



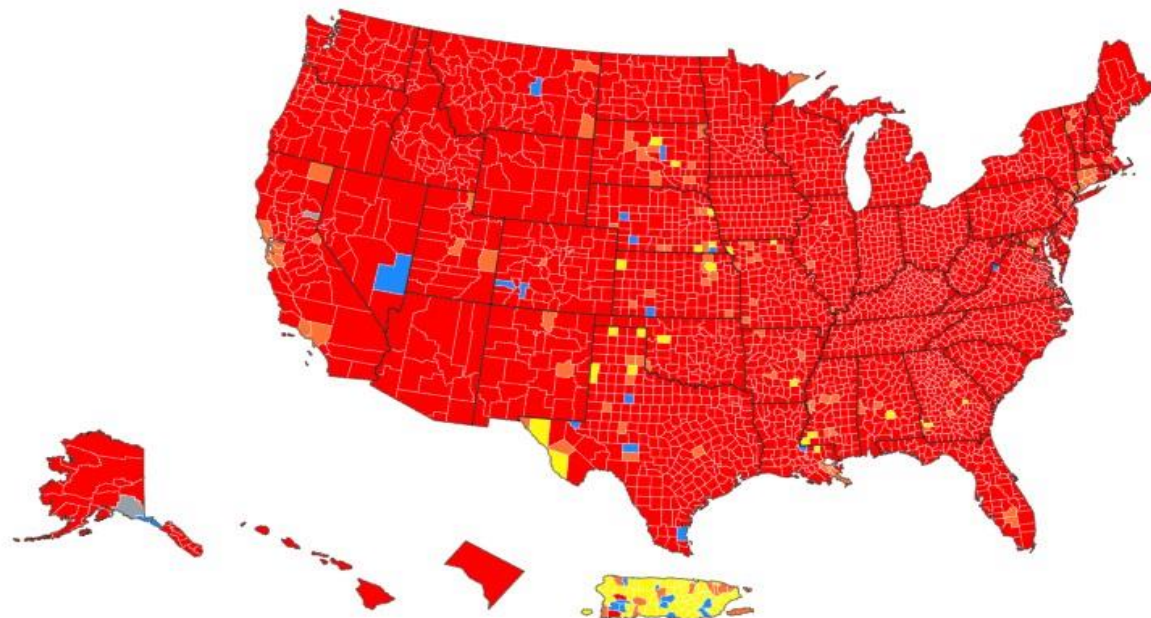
LONG TERM CARE FACILITIES BEFORE, DURING AND AFTER- SARS-COV-2 (COVID-19)

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Associate Director NC Statewide Program for Infection Control and Epidemiology (SPICE)

October 19th, 2021

<https://spice.unc.edu/>



Community Transmission in US by County

	Total	Percent	% Change
High	2988	92.8%	-2.05%
Substantial	120	3.73%	1.09%
Moderate	82	2.55%	0.78%
Low	28	0.87%	0.16%

How is community transmission calculated?

HOW ARE WE DOING?
(AS OF 10/5/21)

	United States	New York
Cases	>40M (44,518,437)	2.44M
Deaths	>719K	>55K
Fully vaccinated	>185.5M (56.3%)	12.5M (64.1%)
Additional Dose	5.29M	

