Appendix A: Recommendations, Steps and Suggested Timeline

CHRT Recommendation	Recommended Steps	Suggested Timeline							Current Status
Recommendation #1: **Hub Selection**		**Dec 2020**	**Jan 2021**	**Feb 2021**	**Mar 2021**	**Q2 2021**	**Q3 2021**	**Q4 2021**	
Select new hubs using modified, evidence-based criteria.	Confirm selection criteria	X							Complete: EO 2020 191
	Open hub application process		X	X					
	Terminate current hub agreements	X	X						
	Select hubs based on new criteria				X				
	Establish process for continuous monitoring				X	X			
Recommendation #2: **Cohorting**		**Dec 2020**	**Jan 2021**	**Feb 2021**	**Mar 2021**	**Q2 2021**	**Q3 2021**	**Q4 2021**	
Cohort COVID-positive and suspected residents on separate floors, wings, or units	Provide instructions to nursing homes to create cohorting plans then review those plans	X	X	X					
	Continue to monitor nursing home structures to ensure appropriate cohorting is in place				X	X	X	X	

Recommendation #3: Hospital Discharges		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Prepare non-hub facilities to care for COVID-19 residents in case hubs are unable to take transfers	Identify facilities with CMS two-plus star staff ratings	X							
	Confirm non-hub selection criteria	X							
	Instruct nursing homes on data reporting requirements	X							
	Review self-certification documents for non-hubs		X	X					
	Establish recertification process and time intervals			X	X				
	Continue to monitor self-certification reports				X	X	X	X	
Recommendation #4: Continuity of Care		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Foster collaborations between nursing homes, hospitals, and local public health agencies	Meet with MHA to develop a plan	X							
	Establish regular brainstorm sessions with key stakeholders	X	X						
	Develop a process plan for collaboration			X	X				

Recommendation #5: Home, Community-Based Services		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Identify options for MI Medicaid to increase funding for, access to, and safety of home-based services for beneficiaries	Develop process to prioritize access to PPE, training for providers serving COVID-19 patients in the home, based on community prevalence			X	X				
	Monitor and take full advantage of federal funds and waiver programs for HCBS				X	X			
	Require health plans to maintain adequate HCBS and PPE supplies for community-based COVID-19 cases that do not need hospitalization (including nutritional supports delivered to member homes)			X	X				
Recommendation #6: Guidance		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Develop and disseminate key elements of guidance in checklist form	Identify focus areas for checklists (e.g. use of PPE)	X							
	Develop high-level templates for checklists	X							
	Draft and design checklists by focus area		X	X					
	Develop a dissemination plan			X	X				
	Develop process for continual tracking and compilation of federal guidance documents			X	X	X	X	X	
	Centralize checklists and other guidance documents on MDHHS website			X	X				

Recommendation #7: Training		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Build on MSF training tools and modules	Meet with WSU and U of D Mercy staff to better understand MSF toolkit and applicability for other training programs	X							
	Share MSF infection prevention webinars (linked in final reports) with all MI nursing homes	X	X						
	Identify key stakeholders and develop a dissemination plan for training	X	X						
	Develop plans for onsite 1:1 coaching refresher courses and infection control training, as recommended by MSF		X	X	X				
	Identify partners to conduct training in nursing homes		X	X	X				
	Launch training modules; continue to monitor and modify modules as appropriate				X	X	X	X	
Recommendation #9: Personal Protective Equipment (PPE)		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Develop process to ensure adequate PPE if cluster outbreaks occur	Convene a meeting with nursing home associations and local public health agencies to develop process to share PPE between nursing homes		X						
	Design and implement an enhanced PPE data reporting system to track and distribute PPE			X	X				
	Track all available federal PPE supplies and funding			X	X	X	X	X	

Recommendation #10: Screening and Testing I		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Direct testing supplies to nursing homes based on community prevalence	Increase staff with analytic capability to utilize community prevalence data, nursing home COVID-19 cases, and resource gaps to direct testing supplies to nursing homes.		X	X					
Recommendation #11: Screening and Testing II		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Establish pooled testing and adjust based on expected prevalence in sample	Identify labs with pooled testing capability. Change state guidance to allow pooled testing.		X	X					
Recommendation #12: Staffing I		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Increase staff pay	Establish protocols and prioritize the use of federal funds for hazard pay		X	X					
Recommendation #13: Staffing II		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Expand access to staffing resources	Expand Rapid Response Staffing Resource	X							Complete
Recommendation #14: Staffing III		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Address staff burnout	Work with nursing home associations to establish requirements for nursing homes to address staff burnout through additional supports			X	X				
Recommendation #15: Staffing IV		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Require full-time infection preventionist	Change state policy to require a full-time infection preventionist in nursing homes			X	X				

Recommendation #16: Staffing V		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Restrict staff from working at multiple nursing homes	Change state staffing requirements to limit exposure by restricting staff from working at multiple homes			X	X				

Recommendation #17: Behavioral health and ancillary services I		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Require and approve nursing home plans to ensure adequate access to behavioral and ancillary health care services.	Work with nursing home associations to establish requirements for nursing home plans to provide adequate access to BH and ancillary services			X	X				

Recommendation #18: Behavioral health and ancillary services II		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Enable non-COVID nursing home residents to socialize with each other to reduce social isolation	Work with nursing home associations to establish protocols for resident socialization that includes adequate testing, infection prevention, and control		X	X					

Recommendation #19: Visitation		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Broaden state visitation policies in accordance with CMS guidelines	Update outdoor policies. Develop and implement indoor policies before winter.	X	X						Outdoor policies complete
	Work with nursing home associations and ombudsman office to establish uniform communications and reduce fear of citations.		X	X					

Recommendation #20: Collaboration with MCOs I		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Reduce the administrative burden on MCOs and increase HCBS	Review options implemented by other states to reduce the administrative burden on MCOs to enable increased HCBS. Require MCOs to develop and				X	X			

	submit plans to provide additional HCBS for COVID-19 members.								

Recommendation #21: Collaboration with MCOs II		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Develop value-based incentive structures for nursing homes.	Review successful value-based incentive structures in other states and collaborate with MCOs to develop a model for Michigan.					X	X	X	

Recommendation #22: Data and Reporting I		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Clarify data reporting guidance, perform routine data quality and validation checks.	Work with nursing homes and NH association to provide technical assistance, clarify requirements and improve the quality and timeliness of nursing home data reporting.		X	X	X				
	Add data management staff to develop and implement routine data quality and validation checks.			X	X				

Recommendation #23: Data and Reporting II		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Expand analytic capabilities.	Create a data repository and tools to support reporting and data analysis, integrating multiple data sources.					X	X		
	Add analytic staff to develop methodologies to support interventions for PPE tracking and distribution, key shortage or cluster alerts, community prevalence rates to guide criteria for infection control.			X	X				

Recommendation #24: Departmental and Stakeholder Alignment		Dec 2020	Jan 2021	Feb 2021	Mar 2021	Q2 2021	Q3 2021	Q4 2021	
Strengthen communication between and within state departments, align policies, and better coordinate implementation.	Review and update departmental COVID-19 response coordination processes: improvement opportunities include communications, policy alignment, and data reporting.	X	X	X					
	Schedule regular stakeholder engagement meetings to gain diverse perspectives and facilitate support for policy changes.		X	X	X	X	X	X	

Region 1:
Clinton
Eaton
Gratiot
Hillsdale
Ingham
Jackson
Lenawee
Livingston
Shiawassee

Region 2N:
Macomb
Oakland
St Clair

Region 2S:
Monroe
Washtenaw
Wayne

Region 3:
Alcona
Arenac
Bay
Genesee
Gladwin
Huron
Iosco
Lapeer
Midland
Ogemaw
Oscoda
Saginaw
Sanilac
Tuscola

Region 5:
Allegan
Barry
Berrien
Branch
Calhoun
Cass
Kalamazoo
St Joseph
Van Buren

Region 6:
Clare
Ionia
Isabella
Kent
Lake
Mason
Mecosta
Montcalm
Muskegon
Newaygo
Oceana
Osceola
Ottawa

Region 7:
Alpena
Antrim
Benzie
Charlevoix
Cheboygan
Crawford
Emmet
Grand
Traverse
Kalkaska
Leelanau
Manistee
Missaukee
Montmorency
Otsego
Presque Isle
Roscommon
Wexford

