**International Dementia Policies and Legacies of the COVID-19 Pandemic**

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**Introduction: Where were we now in relation to Dementia policy before the pandemic**

Tremendous successes in public health and economic development have enabled people all over the world to live longer and, while this has many benefits, it also requires countries to adapt their health and long-term services and supports (LTSS) systems to the implications of an increasingly older population. One implication is a much larger number of people living with Alzheimer’s Disease and related dementias. Worldwide it is estimated more than 57 million people are currently living with dementia, and that by 2050 that number will rise to nearly 153 million (GBD 2019 Dementia Forecasting Collaborators, 2022). This increase has been recognized as a global challenge and, in response, in 2017 the World Health Assembly adopted the Global Action Plan on Dementia (WHO, 2017).

Several countries have adopted national dementia plans (NDPs) to coordinate efforts across different government departments and levels along with non-governmental stakeholders to bring about policy change that enhances the prevention, treatment, and care of people living with dementia and their care partners (WHO, 2017). While the adoption of these plans is undoubtedly important, the implementation and resourcing of the aspirations contained within the national plans also requires major reforms to the health and LTSS systems of countries.

The importance of tackling some of these reforms has been brought to the forefront of public discourse during the SARS-COV-2 (COVID-19) pandemic. The multiple impacts of the COVID-19 pandemic on people living with dementia and their care partners has exacerbated many deeply embedded inequities and challenges to dementia care around the world. People living with dementia are at a heightened risk of poor outcomes after contracting COVID-19 (Tahira, Verjovski-Almeida & Ferreira, 2021) and account for a disproportionate share of all COVID-19 cases and deaths (Suarez-Gonzalez et al., 2020; Gilstrap et al., 2022). Throughout the pandemic, dementia care partners have shouldered bigger burdens due to reduced supports and increased isolation resulting in part from curtailed access to typical sources of care and support and some unintended effects of infection avoidance practices (Giebel et al., 2020; Carbone et al., 2021).

The pandemic also has diverted the attention of governments, in particular the departments and ministries that would usually be involved in developing and implementing dementia-relevant policies and programs. This reduced focus has resulted in disruptions in policy making and implementation processes and postponement or shelving of many reforms (ADI, 2021). Indeed, in an effort to re-focus the important work, it is even more important to take stock and consider what should be learned from the pandemic and how these lessons can shape national dementia-relevant policies and planning efforts. We use the World Health Organization’s (WHO) Global Action Plan on Dementia’s seven action areas to structure the discussion of these considerations (WHO, 2017).

**Dementia as a public health priority and impacts on human rights**

Progress in the development and implementation of National Dementia Plans (NDP), or key reforms to support their implementation, stalled during the pandemic. In England, for example, the equivalent of the National Dementia plan covered the period 2015-2020 (DoH, 2015), and at the time of writing, has not yet been updated. Similarly, the implementation of key reforms to the LTSS financing system initially adopted in 2015 are now announced to take place from October 2023 (DoHSC, 2022).

The pandemic has also demonstrated systemic weaknesses in the mechanisms to protect the human rights of people living with dementia (and, more broadly, people living with disabilities and older people) (Suarez-Gonzalez et al., 2020). The United Nations Convention on the Rights of Persons with Disabilities (CRPD) includes the rights to equal legal capacity, expression of will and preferences, the right to be safeguarded against undue influence and abuse, the rights to liberty and security of the person, to live independently, respect for privacy, respect for home and family and relationships, and right to the highest attainable standard of health without discrimination (UN, n.d). As Peisah et al., (2020) note, the human rights under the CRPD and other human rights treaties had not been adequately implemented in many LTSS settings prior to the pandemic.

Suarez-Gonzalez et al., (2020) provide several specific international examples of discrimination in access to health care based on a dementia diagnosis or residence in a LTSS facility (for example, in Italy, see Perobelli and Notarnicola, 2022). For example, prolonged restrictions on visiting have impacted the right to family life for those living in LTSS facilities, and measures have often resulted in lack of respect for their rights to expression of will (Knapp et al., 2021). Countries should review the mechanisms in place to ensure the rights of people living with dementia and other people living with disabilities are protected, and not just during public health emergencies.