<https://www.worldometers.info/coronavirus/country/us/>

By the numbers

84.5%

National Percent of Vaccinated Residents per Facility

65.4%

National Percent of Vaccinated Staff per Facility

697,020

Total Resident COVID-19 Confirmed Cases

136,513

Total Resident COVID-19 Deaths

643,893

Total Staff COVID-19 Confirmed Cases

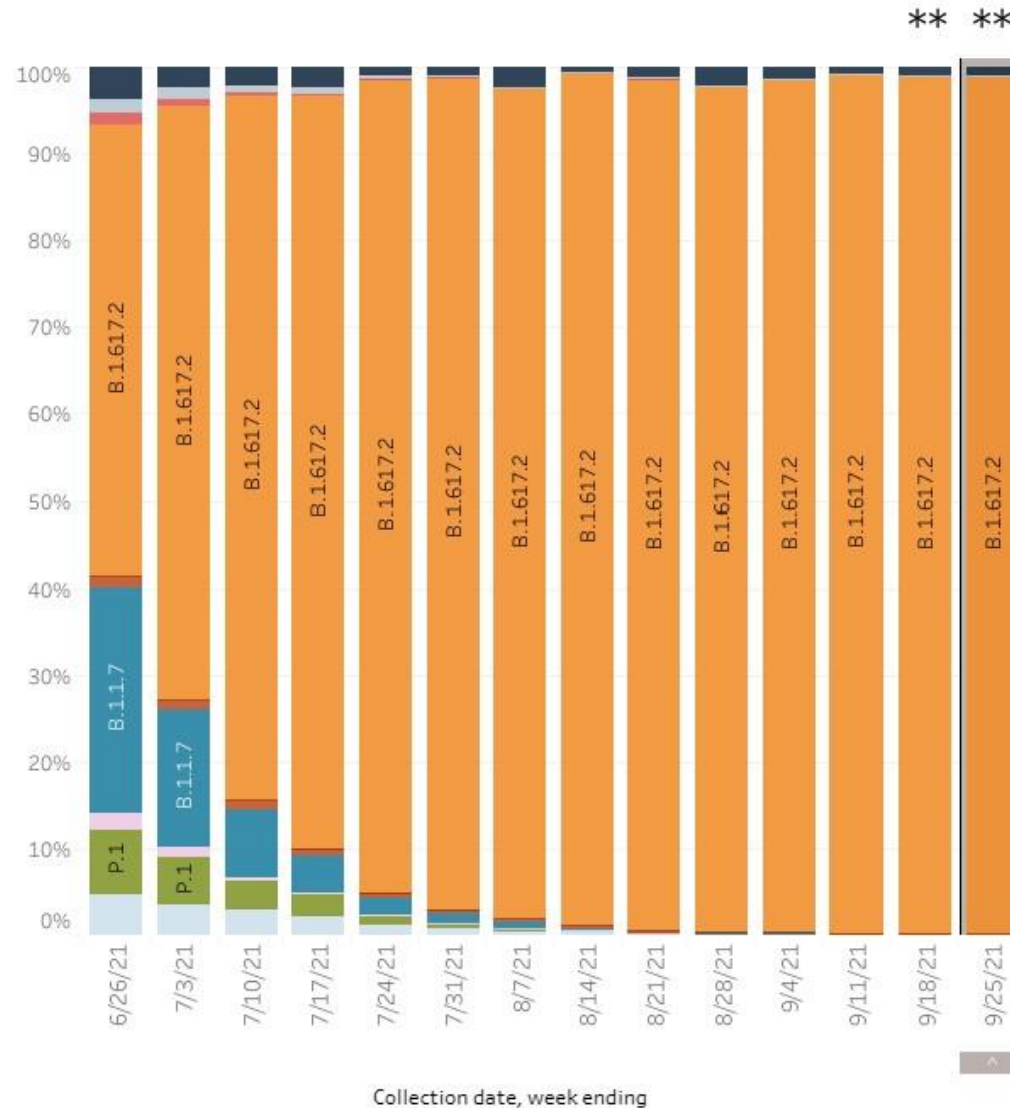
2,070

Total Staff COVID-19 Deaths



United States: 6/20/2021 – 9/25/2021

United States: 9/19/2021 – 9/25/2021 NOWCAST



USA

WHO label	Lineage #	US Class	%Total	95%PI	
Alpha	B.1.1.7	VBM	0.0%	0.0-0.2%	
Beta	B.1.351	VBM	0.0%	0.0-0.2%	
Gamma	P.1	VBM	0.0%	0.0-0.2%	
Delta	B.1.617.2	VOC	99.0%	97.9-99.8%	
	AY.1	VOC	0.1%	0.0-0.5%	
	AY.2	VOC	0.0%	0.0-0.2%	
Iota	B.1.526	VBM	0.0%	0.0-0.2%	
Kappa	B.1.617.1	VBM	0.0%	0.0-0.2%	
Mu	B.1.621	VBM	0.0%	0.0-0.2%	
N/A	B.1.628		0.0%	0.0-0.2%	
	B.1.637		0.0%	0.0-0.2%	
Other	Other*		0.9%	0.0-1.9%	

* Enumerated lineages are VOI/VOC or are circulating >1% in at least one HHS region during at least one two week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.

** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates

Sublineages of P.1, B.1.351 and B.1.621 are aggregated with the parent lineage and included in parent lineage's proportion. Q.1-Q.8 are aggregated with B.1.1.7. AY.3-AY.32 and their sublineages are aggregated with B.1.617.2.

<https://covid.cdc.gov/covid-data-tracker/#variant-proportions>

OBJECTIVES

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Compare

Compare “Long-term Care ” post COVID-19

ONE SIZE DOES NOT FIT ALL

LONG-TERM CARE

- ▶ Facilities seen as the resident's home
- ▶ Residents may be more heterogenous (variety of issues)
- ▶ Resources more limited (equipment, staff)
- ▶ IP hold multiple positions, limited authority
- ▶ Long term relationships formed with residents and family members
- ▶ More robust regulatory oversight
- ▶ Modified recommendations from CDC relating to infection prevention and control

ACUTE CARE

- ▶ Recognized as institutional with short stays
- ▶ Address the acute issue at hand
- ▶ More resources including staff at various levels of education, technology and equipment
- ▶ IP typically is a dedicated position and recognized as an expert
- ▶ CDC guidance better defined
- ▶ Interactions with patients and families are shorter and more limited.