Region 8:
Alger
Baraga
Chippewa
Delta
Dickinson
Gogebic
Houghton
Iron
Keweenaw
Luce
Mackinac
Marquette
Menominee
Ontonagon
Schoolcraft
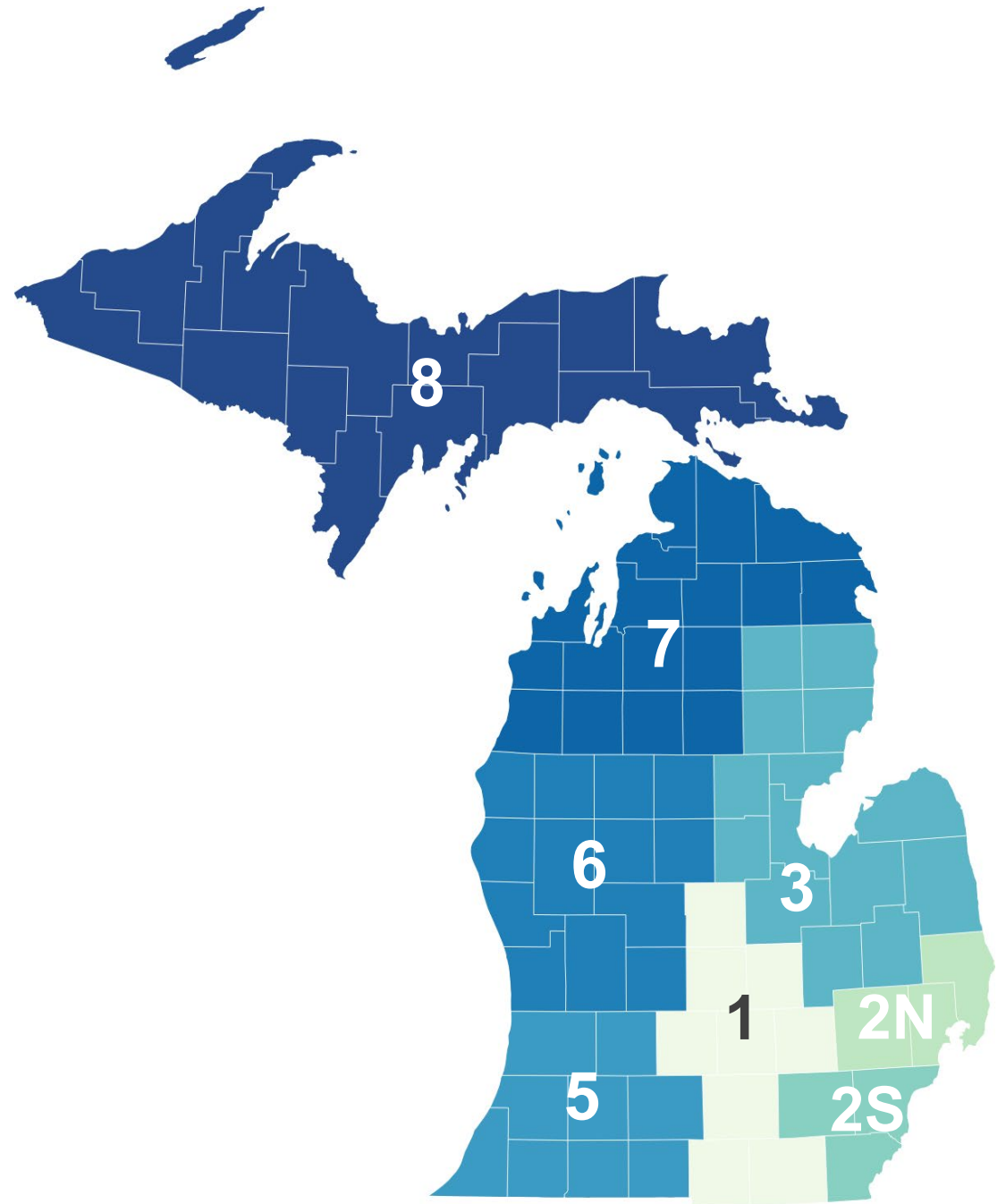
Appendix B: Detailed Data Analyses (Cumulative through August 19, 2020)

CMS Star Ratings

Figure 1

Nursing Home Resident Infections, Staff Infections, and Resident COVID-19 Deaths by CMS Overall Star Rating

	Overall STAR Ratings				
	1	2	3	4	5
Count Of Nursing Homes					
Hubs	2	7	4	5	1
Non-Hubs With COVID-19 Admissions	17	42	25	33	46
Non-Hubs Without COVID-19 Admissions	7	19	12	26	22
No COVID-19 Cases	8	24	16	35	57
Total	**34**	**92**	**57**	**99**	**126**
Resident Infections Per Occupied Bed					
Hubs	1.01	0.95	0.40	0.73	0.51
Non-Hubs With COVID-19 Admissions	0.48	0.53	0.56	0.46	0.37
Non-Hubs Without COVID-19 Admissions	0.15	0.10	0.11	0.10	0.12
Total	**0.33**	**0.34**	**0.30**	**0.23**	**0.18**
Staff Infections Per Occupied Bed					
Hubs	0.17	0.22	0.13	0.16	0.25
Non-Hubs With COVID-19 Admissions	0.18	0.19	0.26	0.24	0.21
Non-Hubs Without COVID-19 Admissions	0.11	0.08	0.10	0.11	0.11
Total	**0.13**	**0.13**	**0.15**	**0.13**	**0.12**
COVID-19 Resident Death Rate					
Hubs	21.8%	19.4%	24.8%	15.8%	26.7%
Non-Hubs With COVID-19 Admissions	26.1%	23.9%	29.1%	29.4%	25.7%
Non-Hubs Without COVID-19 Admissions	13.0%	10.7%	31.1%	17.2%	17.3%
Total	**25.2%**	**22.2%**	**28.8%**	**25.2%**	**24.9%**

Figure 2

Nursing Home Resident Infections, Staff Infections, and Resident COVID-19 Deaths by CMS Staffing Star Rating

	Staffing-Only STAR Ratings				
	1	2	3	4	5
Count Of Nursing Homes					
Hubs	0	4	9	6	0
Non-Hubs With COVID-19 Admissions	3	35	45	49	22
Non-Hubs Without COVID-19 Admissions	0	6	22	30	24
No COVID-19 Cases	1	8	24	52	52
Total	**4**	**53**	**100**	**137**	**98**
Resident Infections Per Occupied Bed					
Hubs	n/a	0.69	0.80	0.56	n/a
Non-Hubs With COVID-19 Admissions	0.48	0.52	0.56	0.41	0.29
Non-Hubs Without COVID-19 Admissions	n/a	0.33	0.11	0.10	0.08
Total	**0.35**	**0.45**	**0.36**	**0.21**	**0.08**
Staff Infections Per Occupied Bed					
Hubs	n/a	0.20	0.23	0.10	n/a
Non-Hubs With COVID-19 Admissions	0.36	0.19	0.25	0.21	0.17
Non-Hubs Without COVID-19 Admissions	n/a	0.18	0.12	0.09	0.09
Total	**0.26**	**0.17**	**0.16**	**0.12**	**0.07**
COVID-19 Resident Death Rate					
Hubs	n/a	31.0%	16.1%	20.1%	n/a
Non-Hubs With COVID-19 Admissions	34.3%	28.3%	24.6%	27.6%	24.7%
Non-Hubs Without COVID-19 Admissions	n/a	14.3%	17.5%	18.0%	16.9%
Total	**34.3%**	**27.6%**	**22.7%**	**25.8%**	**22.2%**

Analyses by Facility Ownership Type

Figure 3

Resident infections Per Occupied Bed

Ownership	Hubs		Non-Hubs With COVID-19 Admissions		Non-Hubs Without COVID-19 Admissions	
	Infections Per Occupied Bed	Facility Count	Infections Per Occupied Bed	Facility Count	Infections Per Occupied Bed	Facility Count
For-profit	0.70	21	0.50	123	0.13	54
Non-profit	n/a	0	0.42	35	0.11	21
Government	n/a	0	0.32	5	0.07	12

Figure 4

Resident COVID-19 Death Rates

Ownership	Hubs		Non-Hubs With COVID-19 Admissions		Non-Hubs Without COVID-19 Admissions	
	Death Rate	Facility Count	Death Rate	Facility Count	Death Rate	Facility Count
For-profit	19.7%	21	26.0%	123	20.7%	54
Non-profit	n/a	0	28.2%	35	10.9%	21
Government	n/a	0	32.9%	5	13.9%	12

