

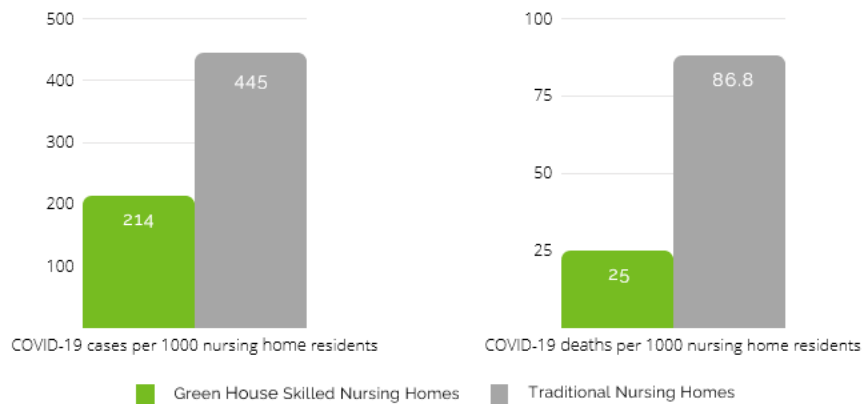


Green House Homes and COVID: More Than Just Design

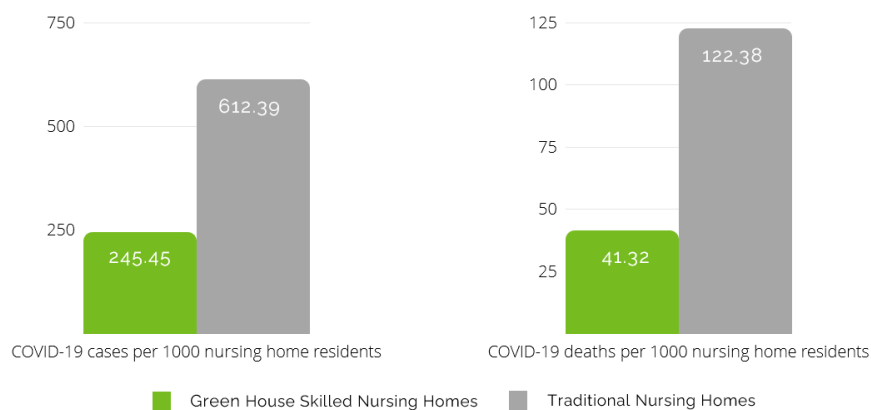
The Green House Project has garnered international attention during the COVID-19 pandemic as a vital, proven alternative to traditional nursing facilities – and for good reason.

By the number of infections and deaths alone, Green House homes produced far superior outcomes during the first two years of the pandemic, as shown below:

Green House COVID Data: 2020



Green House COVID Data: 2021



News articles have focused on the obvious reason for such striking figures: Green House homes exclusively feature private rooms and bathrooms, significantly reducing the risk of airborne viral spread. Traditional nursing facilities, meanwhile, typically feature “semi-private” rooms – in some cases, as many as four per ward – and shared bathroom facilities that create perfect opportunities for COVID infections.



It's not just common sense. Canadian researchers determined that in the province of Ontario alone, single-occupancy rooms would have prevented 31% of all COVID-19 infections and 31% of deaths in long-term care settings, according to an April 2021 study.¹

But the physical design of Green House homes is just part of the equation. Since the very first days of the pandemic, health officials have known that nursing home staff, through no fault of their own, serve as key vectors of COVID-19 outbreaks. Because they live in the wider community, and because so many underpaid caregivers must work multiple jobs to earn a living, workers can become infected with COVID in any number of places, then spread the virus into each of the homes where they work – even before they realize that they're sick.

“Limitations in effective infection control and prevention and staff members working in multiple facilities contributed to intra- and interfacility spread,” the Centers for Disease Control & Prevention observed on March 18, 2020 – just weeks after the first major COVID-19 outbreak at a nursing facility outside of Seattle made national news.²

Time only reinforced that initial assessment. Nursing homes with the lowest number of unique employees – that is, the smallest staff size – logged 6.2 COVID cases and 0.9 deaths per 100 beds, versus 11.9 and 2.1 per 100 beds for those with the largest staff sizes.³

In Green House homes, the traditional top-down hierarchy of nursing facilities is replaced with the universal caregiver model, in which CNAs cook meals and perform light housekeeping duties in addition to direct resident care. By putting the people who matter most – frontline caregivers – in charge of the day-to-day rhythms of life, Green House homes foster an environment where CNAs feel valued and respected, while also reducing money spent on overhead costs not related to direct care services.

Each 10- to 12-person Green House home has a dedicated team of direct caregivers who exclusively serve that home. In addition, staff turnover is substantially lower than traditional nursing facilities: In 2021, Green House homes had a CNA turnover rate of 33.5%,⁴ compared to nearly 130% among traditional nursing facilities prior to the pandemic.⁵

The Green House model thus combines the infection control power of private personal space with the additional benefit of fewer unique workers entering and exiting.

¹ Heckman, George A., et al. “Proceedings from an International Virtual Townhall: Reflecting on the Covid-19 Pandemic: Themes from Long-Term Care.” *Journal of the American Medical Directors Association*, vol. 22, no. 6, 2021, pp. 1128–1132., <https://doi.org/10.1016/j.jamda.2021.03.029>.

² McMichael TM, Clark S, Pogojans S, et al. COVID-19 in a Long-Term Care Facility — King County, Washington, February 27–March 9, 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:339-342. DOI: <http://dx.doi.org/10.15585/mmwr.mm6912e1external> icon.

³ McGarry, Brian E. “Larger Nursing Home Staff Size Linked to Higher Number of COVID-19 Cases in 2020: Health Affairs Journal.” *Health Affairs*, 14 July 2021, <https://www.healthaffairs.org/doi/10.1377/hlthaff.2021.00323>.

⁴ Internal Green House Project data.

⁵ Gandhi A, Yu H, Grabowski DC. “High Nursing Staff Turnover in Nursing Homes Offers Important Quality Information.” *Health Affairs (Millwood)*. 2021 Mar;40(3):384-391. doi: 10.1377/hlthaff.2020.00957. PMID: 33646872; PMCID: PMC7992115.



Those factors come together in a formal study conducted by Sheryl Zimmerman of the University of North Carolina, which compared the COVID performance of Green House homes against traditional nursing homes with fewer than 50 beds, as well as those with more than 50 beds. The results were clear: Green House homes outperformed both types, showing that small size is only one factor in limiting infections.

“COVID-19 incidence and mortality rates are less in Green House/small NHs than rates in traditional NHs with <50 and \geq 50 beds, especially among the higher and extreme values,” Zimmerman and colleagues concluded. “Green House/small NHs are a promising model of care as NHs are reinvented post-COVID.”⁶

Conclusion

Green House homes derive infection-control advantages from physical design as well as their unique staffing structure. While private rooms and bathrooms are crucial to curbing the spread of COVID-19 and other airborne infections, the universal caregiver model brings an added layer of protection by limiting the number of people who come in and out of each home on a daily basis. Policymakers and operators alike must both encourage the development of small-home nursing care campuses and provide the training and educational support necessary to bring the universal caregiver model to more nursing homes across the country.

⁶ Zimmerman, Sheryl, et al. “Nontraditional Small House Nursing Homes Have Fewer COVID-19 Cases and Deaths.” *Journal of the American Medical Directors Association*, vol. 22, no. 3, 2021, pp. 489–493., <https://doi.org/10.1016/j.jamda.2021.01.069>.