LONG TERM CARE - LANDSCAPE *BEFORE COVID-19*

- Nursing homes, skilled nursing facilities, and assisted living facilities
- Provide a variety of services both medical and personal
- Over 4 million Americans admitted to/reside in nursing and skilled facilities
- Nearly 1 million in assisted living facilities



LONG TERM CARE - LANDSCAPE *BEFORE COVID-19*



Photo courtesy of Dr. Rutala

- ▶ Physical Structure
 - ▶ Older Buildings
 - ▶ Inadequate-poorly maintained ventilation system-absence of HVAC systems
 - ▶ Lack of airborne infection isolation rooms (AIIR)
 - ▶ Limited Number of private rooms

LONG TERM CARE - LANDSCAPE *BEFORE COVID-19*



- ▶ Socialization encouraged as part of physical, emotional and mental health
- ▶ Semi-private rooms-roommates
- ▶ Common eating and recreational areas
- ▶ Residents interact freely with each others
- ▶ Families provided care to a large degree
- ▶ Frequent visit by regulatory agencies (CMS)
- ▶ Frequent visits by ombudsmen

LONG TERM CARE- RESIDENTS *BEFORE COVID-19*

- ▶ Life expectancy:
 - ▶ 1970s life expectancy was 70 and today well in the '90s
 - ▶ 85% over the age of 75
- ▶ Level of care
 - ▶ Moved from “custodial care” to very complex medical care and invasive devices
- ▶ Demographics
 - ▶ Comorbid conditions and complex drug regimens
 - ▶ ~ 70% some form of cognitive deficit (48% with dementia)

[https://www.jamda.com/article/S1525-8610\(20\)30522-3/fulltext](https://www.jamda.com/article/S1525-8610(20)30522-3/fulltext)

<https://www.healthaffairs.org/doi/10.1377/hblog20201110.707118/full/>

LONG TERM CARE -INFECTION PREVENTION BEFORE COVID-19

- Infection Prevention and Control (IPC) programs are inadequately staffed, as much as four-fold less than their acute care hospital counterparts
- IPs wear multiple hats
- Less than 10% have specialized training
- Difference in social environment
- Populations in LTCFs are heterogeneous

Council of State and Territorial Epidemiologists (CSTE): Recommendations for Surveillance and Reporting of Healthcare-Associated Infections in Long Term Care Facilities

Continued...

LONG TERM CARE -INFECTION PREVENTION *BEFORE COVID-19*

- ▶ Published data on overall high employee turnover rates in LTC facilities; 2012 data from the American Health Care Association (AHCA) showed the following turnover rates:
- ▶ CNAs often work in multiple LTCFs to supplement their income

	Work force	Turnover rate
RN	12%	50%
LPNs	22%	36.4%
CNAs	64%	51.5%

LONG TERM CARE -INFECTION PREVENTION *BEFORE COVID-19*

Inadequate (and sometimes absent) IT infrastructure, resulting in manual data collection, analysis and feedback of information.

Subject matter experts (i.e., pharmacist) may be consultants with limited access/input

IP lack of authority

Never been required to deal with emerging infectious diseases

Regulatory oversight - Isolation should be the least restrictive possible (CMS)

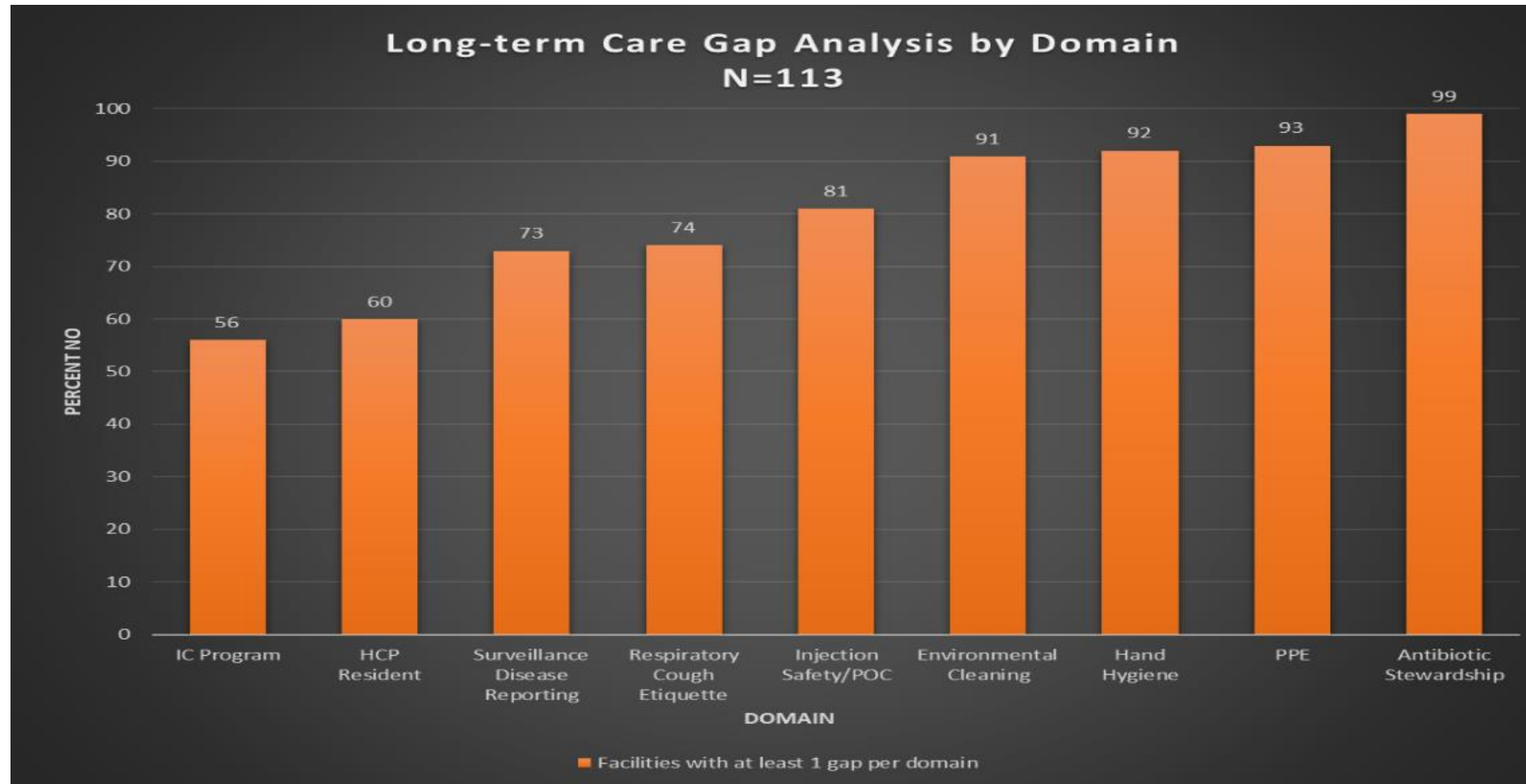
- PPE used much less frequently
- Education/monitoring absent or inadequate