Figure 5

Staff Infections Per Occupied Bed

Ownership	Hubs		Non-Hubs With COVID-19 Admissions		Non-Hubs Without COVID-19 Admissions	
	Infections Per Occupied Bed	Facility Count	Infections Per Occupied Bed	Facility Count	Infections Per Occupied Bed	Facility Count
For-profit	0.17	21	0.22	123	0.11	54
Non-profit	n/a	0	0.27	35	0.11	21
Government	n/a	0	0.26	5	0.07	12

Analyses by Region

Figure 6

Resident Infections Per Occupied Bed

Region	Hubs		Non-Hubs With COVID-19 Admissions		Non-Hubs Without COVID-19 Admissions	
	Infections Per Occupied Bed	Facility Count	Infections Per Occupied Bed	Facility Count	Infections Per Occupied Bed	Facility Count
1	0.57	1	0.30	11	0.13	12
2N	0.73	6	0.48	47	0.21	9
2S	0.86	7	0.52	63	0.26	5
3	0.67	3	0.54	18	0.11	14
5	n/a	0	0.44	11	0.07	11
6	0.35	2	0.30	12	0.07	25
7	0.24	1	0.60	3	0.07	4
8	n/a	0	0.08	1	0.07	6
All	**0.70**	**20**	**0.48**	**166**	**0.11**	**86**

Figure 7

Resident COVID-19 Death Rates

Region	Hubs		Non-Hubs With COVID-19 Admissions		Non-Hubs Without COVID-19 Admissions	
	Death Rate	Facility Count	Death Rate	Facility Count	Death Rate	Facility Count
1	25.0%	1	21.5%	11	19.7%	12
2N	18.7%	6	28.7%	47	19.4%	9
2S	20.1%	7	25.0%	63	27.6%	5
3	18.3%	3	31.0%	18	10.9%	14
5	n/a	0	28.6%	11	13.0%	11
6	26.5%	2	27.5%	12	15.3%	25
7	5.3%	1	15.9%	3	7.4%	4
8	n/a	0	0.0%	1	22.2%	6
All	**19.7%**		**26.7%**	**166**	**17.4%**	**86**

Figure 8

Staff Infections Per Occupied Bed

Region	Hubs		Non-Hubs With COVID-19 Admissions		Non-Hubs Without COVID-19 Admissions	
	Infections Per Occupied Bed	Facility Count	Infections Per Occupied Bed	Facility Count	Infections Per Occupied Bed	Facility Count
1	0.17	1	0.18	11	0.11	12
2N	0.19	6	0.22	47	0.12	9
2S	0.19	7	0.21	63	0.17	5
3	0.12	3	0.28	18	0.11	14
5	n/a	0	0.26	11	0.08	11
6	0.23	2	0.12	12	0.09	25
7	0.05	1	0.37	3	0.11	4
8	n/a	0	0.08	1	0.05	6
All	**0.18**		**0.22**	**166**	**0.10**	**86**

Appendix C: Literature Review and Annotations

Key Findings and Best Practices

The evidence-based research on COVID-19 in nursing homes is still emerging, with a steady stream of new publications that analyze practices, and identify the most promising ones, for protecting nursing home patients from COVID-19. This document describes the key findings and best practices identified in the literature to date. This review, conducted by the Center for Health and Research Transformation, focuses on both peer-reviewed and grey literature due to the emerging nature of COVID-19 research. Results are organized into the following topic areas: structural approaches, guidance and training, personal protective equipment (PPE), screening and testing, staffing, quality measures, behavioral health and visitation, and inequities.

Structural Approaches

Many states have employed a variety of structural approaches to cohorting (the practice of grouping together individuals who are similarly infected or exposed) nursing home residents. These approaches include establishing separate wings or units within existing long term care facilities, developing strict isolation protocols, and securing separate facilities for residents with COVID-19 and the staff members who care for them.

The literature on structural approaches to cohorting in nursing homes and long-term care facilities describes evolving practices and many innovative state solutions. In addition, partnerships between hospitals and nursing homes, and increased options for home and community-based services, which we outlined in our September report (*Keeping nursing home residents safe and advancing health in light of COVID-19)*, are innovative opportunities to improve COVID-19 patient care.

Highlights from the literature on structural approaches include the following:

- A toolkit published and continuously updated by the U.S. Centers for Medicare and Medicaid Services (CMS) highlighted state COVID-19 responses in a number of areas [see article #6]. In terms of structural approaches, states employed a variety of cohorting methods including strict isolation policies, separate wings or units, or separate COVID-19 facilities. These approaches included the following:

    - Delaware required nursing homes to designate a separate room, unit, or floor for COVID-positive residents and those suspected positive. Nursing homes were also required to designate separate areas for newly admitted residents to isolate for their first 14 days.

    - Florida initially used COVID-only isolation centers with a 1,500+ bed capacity to receive COVID-positive transfers from hospitals and skilled nursing facilities. This policy was later changed in favor of designating separate units in existing nursing homes. Large nursing home corporations in Idaho also set up COVID-only units.

    - New York released protocols for facilities to separate residents into positive, negative, and unknown cohorts and to have separate staff teams to care for COVID-positive and negative residents.

- In another article, an assisted-living facility in the state of Washington avoided a widespread breakout in March 2020 by implementing strict isolation and prevention procedures after the first case was identified. These policies included isolating residents in their rooms, restricting visitors, implementing increased hygiene protocols, and conducting daily staff screenings *[see article #27]*.

- In terms of hospital and nursing home relationships, one article described a Canadian partnership between a hospital that helped a local nursing home identify key challenges, fill staffing gaps, and provide psychosocial supports for nursing home staff *[see article #31]*.

- Several articles highlighted the need to support individuals who would prefer to transition to home and community-based services (HCBS). One article highlighted that several states have used 1915(c) waivers to increase accessibility to HCBS, which allows providers to conduct virtual assessments, modify level of care evaluation procedures, extend reassessment and reevaluation due dates, and modify the planning process *[see articles #13, #15, #20, and #30 below]*.

Guidance and Training

Prior to the COVID-19 pandemic, robust training and education in infection prevention was a challenge for nursing homes; this challenge has been exacerbated throughout the pandemic *[see article #15]*. The literature highlights need for additional training, and in particular for onsite training. Constant changes in federal guidelines were also noted as a training challenge and keeping up with shifting protocols. Highlights from the literature include the following:

- Multiple articles identified a gap in infection prevention and control (IPC) preparedness in long-term care facilities due to lack of training before the pandemic *[see articles #15, #22, #26, and #28 below]*. The literature highlighted the need for additional technical training for staff, through either regular technical assistance phone calls or onsite support.

- Another study found that 12 facilities in Detroit reported a reduced positivity rate (18 percent to 35 percent) within two weeks after participating in universal testing and receiving onsite IPC support from public health practitioners *[see article #28]*.

- Multiple articles mentioned the need to improve the regulatory approach to nursing homes to focus on quality improvement and education rather than punitive approaches *[See articles #13 and #22 below]*.

- A Kaiser Family Foundation (KFF) report outlined the CMS guidance and reported that guidelines given to nursing homes were constantly being updated over the course of the pandemic. Multiple articles indicated that increased guidance has led to increased burden on nursing homes to understand and implement guidance, including insufficient funding and staffing *[see articles #16 and #25 below]*.

- The KFF report also indicated that state survey agencies and nursing homes may be experiencing data management issues due to the constantly changing guidance and reporting requirements *[see #25]*.

Personal Protective Equipment (PPE)

Early in the pandemic, there were widespread shortages of PPE, and these issues have persisted *[see #21]*. The literature has indicated that centralizing the distribution of backup PPE is a best practice for nursing homes. Highlights from the literature included the following:

- A CMS toolkit describes state innovations to improve access to PPE including enlisting volunteers to make PPE, pushing out PPE resources to nursing homes, and centralizing the distribution of PPE *[see #6]*.

- A study published in *Health Affairs* found that 20.7 percent of nursing homes had a severe PPE shortage in early July, indicating that access to PPE hadn't improved significantly since early May (less than a one week of supply) *[see #21]*.

- One evaluation analyzing nursing homes and assisted-living facilities in Connecticut highlighted the shortage of PPE supplies and identified centralization of PPE supply and distribution as a best practice. During the height of the outbreak in Connecticut, many facilities had to procure their own PPE supplies because the state had expected to get PPE from the national stockpile but did not have PPE to distribute. This study and others

suggested that states centralize the supply and distribution of backup PPE to ensure that nursing homes have adequate supply *[see articles #6, #25, and #26 below]*.