**Dementia Risk Reduction Approaches**

Early evidence suggests the pandemic has increased the potential risk of developing dementia. Reduced exercise and increased sedentary behaviors, less cognitive stimulation, poor mental health, and lack of monitoring of co-occurring health conditions (e.g., diabetes mellitus) that in turn increase the risk of developing dementia have all been documented during the pandemic (Stockwell et al., 2021; Sepúlveda-Loyola et al., 2020; OECD, 2021; Suarez-Gonzalez et al., 2021). The risks of dementia may also increase due to impacts of COVID-19 infection itself (Daroische, 2021;, Becker et al., 2021)., The need to revisit efforts to support dementia risk reduction strategies by governments in partnership with key stakeholders is clearer than ever.

**Diagnosis, Treatment, Care and Support**

The continuum of care for people living with dementia was significantly impacted by the pandemic. Early detection of dementia has been identified as a global public health priority as it allows for better care planning and management along with the potential for individuals to receive disease modifying treatments. Yet, much healthcare utilization declined during the pandemic as in-person visits were canceled or avoided. There is evidence of reduction in the dementia diagnostic rate from England (Office for Health Improvement & Disparities, 2021). Another pandemic-induced outcome was increased use of psychotropics among people living with dementia in LTSS settings in Canada and the UK (Stall et al., 2020; Howard et al., 2020). These findings speak to the pandemic’s negative impacts on the mental health of people living with dementia.

There is evidence of robust care approaches were able to pivot in response to the pandemic such as the Care Ecosystem model where care support workers were able to support care partners of people with dementia by adapting to providing care in new ways (Merrilees et al., 2022). Another example is the Green House model, a well-established approach to smaller group housing, which also appeared to fare better than larger facilities during the pandemic (Zimmerman et al., 2021). Innovative approaches to dementia care should be encouraged and supported by policymakers.

**Technology and Dementia**

Using technology to support people living with dementia was already gaining interest prior to the pandemic to expand access to care (Astell et al., 2017; Lindauer et al., 2017). During the pandemic technology played a major role and became a primary way to facilitate communication between people living in LTSS settings and their families, although there is strong evidence this did not work well for people with more advanced dementia (Comas-Herrera et al., 2022).

There have been examples of adaptation of therapeutic interventions for people living with dementia to virtual formats, for example, an international pilot of virtual Cognitive Stimulation Therapy (Perkins et al., 2022) and using technology to provide remote access to music therapy and low-impact exercise (Chirico et al., 2022). Technology can be expected to have an increasing role in dementia service provision, allowing greater independence and expanding the types of services and interventions available to people living with dementia and their care partners. Further, while the use of telehealth services to provide medical care exploded, there were also challenges with accessibility, particularly for individuals without internet or smartphone access. Public policies must adapt to this changing landscape to ensure equity in access and mitigate barriers to utilization.

**Support for Dementia Care Partners**

The prolonged course and intensity of dementia coupled with the behavioral and psychological symptoms of dementia (BPSD) (e.g., depression, irritability, agitation, anxiety) that as many as 97% of people living with dementia experience, result in heavy care demands for care partners (Kolanowski et al., 2017; Steinberg et al., 2008). Typically, care provided by care partners is unpaid and unsupported. This is particularly acute in Low and Middle-Income Countries where formal care availability is often limited and family care partner burdens are high (Ibáñez et al., 2021;Comas-Herrera et al., 2020).

While care partner burdens increased during the pandemic (Muldrew, Fee & Coates, 2021), the evidence suggests that policy efforts to support care partners generally received less attention than health care workers or paid care partners in congregate settings (Lorenz-Dant & Comas-Herrera, 2021). An exception is Germany where financial support to family care partners included paid leave to provide caregiving activities (Ibid, 2021). The need to support care partners will continue to be a priority long after the pandemic. Policymakers around the world should make support of care partners a top priority.

**Information systems for dementia**

Robust information systems that track dementia are limited or nonexistent in most countries, but are needed to support the entire continuum of dementia care from identifying people at-risk for dementia to tracking and monitoring care provided across health systems. Systems that do exist are often insufficient. Too often, health and LTSS systems are siloed and there is too little connection or formal information sharing between them. This is a barrier to better care and outcomes for people living with dementia. The pandemic further highlighted problems a lack of information sharing created in care and in the ability of providers to respond to the public health crisis. Policy must approach these systems as part of the same continuum.