Even before COVID, 82% of Nursing Homes Lacked Adequate Infection Control Practices, Report Finds

U.S. nursing homes have been plagued with infection control deficiencies even before the coronavirus pandemic turned them into hotspots for COVID-19, the respiratory disease caused by the virus, a government report said on Wednesday. Eighty-two percent of all nursing homes had an infection prevention and control deficiency cited in one or more years from 2013-2017, according to the U.S. Government Accountability Office. (5/20)

<https://khn.org/morning-breakout/even-before-covid-82-of-nursing-homes-lacked-adequate-infection-control-practices-report-finds/>

LONG TERM CARE -INFECTION PREVENTION *BEFORE COVID-19*



Infection Control Assessment and Response (ICAR) Gap Analysis and Mitigation Strategies across the Healthcare Continuum: North Carolina, 2016-2018

Wanda Lamm, RN, BSN, CIC, FAPIC, Julie Hernandez, RN, BSN, CIC, Heather Ridge, RN, BSN, CIC

Unpublished data

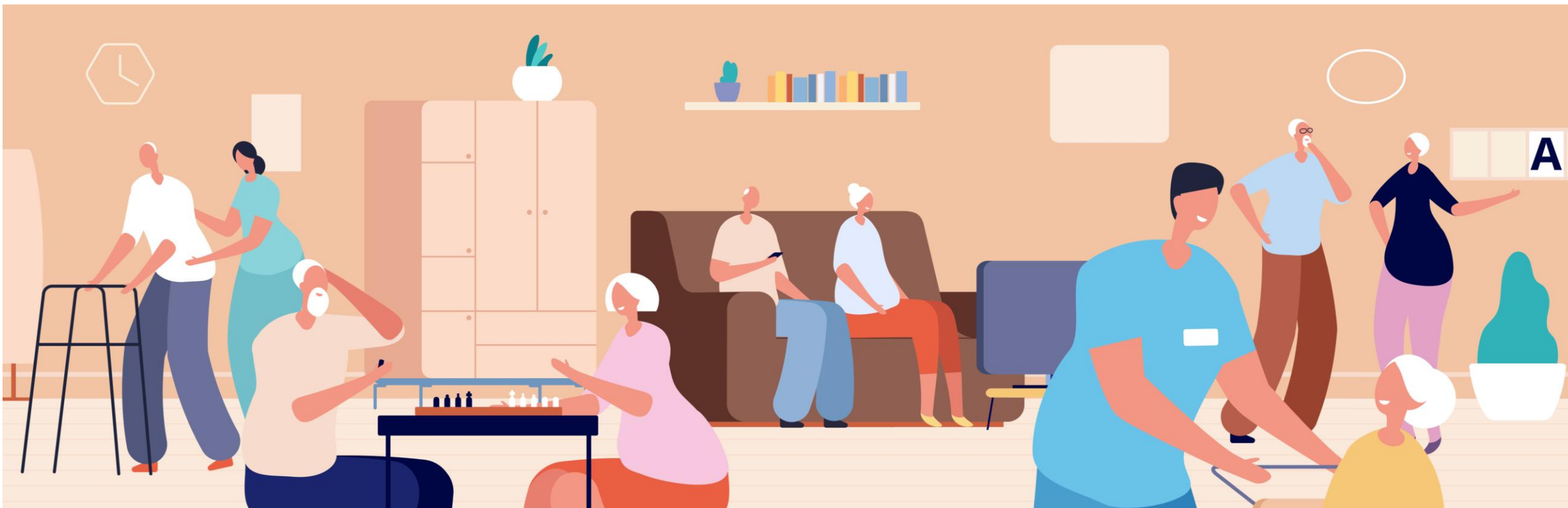
- ▶ Hand hygiene, PPE, environmental cleaning and injection safety domains assessed showed most gaps related to competency validation, audits and feedback
- ▶ A seventy-four (74) percent gap in respiratory hygiene/cough etiquette was usually related to seasonal variations
- ▶ Additional gaps were noted in surveillance and disease reporting (73%); program development (56%)
- ▶ Lack of work exclusion policies when personnel have potentially transmissible infections
- ▶ The infection preventionist served many roles such as; ADON, staff development coordinator and MDS coordinator