Screening and Testing

The literature on screening and testing concluded that identifying cases through universal testing reduces COVID-19 transmission. However, nursing homes face several barriers to implementing widespread universal testing due to insufficient testing resources *[see #32]*. Highlights from the literature included:

- Evidence suggests that it is insufficient to test residents and staff based only on COVID-19 symptoms. A Maryland study found that, compared to symptom-based testing, universal testing in 11 Maryland long-term care facilities increased the identification of COVID-19 cases--from 153 to 507 total cases--due to the identification of asymptomatic cases. Early identification may also contribute to reduced mortality and hospitalization. Those who were identified as positive when they were asymptomatic experienced lower rates of hospitalization (13.0 percent vs. 17.4 percent) and mortality (4.6 percent vs. 8.7 percent) at a two-week follow-up *[see #3]*.

- In a study of nursing facilities in Fulton County, Georgia, facilities that performed facility-wide testing in response to a COVID-19 infection found a high prevalence of cases in residents and staff members– suggesting spread of the infection had already occurred by the time the first case was identified. In comparison, facilities that conducted testing as a preventive strategy (prior to a symptomatic COVID-19 case) had significantly lower cases at initial testing and follow-up testing *[see #4]*.

- The literature identified insufficient testing resources, leading to lags in testing results. A survey of members of the National Center for Assisted Living (NCAL) found that 60 percent of those surveyed waited up to four days for results, while 25 percent waited more than five days. One paper suggested the use of rapid testing to address delays. This hasn't been implemented on a wide scale in the U.S. yet, but can provide on-site, same-day results. *[#32]*

- After the federal government sent rapid-test machines to 14,000 nursing homes, operators reported that the machines were inaccurate, low on test kits, and expensive to resupply. Many of those who received machines ended up using outside laboratories instead of the machines to conduct tests *[see #16]*.

Staffing

The literature on staffing examined issues such as self-isolation, the importance of working at a single facility, and the need for additional staff supports to address burnout and mental health needs. Several articles identified the need for specific benefits such as paid sick leave and hazard pay. Highlights from the literature included:

- Evidence suggested that lack of sufficient support for staff has created staff shortages and an increased need for staff to work at multiple facilities, which may lead to medical complications, less time to care for residents, and increased chances for COVID-19 to spread to additional facilities. These studies suggested that increased benefits for staff, including paid sick leave, higher wages, and mental health support, would address these challenges. Multiple articles indicated that some nursing home staff and health care workers do not have access to paid sick leave, which may lead to nursing home staff working while sick *[see articles #12, #13, #15, #17, #19, and #20]*. Nursing home staff were excluded from the emergency paid sick leave benefits provided by the federal government earlier in the pandemic *[#19]*.

- A recent study published in *Health Affairs* found that nursing homes are facing staff shortages with 21.9 percent of the nursing homes they evaluated experiencing some type of shortage between June 24th-July 19th *[#21]*.

- A study of nursing home CMS quality measures across three domains—health inspections, staffing, and quality measures—found that a high rating in staffing was the only measure that was associated with lower numbers of

COVID-19 cases. This underlies the importance of staffing in nursing homes to mitigate COVID-19 spread *[see #9]*.

- A study of French nursing homes found that nursing homes with staff members who self-confined with residents were less likely to have cases of COVID-19 (5.8 percent) than a national survey of nursing homes (48.3 percent). The self-confined nursing homes reported just five deaths (0.4 percent of residents) while the comparison group reported 12,516 deaths (1.8 percent of residents) *[#2]*.

- A study of nursing home cases and smartphone data indicated that staff members working at multiple facilities may contribute to COVID-19 spread. The authors found that 7 percent of smart phones that appeared in one nursing home also appeared in another. Since this data was collected after visitor restrictions were imposed, the authors determined that the majority of the connections were most likely staff members. They also found that nursing homes had about 15 connections to other facilities. The authors determined that COVID-19 cases in nursing homes could be reduced by 44 percent if connections between nursing homes were eliminated *[#6]*.

Quality Measures

While some studies have found a relationship between CMS nursing home quality ratings and COVID cases and deaths, the most current evidence in the literature indicates that the CMS overall five-star quality ratings for nursing homes are not a reliable predictor of COVID-19 cases and deaths.

- One recent multi-state study found that the staffing component of the CMS quality rating system is significantly correlated with nursing home COVID-19 cases. This study analyzed nursing home cases and quality ratings across three domains and found that the only measure associated with lower COVID-19 cases was a high rating in the staffing component [#10]. The study also concluded that nursing homes with staffing shortages were particularly susceptible to COVID-19 case spread.

Behavioral Health and Visitation

The literature on mental health and visitation in nursing homes indicated that residents are experiencing social isolation—and associated negative physical and psychosocial impacts—due to restrictions on visitation and movement within the facility *[see #1, #20, #22, #25, #28, and #30]*. Authors recommended that states provide clearer guidance on visitation policies and that nursing homes loosen visitation policies whenever appropriate. Additionally, studies have highlighted specific strategies to increase social interaction, including outdoor activities and video calls. Highlights from the literature included:

- Mitigation and prevention measures within nursing homes have led to social isolation for nursing home residents. Several papers discussed the severe physical and psychosocial impact that these restrictions have had on residents, including increased depression, worsened dementia, and possible premature death *[see articles #1, #20, #22, #25, #28, and #30 below]*.

- Several studies highlighted key strategies that are best practices for increasing social interaction among nursing home residents and their families including outdoor activities and visitation, the establishment of "bubbles" of residents who can interact with each other, limited indoor visitation, and video calls *[see articles #1, #22, #28, and #29 below]*.

- Many nursing homes, however, have refrained from loosening visitation restrictions due to a lack of guidance. The literature has highlighted the need for clearer communication to nursing homes about best practices for increasing social interaction *[see articles #1, #22, and #26 below]*.

- Several studies concluded that visitation can be managed safely, based on the given level of COVID-19 in the community, staffing levels, and PPE availability *[see articles #1, #22, #26, and #29 below]*.

Inequities

- Nursing homes with a higher proportion of African American and Latino residents have been twice as likely to have one or more COVID-19 case. More than 60 percent of nursing homes nationally, where at least a quarter of the residents were Black or Latino, have reported at least one coronavirus case *[see #11]*.

- Even predominantly Black and Latino nursing homes with high ratings on the government's five-star rating scale have had higher COVID-19 infection rates than predominantly white nursing homes with low ratings *[#11]*.

- Larger facilities were more likely to have outbreaks, however large nursing homes with few Black and Latino residents were less likely to have outbreaks than large nursing homes with more Black and Latino residents *[#11]*.

- The majority of workers exempted from paid sick leave were disproportionately female, Black, and low-wage workers. Lack of sufficient paid sick leave may result in individuals choosing to work while sick or forgoing pay to stay home *[see #19]*.

Annotated Bibliography

1. **Abbasi, Jennifer. 2020. "Social Isolation—the Other COVID-19 Threat in Nursing Homes."** *JAMA.* **2020;324(7):619–620. doi:10.1001/jama.2020.13484**

This article discusses how lockdowns impact nursing home residents and the need for nursing homes to balance resident safety concerns against resident needs for social contact. Various long-term care representatives have stated that the physical and mental health of nursing home residents has been significantly impacted by restrictions that increase social isolation. These effects include increased depression, anxiety, worsening dementia, and even premature death. An individual interviewed by the author who runs weekly nursing home huddles said that nursing homes throughout the country have "absolutely pervasive" concerns about social isolation.

Nursing homes have attempted to engage residents in social activities through physically distanced activities, video chats, window visits, and other mediums, but they have faced several barriers. For example, video chats and window visits may be counterproductive for individuals with dementia because they may find these communications confusing. Some facilities faced barriers to implementing socially distanced activities because they were short-staffed.

The authors also pointed out that nursing homes have been inconsistently easing restrictions due to differences in state policies or fears of survey violations. For example, outdoor visits are allowed in Colorado, but many long-term care homes haven't allowed visitation because they fear receiving a fine. Overall, the experts interviewed in the article advocated for opening up as much as possible. Their recommendations included opening up for outdoor visitation, limited indoor visitation, and socially distanced resident activities since nursing homes now have more access to proper PPE and tests that can control outbreaks.

2. **Belmin, Joel, Nathavy Um-Din, and Cristiano Donadio. 2020. "Coronavirus Disease 2019 Outcomes in French Nursing Homes that Implemented Staff Confinement with Residents."** *JAMA Netw Open.* **2020;3(8):e2017533. doi:10.1001/jamanetworkopen.2020.17533**

This study discussed the relationship between staff self-confinement with residents in French nursing homes and COVID-19 outcomes. In several nursing homes in France, staff members chose to stay with residents in nursing

homes in an effort to reduce the chances of COVID-19 being introduced into the facility, and, therefore, to reduce spread of the virus. The authors of the study investigated whether COVID-19 outcomes were better in nursing homes with staff who chose self-confinement compared to national outcomes.