**Summary and Conclusions**

The COVID-19 pandemic has brought multiple, deeply embedded structural problems in the care of people living with dementia to the forefront. The difficulties in implementing public health measures to protect people from COVID-19 infection demonstrate the need to have mechanisms in place to monitor human rights of people living with dementia. Concurrently, some innovative care models and the use of technology have shown promise and will continue to offer opportunities to provide better dementia care in a post-pandemic world. To advance better dementia care and support, health care and LTSS system-level reforms and dementia-specific policies are needed. A heightened global awareness of dementia, LTSS system issues, and an increased interest in research related to dementia care may be a positive legacy of the pandemic and can contribute to new momentum for the types of policy changes that are needed globally.

To ensure continued momentum for restoring levels of care that may have been lost during the pandemic, national and international policy efforts should focus on tangible ways to strengthen and sustain the dementia care continuum. Several global efforts to better support the dementia continuum are already taking place. The WHO’s increased focus on [dementia](https://www.who.int/news-room/fact-sheets/detail/dementia) as a priority along with their [*Framework for Countries to Achieve an Integrated Continuum of Long-Term Care*](https://www.who.int/publications/i/item/9789240038844)(WHO, 2021), are prime examples of these efforts (OECD, 2021). Initiatives such as the OECD’s [Neuroscience-Inspired Policy Initiative](https://www.oecd.org/naec/brain-capital/#:~:text=Neuroscience%2Dinspired%20Policy%20Initiative&text=NAEC%20promotes%20this%20concept%20as,%2C%20neuroscience%2C%20philanthropy%20and%20business.) (NIPI), which draws on the frameworks of brain health diplomacy and brain capital (Dawson et al., 2020; Ibáñez et al., 2021; Smith et al., 2021) are opportunities for further momentum. Additionally, the International Long-Term Care Policy Network’s [LTCcovid.org](https://ltccovid.org/) was developed to provide rapid evidence review and policy analysis to inform LTSS systems dementia care. Other innovative global dementia initiatives and organizations predate the pandemic including the [Davos Alzheimer’s Collaborative](https://www.davosalzheimerscollaborative.org/), [Alzheimer’s Disease International](https://www.alzint.org/), [Latin American Brain Health Institute](https://brainlat.uai.cl/) (BrainLat), [Global Brain Health Institute](https://www.gbhi.org/), [International Research Network on Dementia Prevention](https://coghealth.net.au/), [World Dementia Council](http://www.worlddementiacouncil.org/), and [Strengthening Responses to Dementia in Developing Countries](https://stride-dementia.org/) (STRiDE); these multi-national collaborations are essential resources to support dementia policy development and implementation that appeart to have stalled during the pandemic.

**References**

Alzheimer’s Disease International (2021). *From plan to impact IV: Progress towards targets of the WHO Global action plan on dementia*. London: Alzheimer’s Disease International. <https://www.alzint.org/u/From-Plan-to-Impact-IV.pdf>

Astell, A. J., Bouranis, N., Hoey, J., Lindauer, A., Mihailidis, A., Nugent, C., & Robillard, J. M. (2019). Technology and dementia: The future is now. *Dementia and Geriatric Cognitive Disorders*, 47(3), 131-139. DOI: 10.1159/000497800

Becker, J. H., Lin, J.J., Doernberg, M., Stone, K., Navis, A., Festa, J.R., & Wisnivesky, J.P. (2021). Assessment of Cognitive Function in Patients After COVID-19 Infection. *JAMA Network Open*, 4(10), e2130645. <https://doi.org/10.1001/jamanetworkopen.2021.30645>

Carbone, E. A., de Filippis, R., Roberti, R., Rania, M., Destefano, L., Russo, E., De Sarro, G., Segura-Garcia, C., & De Fazio, P. (2021). The Mental Health of Caregivers and Their Patients With Dementia During the COVID-19 Pandemic: A Systematic Review. *Frontiers in psychology*, 12, 782833. https://doi.org/10.3389/fpsyg.2021.782833

Chirico, I., Ottoboni, G., Giebel, C., Pappadà, A., Valente, M., Degli Esposti, V., Gabbay, M., & Chattat, R. (2022). COVID-19 and community-based care services: Experiences of people living with dementia and their informal carers in Italy. *Health & Social Care in the Community*, 10.1111/hsc.13758. Advance online publication. <https://doi.org/10.1111/hsc.13758>

Comas-Herrera, A., Lorenz-Dant, K., Ferri, C, Govia, I., Sani, T.P., Jacobs, R., Lopez-Ortega, M., Musyimi, C., Pattabiraman, M., Weidner, W., Barbarino, P., Knapp, M., and the STRiDE team (2020). *Supporting people living with dementia and their carers in low- and middle-income countries during COVID-19*. Article in LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE. <https://ltccovid.org/2020/04/10/supporting-people-living-with-dementia-and-their-carers-in-low-and-middle-income-countries-during-covid-19/> (accessed 07 March 2022).