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LONG TERM CARE FACILITIES BEFORE COVID-19



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RESIDENT FACTORS (non-modifiable) CONTRIBUTING TO INFECTIONS

- ▶ Medications affecting resistance to infection (corticosteroids and chemotherapy)
- ▶ Limited physiologic reserve
- ▶ Compromised host defenses (↓ cough reflex, thinning skin, decreased tear production and immune dysfunction)
- ▶ Coexisting chronic diseases
- ▶ Impaired responses to infection
- ▶ Increased frequency of therapeutic toxicity (declining liver and kidney function)



MODIFIABLE FACTORS CONTRIBUTING TO INFECTION TRANSMISSION

- ▶ Lack of a staff member dedicated to the function of infection prevention and control
 - ▶ Staff education, **monitoring** and competency
- ▶ Semi-private rooms
- ▶ Inadequate ventilation systems and/or systems maintenance
- ▶ Residents sharing space, air, food in a crowded institutional setting
- ▶ Multiple visitors

MODIFIABLE FACTORS CONTRIBUTING TO INFECTION TRANSMISSION

- ▶ Lack dedicated in room-sinks
- ▶ Lack in room storage for linen, supplies
- ▶ Lack of alcohol-based hand rubs in rooms
- ▶ Staffing shortages-turnover
- ▶ Staff working in multiple facilities
- ▶ Staffing training
- ▶ Staff compliance with immunizations



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LOCKED IN WITH NOWHERE TO GO



COVID-19 IMPACT ON LONG TERM CARE - FACILITIES

- ▶ Required to serve in a completely different compacity
 - ▶ Implement visitation restrictions
 - ▶ Communal dining restricted
 - ▶ Group activities suspended
 - ▶ Isolate/cohort residents
 - ▶ Increased need for personal protective equipment
 - ▶ Vilified in the media



<https://www.seattletimes.com/seattle-news/times-watchdog/coronavirus-spread-in-a-kirkland-nursing-home-for-weeks-while-response-stalled/>

COVID-19 IMPACT ON LONG TERM CARE – FACILITIES

► Staffing

- No families to assist with feeding or ADLs
- Need for staff to deliver trays and assist residents individually
- Need to move resident to single rooms
- Required time for screening procedures
- Increased time required for facilitating telehealth visits with providers and alternative means of visitation with family.
- Increased shortages
 - Staff quit or call in sick because of COVID-19
- Use of agency staff



<https://www.nytimes.com/2021/03/10/us/politics/coronavirus-nursing-homes.html>

COVID-19 IMPACT ON LONG TERM CARE- RESIDENTS

NO indoor visitation from family or loved ones-isolation (*March-September*)

NO socialization with other residents

Difficulty with recognizing/communicating with care providers

Lack of understanding what is going on



COVID-19 IMPACT ON LONG TERM CARE- RESIDENTS

- ▶ 85% noted a decline in physical abilities.
- ▶ 87% indicated their loved one's physical appearance had declined.
- ▶ 91% of reported that their loved one's demeanor (mental status) had declined.
- ▶ 40% indicated their loved ones were missing personal belongings.
- ▶ 69% indicated the facility did not appear to have sufficient staff to care for residents.
- ▶ 10% observed facility staff not wearing or properly using personal protective equipment (PPE).