The authors compared outcomes from 17 nursing homes, which included 794 staff members who confined themselves with 1,250 residents, to a national survey that included 9,513 facilities (385,290 staff members and 695,060 residents). Data were gathered on the self-confined facilities through telephone interviews.

Of the self-confined nursing homes:

- Only one nursing home (5.8 percent) experienced a COVID-19 case among residents compared to 4,599 (48.3 percent) of nursing homes in the national survey;

- Only five residents (0.4 percent) had a confirmed case of COVID-19, compared to 30,569 (4.6 percent) in the national survey;

- Only 12 staff members (1.6 percent) had a confirmed case of COVID-19, compared to 29,463 (7.6 percent) in the national survey; and

- Five deaths (0.4 percent) were reported compared to 12,516 deaths (1.8 percent) in the national survey.

All of these findings were significant at a level of $P<.001$.

Overall, the authors found that nursing homes who had staff who self-confined had lower rates of COVID-19 in both staff and residents and lower rates of mortality for residents. The authors determined that self-confinement of nursing home staff may limit mortality among residents, and COVID-19 cases among staff and residents.

3. **Bigelow, Benjamin, F., Olive Tang, and Bryan Barshick. 2020. "Outcomes of Universal COVID-19 Testing Following Detection of Incident Cases in 11 Long-term Care Facilities."** *JAMA Intern Med.* https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2768377

This study analyzed the results of universal testing of untested residents in 11 Maryland facilities with known positive cases that had previously implemented targeted testing based on residents' symptoms. At the time of universal testing, nasopharyngeal swab samples were collected and analyzed, and information about symptoms was collected. Two weeks later, information was gathered on hospitalization and mortality status of tested residents at seven of the 11 facilities through telephone follow-up.

The authors indicated that the targeted symptom-based testing approach identified 153 COVID-19 cases. Through universal testing, the 893 remaining residents were tested, and 353 (39.6 percent) tested positive. Universal testing increased the identification of COVID-19 cases from 153 to 507 total cases. Of the total cases, 281 (55.4 percent) were asymptomatic. At the two-week follow-up, the authors found lower rates of hospitalization (13.0 percent vs. 17.4 percent) and mortality (4.6 percent vs. 8.7 percent) for those who were identified as positive when they were asymptomatic.

Overall, the authors of this study determined that the results underscored the importance of universal testing and likelihood that unidentified asymptomatic cases among residents contributes to transmission within facilities. The short-term mortality rates between asymptomatic and symptomatic cases indicated that mortality rates could be lowered with increased testing and case detection.

4. **Telford Carson T., Udodirim Onwubiko, David P. Holland, Kim Turner, Juliana Prieto, Sasha Smith, Jane Yoon, et al. "Preventing COVID-19 Outbreaks in Long-Term Care Facilities Through Preemptive Testing of Residents and Staff Members — Fulton County, Georgia, March–May 2020."**

This CDC report highlights data regarding active testing in nursing homes and other long-term care facilities. The report implies that proactive testing in long-term care facilities can prevent large COVID-19 outbreaks in these facilities through early detection and a controlled response.

Facilities that performed facility-wide testing in response to the known presence of a COVID-19 infection had high prevalence of additional cases in residents and staff members—suggesting that spread of the infection had already occurred by the time the first case was identified.

In comparison, facilities that conducted testing as a preventive strategy found that, even when a COVID-19 case was identified, the prevalence was significantly lower in initial testing and follow-up for both residents and staff members compared to facilities that performed testing in response to an infection.

5. **Centers for Medicare and Medicaid Services (CMS), 2020. Interim Final Rule (IFC), CMS-3401-IFC, Additional Policy and Regulatory Revisions in Response to the COVID-19 Public Health Emergency related to Long-Term Care (LTC) Facility Testing Requirements and Revised COVID19 Focused Survey Tool. https://www.cms.gov/files/document/qso-20-38-nh.pdf.**

This memorandum describes a CMS interim final rule establishing nursing home and other long term care facility guidance that requires testing residents and staff based on guidelines from the HHS secretary and revises the CMS survey tool to reflect the new guidance. This guidance includes information on testing frequency, documentation and reporting of testing, and survey procedures.

The memorandum outlines testing prioritization for staff and residents and provides guidance for nursing homes in the case that a resident or staff member refuses testing. According to the guidelines, nursing homes must implement the following testing:

• testing for all staff and residents who exhibit symptoms,

• facility-wide testing in response to an outbreak, and

• routine testing of staff based on the surrounding community's COVID-19 prevalence.

Nursing homes must use point-of-care (POC) testing devices or partner with off-site laboratories to complete their testing requirements. If partnering with off-site laboratories, laboratories must have the capacity to return test results within 48 hours. Tests must be documented in a staff member's personnel file and in a resident's medical record.

Nursing homes are required to report POC tests every 24 hours to local or state health departments. They are also required to continue reporting weekly COVID-19 data to the CDC. Failure to follow reporting requirements will result in financial penalty. The memorandum also updates the survey tool used by CMS surveyors to reflect the new requirements.

6. **Centers for Medicare and Medicaid Services (CMS). 2020. "Toolkit on State Actions to Mitigate COVID-19 Prevalence in Nursing Homes, September 2020, Version 10."**
https://www.cms.gov/files/document/covid-toolkit-states-mitigate-covid-19-nursing-homes.pdf

This CMS toolkit summarizes the state-level innovations that were used to address COVID-19 in nursing homes. The toolkit's major categories include:

- State actions for COVID management and response,

- Telehealth, and

- Organizations that are available to assist nursing homes.

Within "State actions for COVID management and response", the toolkit addresses a number of topics, including cleaning/disinfection, cohorting, infection control "strike teams," PPE, actions to improve access to PPE, and screening/visitors.

7. **Chen, M. Keith, Judith A. Chevalier, and Elisa F. Long. 2020. "Nursing Home Staff Networks and COVID-19."** *NBER* **Working Paper no. 27608. Retrieved from https://www.nber.org/papers/w27608.**

This paper investigated the relationship between staff networks and nursing home outbreaks to determine if staff working in multiple nursing homes played a role in the spread of COVID-19 in nursing homes. For their analyses, the authors combined nursing home COVID-19 case data and smartphone data from 30 million phones from March 13 – April 23, 2020. The authors also built networks to determine if strength and type of relationship between facilities impacted cases.

The study found that 7 percent of smartphones that appeared in one nursing home also appeared in another nursing home. Since this data was collected after visitor restrictions were imposed, the authors determined that these were most likely staff members traveling between facilities. The authors also found that nursing homes averaged 15 connections to other facilities.

When controlling for factors like location, number of beds, and quality ratings, the authors found that strength of connections (i.e. number of smartphones that connect one facility to another facility), number of connections, and centrality within a network predicted COVID-19 cases. Finally, the authors determined that COVID-19 cases in nursing homes could be reduced by 44 percent if these connections were removed.

8. **"COVID-19 in Assisted Living Facilities: Staff Report Prepared for Senator Elizabeth Warren, Senator Edward J. Markey, Rep. Carolyn Maloney." Retrieved from https://www.warren.senate.gov/imo/media/doc/Assisted%20Living%20Facilities%20Staff%20Report.pdf**

This report investigated how the 11 largest national assisted living facility operators handled the COVID-19 pandemic by sending a survey that requested information on outbreaks and prevention measures. The report was prepared because assisted living facilities share many of the same characteristics as nursing homes (communal living conditions and similar, high-risk populations), but less of the regulation, including lack of requirement to report COVID-19 cases to the federal government.

The authors of the report found that assisted living facilities had high rates of COVID-19, with almost one in four facilities reporting at least one case, and about 8 percent reporting an outbreak of at least 10 cases. Assisted living residents tested positive for COVID-19 at over five times the overall national average rate (2.9 percent vs. 0.5 percent as of 5/31/2020).

The authors also found that 43 percent of assisted living facility residents who tested positive for coronavirus were hospitalized, and, of those who tested positive, almost one-third died. According to the authors, the case fatality rates in assisted living facilities are similar or higher than nursing homes.

The authors found that none of these assisted living facilities reported the cases to the federal government. Additionally, they found issues with policies and protocols, including inadequate sick leave policies for assisted

living employees, lack of testing, and insufficient testing protocols. The assisted living facility operators also reported significant financial and logistical barriers in obtaining PPE for their staff.