Comas-Herrera, A., Marczak, J., Byrd, W., Lorenz-Dant, K., Patel, D., & Pharoah, D. (eds.) & [LTCcovid contributors (2022).](https://ltccovid.org/experts-directory/)*L*TCcovid International living report on COVID-19 and Long-Term Care. LTCcovid, Care Policy & Evaluation Centre, London School of Economics and Political Science. <https://doi.org/10.21953/lse.mlre15e0u6s6> (accessed 07 March 2022).

Daroische, R., Hemminghyth, M.S., Eilertsen, T.H., Breitve, M.H. & Chwiszczuk, L.J. (2021). Cognitive Impairment After COVID-19—A Review on Objective Test Data. *Frontiers in Neurology*. 12: 699582. Doi: 10.3389/fneur.2021.699582.

Dawson, W.D., Bobrow, K., Ibáñez, A., Booi, L., Pintado-Caipa, M., Yamamoto, S., Tarnanas, I., Evans, T., Comas-Herrera, A., Cummings, J., Kaye, J., Yaffe, K., Miller, B.L., & Eyre, H.A. The Necessity of Diplomacy in Brain Health. *The Lancet Neurology*. 2020;19(12):P972-974. Doi: <https://doi.org/10.1016/S1474-4422(20)30358-6>

DoH (2015). *Prime Minister’s challenge on dementia 2020*. <https://www.gov.uk/government/publications/prime-ministers-challenge-on-dementia-2020>

(Accessed 9th March 2022).

DoHSC (2022). *People at the Heart of Care: adult social care reform. Policy paper*. [https://www.gov.uk/government/publications/people-at-the-heart-of-care-adult-social-care-reform-white-paper/people-at-the-heart-of-care-adult-social-care-reform#strong-foundations-to-build-on](https://www.gov.uk/government/publications/people-at-the-heart-of-care-adult-social-care-reform-white-paper/people-at-the-heart-of-care-adult-social-care-reform" \l "strong-foundations-to-build-on) (Accessed 9th March 2022)

GBD 2019 Dementia Forecasting Collaborators (2022). Estimation of the global prevalence of dementia in 2019 and forecasted prevalence in 2050: an analysis for the Global Burden of Disease Study 2019. *The Lancet Public Health*, (7)2, e105-e125. <https://doi.org/10.1016/S2468-2667(21)00249-8>

Giebel, C., Lord, K., Cooper, C., Shenton, J., Cannon, J., Pulford, D., Shaw, L., Gaughan, A., Tetlow, H., Butchard, S., Limbert, S., Callaghan, S., Whittington, R., Rogers, C., Komuravelli, A., Rajagopal, M., Eley, R., Watkins, C., Downs, M., Reilly, S., Ward K., Corcoran R, Bennett K & Gabbay, M. (2021). A UK survey of COVID-19 related social support closures and their effects on older people, people with dementia, and carers*. International Journal of Geriatric Psychiatry*, 36(3), 393-402. <https://doi.org/10.1002/gps.5434>

Gilstrap, L., Zhou, W., Alsan, M., Nanda, A., Skinner, J.S. (2022). Trends in Mortality Rates Among Medicare Enrollees with Alzheimer Disease and Related Dementias Before and During the Early Phase of the COVID-19 Pandemic. JAMA Neurology. Published online February 28, 2022. Doi:10.1001/jamaneurol.2022.0010.

Howard, R., Burns, A., & Schneider, L. (2020). Antipsychotic prescribing to people with dementia during COVID-19. *The Lancet Neurology*, (19)11: 892. <https://www.thelancet.com/journals/laneur/article/PIIS1474-4422(20)30370-7/fulltext>

Ibáñez, A., Pina-Escudero, S. D., Possin, K. L., Quiroz, Y. T., Peres, F. A., Slachevsky, A., Sosa, A. L., Brucki, S., Miller, B. L., & Multi-Partner Consortium to Expand Dementia Research in Latin America (2021). Dementia caregiving across Latin America and the Caribbean and brain health diplomacy. *The Lancet Healthy longevity*, *2*(4), e222–e231. <https://doi.org/10.1016/S2666-7568(21)00031-3>