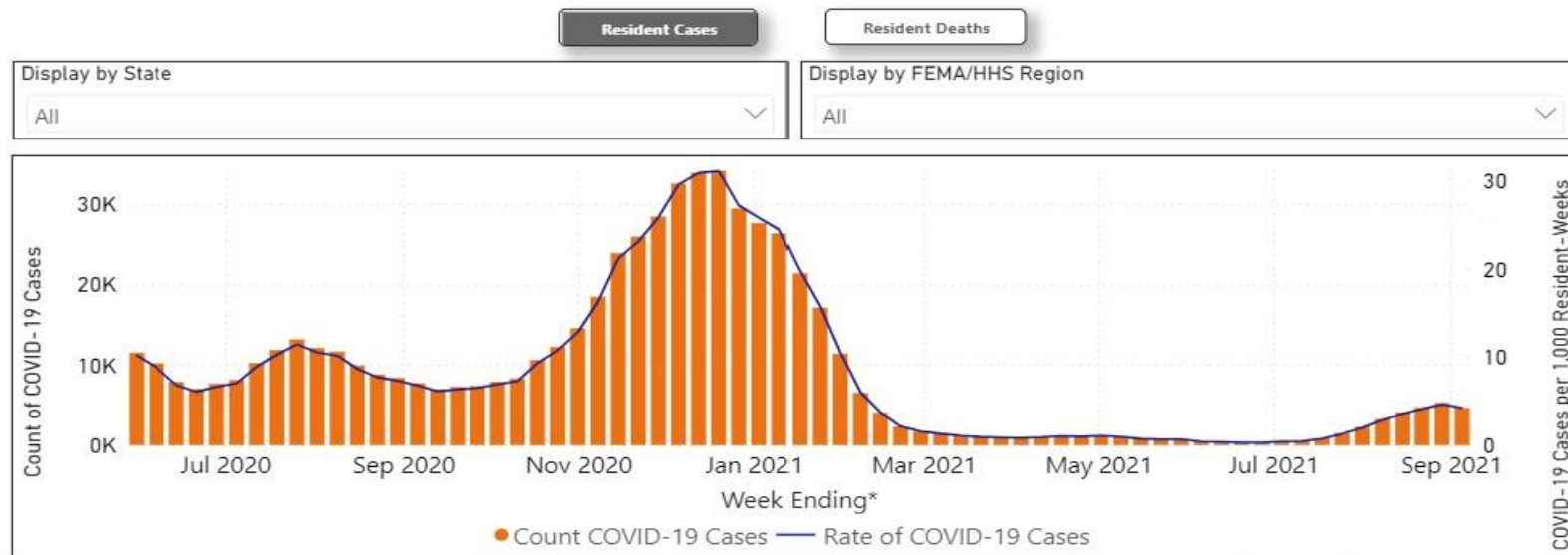


https://theconsumervoice.org/uploads/files/issues/Devasting_Effect_of_Lockdowns_on_Residents_of_LTC_Facilities.pdf



Confirmed COVID-19 Cases among Residents and Rate per 1,000 Resident-Weeks in Nursing Homes, by Week—United States

Data as of 9/6/2021
5:30 AM



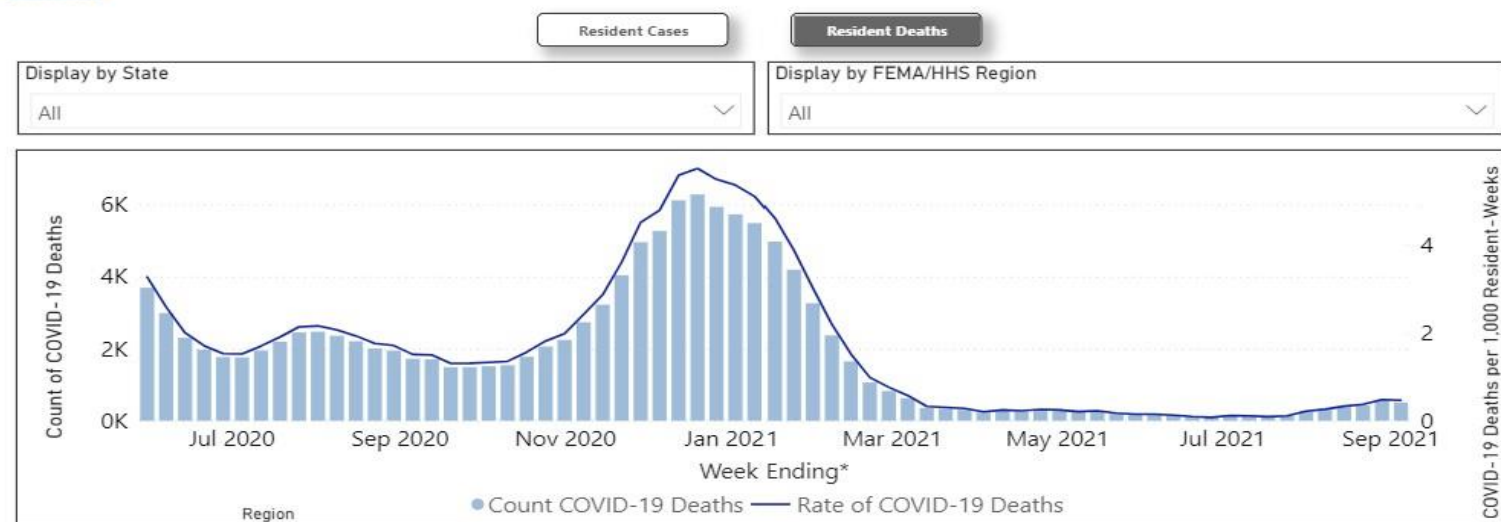
- U.S. NHs represented 2% of all cases

- U.S. NHs represented 19% of deaths



COVID-19 Deaths among Residents and Rate per 1,000 Resident-Weeks in Nursing Homes, by Week—United States

Data as of 9/6/2021
5:30 AM



► In June 2021, the OIG noted that COVID-19 had a devastating impact on Medicare Beneficiaries in Nursing Homes during 2020

- 2 in 5 Medicare beneficiaries in NH were diagnosed with confirmed or suspected COVID-19
- Almost 1,000 more beneficiaries died per day in April 2020 when compared to April 2019
- Overall mortality increased to 22 percent in 2020 from 17 percent in 2019
- About half of Black, Hispanic and Asian beneficiaries had or likely had COVID and 41% of Whites.

2 in 5 Medicare beneficiaries in nursing homes were diagnosed with **COVID-19 or likely COVID-19** in 2020.



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Million Dollar Question

“Insanity is doing the same thing over and over and expecting different results.”

Given the growing demographically-driven demand for care in an environment with relatively fewer people who can both provide care and provide financing, It is essential to recognize that simply doing more of the same will not suffice and will bankrupt us.