9. **Dafny, Leemore and Steven S. Lee. 2020."Designating Certain Post-Acute Care Facilities As COVID-19 Skilled Care Centers Can Increase Hospital Capacity And Keep Nursing Home Patients Safer."** *Health Affairs Blog***, doi: 10.1377/hblog20200414.319963**

This blog post proposed the designation of specialized nursing facilities, which they refer to as "COVID-19 Skilled Care Centers, (CSCCs)" to serve the needs of stable patients who need to be transferred from intensive care beds or who need to be transferred from other nursing homes.

The authors recommended that each metro area create a scorecard to identify appropriate facilities or utilize the scorecard that the authors had already created. The scorecard included the following criteria for selecting facilities: skill and staff experience in treating respiratory illnesses, few long-term residents requiring relocation, high capacity in order to handle influx of residents and need to isolate residents, operational readiness, and managerial skill.

Using Medicare claims data and the Medicare Nursing Home Compare database, the authors identified nursing homes in metro areas that would meet their criteria for a designated facility. Due to the uncertainty of the virus, the authors recommend that all metro areas identify potential facilities and assist with the funding of these facilities.

10. **Figueroa, Jose F., Rishi K. Wadhera, and Irene Papanicolas. 2020. "Association of Nursing Home Ratings on Health Inspections, Quality of Care, and Nurse Staffing with COVID-19 Cases."** *JAMA.* **doi:10.1001/jama.2020.14709**

This study analyzed CMS ratings across three domains—health inspections, quality measures, and nurse staffing—to determine if higher rated facilities had lower COVID-19 cases than facilities with lower ratings. They compared 4,254 nursing homes in eight states (California, Connecticut, Illinois, Maryland, Massachusetts, New Jersey, and Pennsylvania) using COVID-19 case data collected from state health departments for 1/1/2020-6/30-2020 and data from CMS *Nursing Home Compare* across the three domains, which are characterized by a star rating of one (low) to five (high).

Of the nursing homes studied, the authors found that high-performing (four- or five-star) facilities were less likely to have more than 30 cases compared to low-performing (one- to three-star) facilities across all domains. After adjusting for the number of certified beds and fixed county statistics (high school education percentage, median income, and white population percentage), they found that nursing homes with high ratings in nurse staffing were less likely to have more than 30 COVID-19 cases than low-performing nursing homes in this domain.

The authors found no statistical significance for the other domains and determined that nursing homes with short staffing may be particularly susceptible to COVID-19. They also pointed out that CMS's primary strategy to mitigate COVID-19 spread, providing guidance on best practices, may be insufficient, and that CMS should target policies that would assist nursing homes with staffing.

11. **Gebeloff, Robert, Danielle Ivory, Matt Richtel, Mitch Smith, Karen Yourish, Scott Dance, Jackie Fortier, et al. "The Striking Racial Divide in How Covid-19 Has Hit Nursing Homes."** *New York Times,* **September 10th, 2020. https://www.nytimes.com/article/coronavirus-nursing-homes-racial-disparity.html**

This collaborative article reviews the impact of COVID-19 on nursing homes, specifically those with significant portions of Black or Latino residents.

The data shows that irrespective of governmental rating of the facility, nursing homes with higher percentages of Black and Latino residents saw more outbreaks of the virus than facilities (even poorly rated facilities) that were predominantly white.

The article highlights testimonies from some residents, staff members, and family members of residents.

12. **Grabowski, David C. and Vincent Mor. 2020. "Nursing Home Care in Crisis in the Wake of COVID-19."** *JAMA Network.***https://jamanetwork.com/journals/jama/fullarticle/2766599**

This opinion article discusses the questions that nursing homes are facing amid the COVID-19 crisis and suggests some solutions, including value-based payment models. Topics include nursing homes' concern for keeping staff safe, staff shortages, and financing given nursing homes are admitting less short-term post-acute care Medicare beneficiaries with higher reimbursement rates during the COVID-19 pandemic.

The authors stressed the immediate need for testing, PPE, and support for staff, which will also be greatly needed after the facilities remove or loosen lockdown restrictions. The authors suggested that value-based payment models would be appropriate in addressing short-term and long-term nursing care to provide safe and appropriate care for individuals who are recovering from COVID-19 or who require short-term or long-term nursing care.

13. **Grabowski, David C. 2020. "Strengthening Nursing Home Policy for the Postpandemic World: How Can We Improve Residents' Health Outcomes and Experiences?"** *The Commonwealth Fund.* **https://www.commonwealthfund.org/publications/issue-briefs/2020/aug/strengthening-nursing-home-policy-postpandemic-world**.

This paper identifies several policies to address U.S. issues with nursing home payment, regulation, and delivery, which have been amplified by the COVID-19 pandemic. The author recommended several policies that could strengthen nursing homes in the long-term.

Regarding payment, the author recommended that Medicaid and Medicare realign payments so Medicare is no longer overpaying for short-stays and Medicaid pays a higher rate for long-term stays. Additionally, the author recommends that Medicare and Medicaid dollars are set aside to give directly to caregivers and that wages to these caregivers are increased.

The author also recommends incentivizing resident-centered models of care, such as small-home models, and home- and community-based programs. Finally, the author recommends that regulatory reforms focus on what residents and advocates want, which is quality improvement.

14. **He, Mengying, Yumeng Li, and Fang Fang. 2020. "Is There a Link between Nursing Home Reported Quality and COVID-19 Cases? Evidence from California Skilled Nursing Facilities."** *J Am Med Dir Assoc* **21(7): 905-908. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7294249/**

This study examined whether there is a relationship between nursing home cases and deaths and nursing home quality. The authors studied 1,223 California skilled nursing facilities and compared their quality, using star ratings as their independent variable, and their COVID-19 cases and deaths as dependent variables. They also considered nursing home ownership, size, years of operation, and patient race composition in their model.

After adjusting for nursing home ownership, size, and years of operation, the authors determined that nursing homes with five-star ratings and higher percentages of white residents were less likely to have COVID-19 cases and deaths.

15. **Hirdes, John P., Anja Declercq, Harriet Finne-Soveri, Brant E. Fries, Leon Geffen, George Heckman, Terry Lum, et al. 2020. "The Long-term Care Pandemic: International Perspectives on COVID-19 and the Future of Nursing Homes."** *Balsillie Papers.* https://www.balsillieschool.ca/the-long-term-care-pandemic-international-perspectives-on-covid-19-and-the-future-of-nursing-homes/

This report, with an international perspective, proposes five major changes to long-term care considering the threat to the elderly that infectious disease can pose, which the global COVID-19 pandemic has brought to light.

- *Clinical resources need to be increased to meet the needs of nursing home and other LTC residents*: Authors suggested that governments should increase financial support to enhance clinical services, such as increased care from nurses and physical and occupational therapists, in LTC facilities, and allocate funding for more direct, specialized care.

- *Collaborations to improve both quality of care and quality of life in LTC facilities*: To improve both quality of care and life, the authors suggested that facilities shift to more person-centered models with transformed physical environments that allow for more community engagement. Quality improvement models like the Seniors Quality Leap Initiative (SQLI) should be used to drive culture change in LTC facilities. This initiative has been successful in improving pain management and appropriate use of anti-psychotic medications in nursing homes.

- *Enhancing evidence and standardizing data in LTC facilities to ensure that facilities are prepared for future threats:* While the authors pointed out critical gaps in Canada's LTC information system, they also found ways the U.S. could improve. The U.S. did not originally include nursing homes in public reporting, and the public had to rely on reports from news media and university research groups. Additionally, while the U.S. keeps standardized data on LTC facilities, they may not cover unregulated facilities.

- *Improving LTC pandemic and emergency preparedness:* The authors pointed out that governments didn't pay enough attention to infection prevention and control before the pandemic, and therefore, LTC facility staff members weren't adequately trained on breakout prevention and isolation practices. They recommend that IPC standards are improved in order to prepare for future pandemics.

- *Improvement to the working conditions of LTC facility staff members.* During the pandemic, staff shortages led to burn out, rushed care, and physical and mental health complications among residents. The authors recommend providing staff with better wages, benefits, and more stable employment arrangements.

16. **Jacobs, Andrew. 2020. "'Testing Hell': Gift of Devices to Nursing Homes Brings New Problems."** *New York Times*, September 29th, 2020. https://www.nytimes.com/2020/09/29/health/covid-nursing-homes-testing.html.