Knapp, M., Cyhlarova, E., Comas-Herrera, A., Lorenz-Dant, K. (2021). *Crystallising the Case for Deinstitutionalisation: COVID-19 and the Experiences of Persons with Disabilities*. Care Policy and Evaluation Centre, London School of Economics and Political Science. <https://www.lse.ac.uk/cpec/assets/documents/CPEC-Covid-Desinstitutionalisation.pdf>

Kolanowski, A., Boltz, M., Galik, E., Gitlin, L. N., Kales, H. C., Resnick, B., Van Haitsma, K. S., Knehans, A., Sutterlin, J. E., Sefcik, J. S., Liu, W., Petrovsky, D. V., Massimo, L., Gilmore-Bykovskyi, A., MacAndrew, M., Brewster, G., Nalls, V., Jao, Y. L., Duffort, N., & Scerpella, D. (2017). Determinants of behavioral and psychological symptoms of dementia: A scoping review of the evidence. *Nursing Outlook*, *65*(5), 515–529. <https://doi.org/10.1016/j.outlook.2017.06.006>

Lindauer, A., Seelye, A., Lyons, B., Dodge, H., Mattek, N., Mincks, K., Kaye, J., & Erton-Lyons D. (2017). Dementia care comes home: Patient and caregiver assessment via telemedicine. *The Gerontologist*. 57(5):e85-e93. <https://doi.org/10.1093/geront/gnw206>

Lorenz-Dant, K., & Comas-Herrera, A. (2021). The Impacts of COVID-19 on Unpaid Carers of Adults with Long-Term Care Needs and Measures to Address these Impacts: A Rapid Review of Evidence up to November 2020. *Journal of Long-term Care*, (2021), 124–153. DOI: <http://doi.org/10.31389/jltc.76>

Merrilees, J., Robinson-Teran, J., Allawala, M., Dulaney, S., Rosenbloom, M., Lum, H.D., Sawyer, R.J., Possin, K.L. & Bernstein, A. (2022). Responding to the needs of persons living with dementia and their caregivers during the COVID-19 pandemic: Lessons from the Care Ecosystem*, Innovation in Aging*, (6)2 igac007, <https://doi.org/10.1093/geroni/igac007>

Muldrew, D., Fee A., & Coates, V. (2021). Impact of the COVID-19 pandemic on family carers in the community: A scoping review, *Health & social care in the community*, 10.1111/hsc.13677. Advance online publication. <https://doi.org/10.1111/hsc.13677>

OECD (2020).*Who Cares? Attracting and Retaining Care Workers for the Elderly,* OECD Health Policy Studies, OECD Publishing, Paris, FR. <https://doi.org/10.1787/92c0ef68-en>

OECD (2021). Tackling the Mental Health Impact of the COVID-19 Crisis: An Integrated, Whole-of-Society Response. OECD: Paris, FR. May 12, 2021. <https://www.oecd.org/coronavirus/policy-responses/tackling-the-mental-health-impact-of-the-covid-19-crisis-an-integrated-whole-of-society-response-0ccafa0b/>

Office for Health Improvement & Disparities (2021). Statistical Commentary: Dementia profile, March 2021 update; Updated 1 March 2022. <https://www.gov.uk/government/statistics/dementia-profile-updates/statistical-commentary-dementia-profile-march-2021-update>

Peisah, C., Byrnes, A., Doron, I., Dark, M. and Quinn, G. (2020). Advocacy for the human rights of older people in the COVID pandemic and beyond: a call to mental health professionals. *International Psychogeriatrics*, 32(10):1199-1204. doi:10.1017/S1041610220001076

Perkins, L., Fisher, E., Felstead, C., Rooney, C., Wong, G., Dai, R., Vaitheswaran, S., Natarajan, N., Mograbi, D. C., Ferri, C. P., Stott, J., & Spector, A. (2022). Delivering Cognitive Stimulation Therapy (CST) Virtually: Developing and Field-Testing a New Framework. *Clinical Interventions in Aging*, *17*, 97-116. <https://doi.org/10.2147/CIA.S348906>

Perobelli, E. & Notarnicola, E. (2022). COVID-19 and the Long-Term Care system in Italy. In: Comas-Herrera A, Marczak J., Byrd W., Lorenz-Dant K., (editors) *LTCcovid International Living report on COVID-19 and Long-Term Care*. LTCcovid, Care Policy and Evaluation Centre, London School of Economics and Political Science.

<https://doi.org/10.21953/lse.mlre15e0u6s6> (accessed6th March 2022).