Dr. Robert Kane

Dr. Kane goes on to say-

"The place to start is with what people say they want in LTC. When we talk with those who give or receive LTC we hear a common set of descriptors of what they value. They talk about choice and autonomy or control. They want to be seen as people with a life and a personality, not some inanimate object to be tended. Ideally, they want to contribute to the world around them. They want respect and dignity, even when they are dependent on others for their intimate care. They do not want to be infantilized and over-protected. They want the right to take informed risks. It is safe to assume they also want competent medical and nursing care, but this is not at the top of their list. "

<https://www.mcknights.com/blogs/guest-columns/where-are-we-going-with-long-term-care/>

FIVE KEYS TO SOLVING THE COVID-19 CRISIS IN: Post Acute Long-Term Care (PALTC)

- ▶ PALTC expertise must be included when policy is being developed that affects PALTC
- ▶ Collaboration across healthcare sectors must become the norm
- ▶ Do not look for a one-size-fits-all solutions
- ▶ Federal policy leadership must be proactive; not reactive; and supportive; not punitive
- ▶ The nursing home industry and regulatory process need massive restructuring

LONG TERM CARE POST COVID-19

- ▶ Among the many painful lessons COVID-19 has inflicted is this:

Our approach to caring for the vulnerable among us has failed, with nursing home residents disproportionately stricken. It's time to abandon our deeply entrenched and outdated views of long-term care in favor of a **disruptive model** that invests more heavily in quality home and community services such as leading-edge adult day health programs, each with rigorous standards.

A DISRUPTIVE MODEL(s) OF LONG-TERM CARE

► The Green House Project

- In addition to having an organizational structure that is radically different from other settings, Green House homes are small in scale, self-contained, and self-sufficient, with elders at the center.
- Each home includes private rooms and bathrooms for all elders, a living room with a fireplace, and outdoor spaces that are easy to access and navigate.
- They have garnered great interest regarding their potential benefit to limit Coronavirus Disease 2019 (COVID-19) infections due to fewer people living, working, visiting, and being admitted to Green House/small NHs, and private rooms and bathrooms



The Green House®
Project
849 International Dr.
Linthicum, MD 21090
(410) 246-3806

1. Kane R, Cutler L, et al. "Resident Outcomes in Small-House Nursing Homes: A Longitudinal Evaluation of the Initial Green House Program," *Journal of the American Geriatric Society*, 55(6):832-839, June 2007.
2. Kane R, Cutler L, et al. "Effects of Green House® Nursing Homes on Residents' Families," *Health Care Financing Review*, 30(2):35-51, Winter 2008-2009.
3. Sharkey S, Hudak S, et al. "Frontline Caregiver Daily Practices: A Comparison Study of Traditional Nursing Homes and The Green House Project Sites," *Journal of the American Geriatric Society*, 59(1):126-131, January

Research Summary

Since its inception in 2003, The Green House Project has led the creation of 298 homes in 32 states. Research conducted between 2003 and 2012 examined numerous measures of care, satisfaction, and financial performance, as follows:

Green House elders relative to comparison group of elders at a traditional nursing home. (1,2)

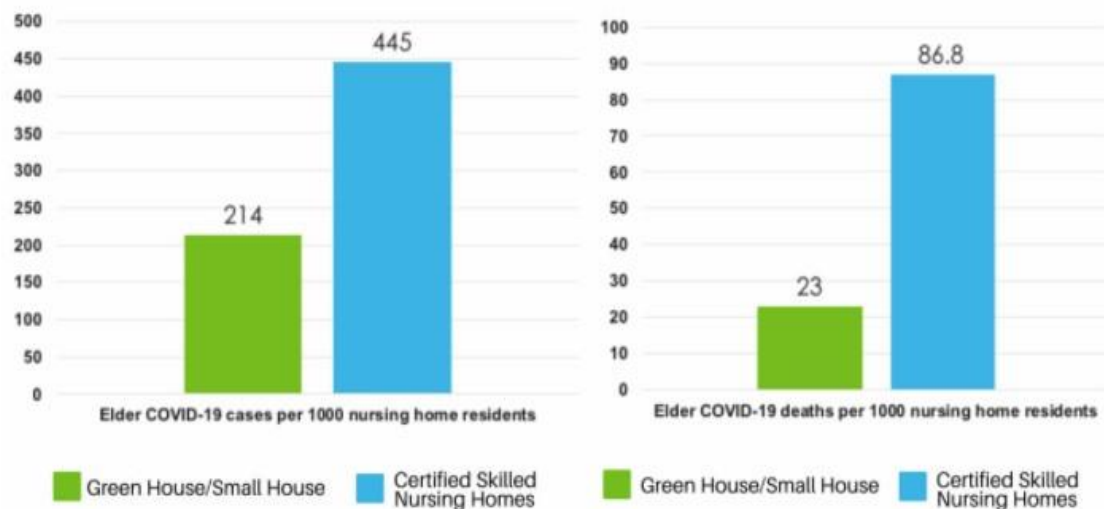
- *Improved quality of life:* Green House elders reported improvement in seven domains of quality of life (privacy, dignity, meaningful activity, relationship, autonomy, food enjoyment and individuality) and emotional wellbeing.
- *Improved quality of care:* Green House elders maintained self-care abilities longer with fewer experiencing decline in late-loss Activities of Daily Living (ADLs). Fewer Green House elders experienced depression, being bedfast, and having little or no activity.
- *Improved family satisfaction:* Green House families were more satisfied with general amenities, meals, housekeeping, physical environment, privacy, autonomy and health care.
- *Improved staff satisfaction:* Green House staff reported higher job satisfaction and increased likelihood of remaining in their jobs. Green House homes relative to traditional nursing home comparison sites. (3)
- *Higher direct care time:* 23-31 minutes more per resident per day in staff time spent on direct care activities in Green House homes without increasing overall staff time.
- *Increased engagement with elders:* More than a four-fold increase in staff time spent engaging with elders (outside of direct care activities) in Green House settings.
- *Less stress:* Direct care staff in Green House homes reported less job-related stress.
- *Improved care outcome:* Fewer in-house acquired pressure ulcers in Green House homes.