The federal government sent rapid-test machines to 14,000 nursing home facilities in order to assist with quickly identifying and isolating COVID-19 patients. Many nursing homes found these test machines unusable because they weren't accurate enough, came without enough supplies, and required expensive supply replacements.

The authors found that many nursing homes ended up using outside laboratories which had high costs and longer wait times instead of the test machines. The article also underscored the burden that federal guidance has had on nursing home staff and operators, which includes expensive testing and new rules and fines associated with testing reporting requirements.

17. **Jenq, Grace Y., John P. Mills, and Preeti N. Malani. 2020. "Preventing COVID-19 in Assisted Living Facilities—A Balancing Act."** *JAMA Intern Med.* **2020;180(8):1106–1107. doi:10.1001/jamainternmed.2020.2224**

This article reviewed the previous Roxby and colleague's article that determined that early surveillance and preventive strategies reduce transmission within assisted and independent living facilities. The authors report that the results may not be generalizable because Roxby et al. studied one facility. They identify several factors within the facility that may have contributed to low infection rates including the relatively fair health of the residents, the good functional status of the residents (which meant that they needed less staff interaction), and the early implementation of social distancing.

Additionally, the authors of this review point out the high rate of staff members reporting symptoms consistent with COVID-19 (28 percent), which underscores the need for improved sick leave policies for staff. While this was a limited study at one facility, the authors indicate that it provides an example of how a facility could implement an aggressive IPC strategy to reduce spread.

18. **Jones, Karen M., Julia Mantey, John P. Mills, Ana Montoya, Lillian Min, Kristen Gibson, and Lona Mody. 2020. "Research COVID-19 Preparedness in Michigan Nursing Homes."** *J Am Geriatr Soc.* **2020 May;68(5):937-939. doi: 10.1111/jgs.16490.**

This article describes the results of a study investigating the pandemic preparedness of Michigan nursing homes and changes in preparedness between 2007 and 2020. The authors used the results of a pandemic preparedness survey administered to state health department-registered nursing homes in 2007 and adapted and administered the survey to assess COVID-19 preparedness in state health department-registered nursing homes early in the pandemic.

The authors found that the majority of nursing homes had a pandemic response plan in 2020 (3 percent reported not having one) compared to the majority of nursing homes not having one in 2007 (51percent did not have a plan). Almost all of the nursing homes surveyed in 2020 (94 percent) had a staff member who was responsible for preparedness compared to 80 percent of those surveyed in 2007.

In 2020, nursing homes were more likely to have established communication with nearby hospitals (63 percent in 2020 vs. 49 percent in 2007) and public health officials (86 percent vs 56 percent), and were more likely to have stockpiled supplies in 2020 than in 2007 (85 percent vs. 57 percent). Overall, the results suggested that Michigan nursing homes were more prepared for a pandemic in 2020, as compared to 2007.

19. **Long, Michelle and Matthew Rae. 2020. "Gaps in the Emergency Paid Sick Leave Law for Health Care Workers."** *Kaiser Family Foundation.* **https://www.kff.org/coronavirus-covid-19/issue-brief/gaps-in-emergency-paid-sick-leave-law-for-health-care-workers/**

This article analyzes gaps in the emergency paid sick leave benefit within the Families First Coronavirus Act (FFCRA). This benefit, which took effect in April, guarantees eligible workers up to 80 hours of paid sick leave for a coronavirus-related health issue, but excluded several groups of U.S. workers, including those employed by private businesses with 500 or more workers and emergency responders and health care workers regardless of the size of the business that employs them.

The health care worker exemption was broad, including employees who provide direct patient care and employees who work at health care organizations but provide health-related service, like janitorial workers and food service workers. The authors analyzed the 2019 Community Population Survey Annual Social and Economic Supplement to estimate the number and characteristics of exempted workers.

The authors found that 17.7 million health care workers are not guaranteed emergency paid sick leave benefits under the exemptions. Over half of them (9.5 million) were automatically excluded due to firm size and 8.1 million were excluded at their employer's discretion as health care workers. The authors found that 75 percent of the exempt workers were women, 39 percent were from communities of color, 24 percent were part-time workers, and 18 percent were low-wage workers. Almost a quarter (24 percent) of them work in long-term care facilities.

The authors indicated that these gaps may force workers to choose between going to work with symptoms and staying home without pay. They identified multiple changes that may close these paid sick leave gaps, including a New York lawsuit arguing that the exemption of health care and emergency response workers is illegal, and the House's HEROES Act, which would extend the requirement to private companies with over 500 workers and health care providers.

20. **Manatt Health, 2020. "Recommendations to Strengthen the Resilience of New Jersey's Nursing Homes in the Wake of COVID-19."** https://www.manatt.com/Manatt/media/Documents/NJ-LTC-Report_2.pdf.

This report from Manatt Health provides the New Jersey Department of Health (DOH) with recommendations to strengthen the state's LTC delivery system following the COVID-19 pandemic, with considerations for the near-term (within four months) and intermediate to long-term (five or more months). The authors conducted a literature review, data analysis, analyses of national best practices, and interviews with stakeholders to reach their recommendations.

The authors provided four major recommendations with actionable steps within these areas: strengthen emergency response capacity, stabilize facilities and bolster workforce, increase transparency and accountability, and build a more resilient and higher quality system. Within these categories, the authors provided several actionable steps and examples of national best practices.

- *Strengthen emergency response capacity*: The authors recommended that the state establish a centralized emergency response operations center for LTCs, implement a reopening and testing strategy, and implement a plan for residents to communicate with their families. A best practice identified from another state included Minnesota's designation of several LTCs as "COVID support sites," which are LTC facilities with separate units and wings to treat COVID-19 patients and with the experience and resources to treat COVID-19.

- *Stabilize facilities and strengthen the LTC workforce*: The authors recommended that New Jersey implement policies to increase benefits to nursing home staff and increase payments to nursing homes. A best practice from Massachusetts was a $1,000 signing bonus for individuals who signed up to work at a nursing facility through a state staffing portal.

- *Increase transparency and accountability*: The authors recommended that the state implement new policies to regulate and track facility ownership, improve oversight of nursing homes, and improve and centralize the LTC data infrastructure. A best practice included California's LTC data infrastructure, which includes financial and utilization data in user-friendly formats to improve transparency.

- *Build a more resilient and higher quality system*: The authors recommend that the state of New Jersey improve safety and quality in nursing homes, streamline LTC oversight within the government, and create a task force to transform the LTC system in the long-term. A best practice from Massachusetts included establishing a nursing facility task force to address challenges experienced by skilled nursing facilities (SNFs).

21. **McGarry, Brian E., David C. Grabowski, and Michael L. Barnett. 2020. "Severe Staffing and Personal Protective Equipment Shortages Faced By Nursing Homes During the COVID-19 Pandemic."** *Health Affairs*. https://doi.org/10.1377/hlthaff.2020.01269

This article presents results from a national database (CMS COVID-19 Nursing Home Database) containing 98 percent of U.S. nursing homes. Data shows that more than one in five nursing homes report a severe shortage of PPE and a shortage of staff. Facilities with COVID-19 cases among residents and staff were more likely to report shortages. Shortages were defined as nursing homes with less than a one-week supply of N95 masks, surgical masks, eye protectors, gowns, gloves, and alcohol-based hand sanitizers. Nursing homes were considered to have a shortage of staff if they reported a shortage in any of the following: nurses, clinical staff, aides, other (including staff not involved in direct resident care like food or environmental service staff).

The study found that N95 masks and gowns were the most common types of PPE shortages, and nursing aides, nurses, and others were the most common staff shortage categories. Furthermore, facilities that were government-owned, had higher Medicaid revenue shares, had lower five-star overall and staffing-specific quality scores, and had staff and residents with COVID-19 cases were more likely to report shortages.

The study found that one in five facilities faced a staff shortage or severe shortage of PPE in early July 2020. For-profit nursing homes reported significantly higher rates of PPE shortages than other facilities, but not staffing shortages (a vast majority of nursing facilities in the U.S. are for-profit). Furthermore, nursing homes in areas of the country that faced a second surge of COVID-19 in late June and July (Alabama, Georgia, and South Carolina) had high concentrations of counties where the majority of nursing homes faced shortages even before the second wave began.

22. **Médecins Sans Frontières (MSF). 2020. "Responding to the Crisis in Long Term Care Facilities in Michigan Doctors Without Borders/Médecins Sans Frontières (MSF) Briefing Paper."**

This brief from Doctors Without Borders/Médecins Sans Frontières (MSF) describes their findings from an intervention in LTCs in Michigan. From May – July 2020, MSF observed, conducted interviews, and provided hands-on training and support in over 50 LTCs (32 SNFs and 24 adult foster care homes) in the Detroit metropolitan and tri-county (Macomb, Oakland, and Wayne) area. This brief describes their findings and provides recommendations to improve LTC facility responses to COVID-19. MSF recommends improvements in several areas, including IPC, staffing, and testing.