Smith E., Ali D., Wilkerson B., Dawson W.D., Sobowale K., Reynolds C., Berk M., Lavretsky

H., Jeste D., Ng C., Soares J., Aragam G., Wainer Z., Manji H., Licinio J., Lo A., Storch E., Fu E., Leboyer M., Tarnanas I., Ibañez A., Manes F., Caddick S., Fillit H., Abbott R., Robertson I., Chapman S.B., Au R., Altimus C., Hynes W., Brannelly P., Cummings J., and Eyre H.A. (2021). A Brain Capital Grand Strategy: Towards Economic Reimagination. *Molecular Psychiatry*, 26(1):3-22. <https://doi.org/10.1038/s41380-020-00918-w>

Sepúlveda-Loyola, W., Rodríguez-Sánchez, I., Pérez-Rodríguez, P., Ganz, F., Torralba, R., Oliveira, D. V., & Rodríguez-Mañas, L. (2020). Impact of social isolation due to COVID-19 on health in older people: mental and physical effects and recommendations. *The Journal of Nutrition, Health & Aging*, 24(9), 938-947. <https://doi.org/10.1007/s12603-020-1500-7>

Stall, N.M., Zipursky, J.S., Rangrej, J., Jones, A., Costa, A.P., Hillmer, M.P., & Brown, K. (2021). Assessment of Psychotropic Drug Prescribing Among Nursing Home Residents in Ontario, Canada, During the COVID-19 Pandemic. *JAMA Internal Medicine*, 181(6):861-863. doi:10.1001/jamainternmed.2021.0224.

Steinberg, M., Shao, H., Zandi, P., Lyketsos, C. G., Welsh-Bohmer, K. A., Norton, M. C., Breitner, J. C., Steffens, D. C., Tschanz, J. T., & Cache County Investigators (2008). Point and 5-year period prevalence of neuropsychiatric symptoms in dementia: the Cache County Study. *International Journal of Geriatric Psychiatry*, *23*(2), 170–177. <https://doi.org/10.1002/gps.1858>

Stockwell, S., Trott, M., Tully, M., Shin, J., Barnett, Y., Butler, L., McDermott, D., Schuch, F., & Smith, L. (2021). Changes in physical activity and sedentary behaviours from before to during the COVID-19 pandemic lockdown: a systematic review. *BMJ Open Sport & Exercise Medicine*, 7(1), e000960. <https://doi.org/10.1136/bmjsem-2020-000960>

Suárez-González, A., Livingston, G., Low, L.F., Cahill, S., Hennelly, N., Dawson, W.D., Weidner, W., Bocchetta, M., Ferri, C.P., Matias-Guiu, J.A., Alladi, S., Musyimi, C.W., & Comas-Herrera, A. (2020). Impact and mortality of COVID-19 on people living with dementia: cross-country report. 19 August 2020. <https://ltccovid.org/2020/08/19/impact-and-mortality-of-covid-19-on-people-living-with-dementia-cross-country-report/>

Suárez-González, A., Rajagopalan, J., Livingston, G., & Alladi, S. (2021). The effect of COVID-19 isolation measures on the cognition and mental health of people living with dementia: A rapid systematic review of one year of quantitative evidence. *EClinicalMedicine*. (31)39:101047. doi: 10.1016/j.eclinm.2021.101047.

Tahira, A.C., Verjovski-Almeida, S., & Ferreira, S.T. (2021). Dementia is an age-independent risk factor for severity and death in COVID-19 inpatients. *Alzheimer's & dementia*, 17(11), 1818–1831. <https://doi.org/10.1002/alz.12352>

UN (n.d.). Convention on the Rights of Persons with Disabilities. Department of Economic and Social Affairs, Disability. <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

WHO (2017). Global action plan on the public health response to dementia 2017–2025. Geneva, SZ: World Health Organization. 44. <https://www.who.int/publications/i/item/global-action-plan-on-the-public-health-response-to-dementia-2017---2025>

WHO (2021). Framework for countries to achieve an integrated continuum of long-term care. Geneva, Switzerland: World Health Organization. 54. <https://www.who.int/publications/i/item/9789240038844>

Zimmerman, S., Dumond-Stryker, C., Tandan, M., Wretman, C., Howell, A. & Ryan, S. (2021). Nontraditional Small House Nursing Homes Have Fewer COVID-19 Cases and Deaths. *Journal of the American Medical Directors Association*, (22)3, 489-493. <https://doi.org/10.1016/j.jamda.2021.01.069>