Green House homes versus traditional and other culture change-model nursing home costs. (4)

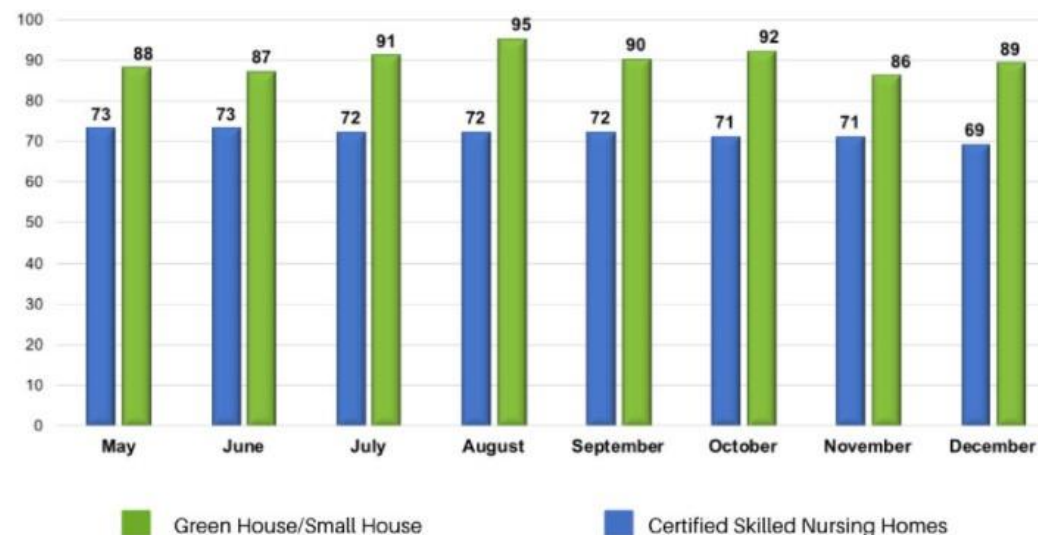
- *Cost neutral operations:* Green House homes operate at the same median cost as the national nursing home median cost.
- *Lower capital costs:* Green House homes provide private bedrooms and baths and enhanced common space while building the same or fewer square feet than other

A DISRUPTIVE MODEL(s) OF LONG-TERM CARE

COVID-19 Cases & Deaths in Green House Skilled Nursing Homes Compared to CMS Data (Jan 1 to Dec. 27, 2020)



Occupancy Rates in Green House Skilled Nursing Homes Compared to CMS Occupancy Data (May to Dec. 2020)



Source: CMS COVID-19 Study database and Green House COVID-19 database

<https://doi.org/10.1016/j.jamda.2021.01.069>

LONG TERM CARE POST COVID-19

► Required operational changes:

- Strict oversight of NHs
- One RN on site at all times
- An expert responsible for preventing the spread of infections

► Required reimbursement changes:

- Inability to use Medicaid dollars for home care or community services
- Increase in Medicaid reimbursement-changes in regulation-are we willing to pay for it?
- Higher pay for staff-better pre-employment screening
- Federal laws changes supporting “functioning long-term care insurance market”



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SUMMARY



- ▶ Suddenly, the nursing home industry, which has long operated out of public view, finds itself at the center of scrutiny.¹
- ▶ The outbreak will push nursing home residents and their families to question whether many facilities should survive. “I think as the data becomes clearer, families and individuals are going to rethink if nursing homes are the best and safest places for them to be,”¹
- ▶ Improving long-term care in a post-pandemic world will require increased investment in community-based care while also changing the nature and scale of elder-care homes.²

¹<https://www.aarp.org/caregiving/health/info-2020/nursing-home-changes-after-coronavirus.html>

²<https://www.nature.com/articles/s43587-020-00018-y#citeas>

SUMMARY



- ▶ Designate response facilities?
- ▶ Disruptive Model?
 - ▶ Smaller facilities
 - ▶ Private rooms
 - ▶ Consistent staff
 - ▶ Higher wages
- ▶ Operational and Reimbursement Changes?
 - ▶ Improved oversight
 - ▶ One IP

“Those that do not learn history are doomed to repeat it.”

Every storm runs out of rain

Maya Angelou