- *IPC*: The authors supported hands-on training for staff in the form of individual coaching and all-staff trainings. They stressed the importance of IPC and PPE training for non-clinical staff, such as environmental services staff, as they aren't usually trained in this area. MSF advocates for the implementation of a more collaborative, rather than punitive, regulation and oversight approach. They specifically mention the use of the IPC trainings discussed above as one way to improve staff behaviors in a collaborative oversight process. The authors also recommended creating a full-time position devoted to IPC.

- *Staffing*: The authors advocated for the need to invest in staff wellness and mental health support as staff are facing increased burdens at work and outside of work. Additionally, the authors observed that supportive leadership plays a key role in successful IPC, and therefore, recommended that LTC facilities stress the importance of supportive leadership at all levels. According to MSF, LTC staff reported that residents were experiencing cognitive issues due to loneliness and isolation, and the authors recommended that facilities be given practical and clear guidance to re-open visitation.

- *Testing*: the authors emphasized the importance of returning test results quickly in order to sufficiently monitor infections.

23. **Mody, Lona, Laraine Washer, and Scott Flanders. 2018. "Can Infection Prevention Programs in Hospitals and Nursing Facilities Be Integrated?"** *JAMA*. **2018 Mar 20;319(11):1089-1090. doi: 10.1001/jama.2018.0060.**

This article first describes key challenges faced by nursing homes in effectively implementing and maintaining infection prevention programs: 1) Patients receiving post-acute care and long-term residents often visit common areas such as dining rooms, rehabilitation areas, and family visitation rooms—increasing the risk of pathogen transmission; 2) nursing facilities lack in-house diagnostic testing and rely on off-site physicians, leading to delays in management of acute infections; 3) the post-acute care population has more active medical problems, more devices, wounds, recurrent hospital stays, and high antibiotic use compared with long-term residents.

Community-based nursing facilities often partner with hospitals under Medicare accountable care organization (ACO) programs. Integrated health care systems could benefit nursing facilities, and have some key advantages: (1) Sharing resources from a hospital-based infection prevention team can improve policies and practices, assist with staff training, and standardize practices; (2) sharing knowledge about the characteristics of the population, care delivery, and care coordination can increase understanding of challenges; (3) appropriate use of diagnostic testing can lead to more appropriate antibiotic treatment.

24. **Montgomery, Anne, Sarah Slocum, and Christine Stanik. 2020. "Experiences of Nursing Home Residents During the Pandemic."** *Altarum*. **https://altarum.org/sites/default/files/uploaded-publication-files/Nursing-Home-Resident-Survey_Altarum-Special-Report_FINAL.pdf.**

A survey of nursing home residents conducted from July to August 2020 investigated changes in residents' daily life, comparing pre- and post-COVID-19 restrictions. The authors found that residents' social interactions within and outside the nursing home have dropped significantly since COVID-19 restrictions have been imposed.

Survey respondents reported that they had a sharp reduction in visitors with only 5 percent having three or more per week compared to 56 percent before COVID-19 restrictions. Before the outbreak, 83 percent of respondents reported that they went outside for fresh air at least once per week compared to 28 percent after the outbreak. After the outbreak, over half of respondents reported not participating in any organized activities within the facility compared to 14 percent before COVID-19.

Additionally, less individuals reported eating meals in the dining room after the outbreak (13 percent after vs. 69 percent before). The vast majority of respondents to the survey also indicated that they were experiencing loneliness (76 percent) and that they no longer leave their rooms to socialize (64 percent).

25. **Musumeci, MaryBeth and Priya Chidambaram. 2020. "Key Questions About Nursing Home Regulation and Oversight in the Wake of COVID-19."** *Kaiser Family Foundation*. **https://www.kff.org/coronavirus-covid-19/issue-brief/key-questions-about-nursing-home-regulation-and-oversight-in-the-wake-of-covid-19/.**

This article discusses nursing home oversight and changes to nursing home oversight in response to the COVID-19 pandemic. The authors discuss a May 2020 U.S. Government Accountability Office (GAO) report, which found that there were widespread infection control deficiencies in nursing homes prior to the pandemic.

Once the pandemic began, surveys focused on "infection control and immediate jeopardy." From March 4[t] - May 30, only 13 percent of facilities were found to have deficiencies. The article also documented new federal guidance that was coming out during the pandemic, with multiple CMS guidance and actions being released per month for nursing homes. Finally, the authors acknowledged that state agencies that conduct surveys may have issues with funding, capacity, and data management considering they are required to manage new federal guidance and reporting requirements and face penalties for lack of compliance.

26. **Rowan, Patricia, Reena Gupta, Rebecca Lester, Michael Levere, Kristie Liao, Jenna Libersky, Debra Lipson, et al. 2020. "A Study of the COVID-19 Outbreak and Response in Connecticut Long-Term Care Facilities: Final Report."** *Mathematica.* https://www.mathematica.org/our-publications-and-findings/publications/fr-a-study-of-the-covid-19-outbreak-and-response-in-connecticut-long-term-care-facilities?utm_campaign=phpartners&utm_medium=email&utm_source=govdelivery.

This final report describes the impact of COVID-19 in Connecticut's LTCs, the response of the state and the LTC industry, and recommendations to improve preparedness in anticipation of a second wave of COVID-19. The authors reviewed COVID-19 data for LTC facilities, and interviewed stakeholders.

In total, the authors identified 23 short-term and 22 long-term recommendations to prepare for future disease outbreaks. Findings were organized into 10 categories: person-centered care, surveillance and outbreak response, emergency response, screening and testing, infection control, long-term staffing and workforce availability, state agency roles, expertise and skills, communication and coordination across state agencies, facilities and support organizations, care transitions, and reimbursement mechanisms.

Highlights in select categories include the following:

- *Person-centered care*: The authors recommended policies to balance infection prevention against the social needs of residents, which included the need for resident care plans to address social needs and the continuous assessment of visitation policies to reflect the prevalence of disease.

- *Screening and testing*: The authors recommended that guidelines are continuously updated to reflect new information about turnaround times for tests, testing technology, and testing partner capacity.

- *Infection control*: The authors recommended that the state work with the federal government and industry partners to procure backup PPE for facilities. The authors also recommended that the state provide staff members or consultants who can offer technical assistance in the area of infection control.

- *Communications*: The authors recommended that the state centralize and distribute written guidance to nursing homes. They also recommended that visitation is made more accessible, and that states make visitation guidelines clear to nursing homes.

27. **Roxby, Alison C., Alexander L. Greninger, and Kelly M. Hatfield. 2020. "Outbreak Investigation of COVID-19 Among Residents and Staff of an Independent and Assisted Living Community for Older Adults in Seattle, Washington."** *JAMA Intern Med.* 2020;180(8):1101-1105. doi:10.1001/jamainternmed.2020.2233

This case study described the results of a symptom screening and testing of 142 residents and staff exposed to COVID-19 at an independent and assisted living community during the same week that two facility residents were hospitalized with the illness. When a case was identified in this facility, staff implemented strict isolation and

prevention measures, which included isolation of residents in their rooms, restriction of visitors, increased hygiene practices, and daily staff screening of symptoms.

A public health surveillance team collected questionnaires from residents and staff asking about COVID-19 symptoms for the previous 14 days and universally tested them for COVID-19. Residents were tested again for COVID-19 a week later. The surveillance results identified infections among three asymptomatic residents and two symptomatic staff members. One week later, one additional asymptomatic infected resident was identified. Ultimately, a facility-wide outbreak did not occur.

The authors determined that testing was a better strategy for identifying cases than symptom screening. The authors also determined that strict infection prevention and social distancing measures may have prevented a widespread breakout. The authors identified several possible reasons that a breakout didn't occur in this facility in contrast to an SNF and another long-term care facility that experienced outbreaks: 1) Apartment living allowed for natural distancing, 2) universal testing occurred rapidly after the first case was identified, 3) residents in assisted-living have better baseline health, and 4) staff implemented strict isolation and prevention measures as soon as the first case was identified.

28. **Sanchez, Guillermo V., Caitlin Biedron, Lauren Fink, Kelly M. Hatfield, Jordan Micah F. Polistico, Monica P. Meyer, Rebecca S. Noe, et al. "Initial and Repeated Point Prevalence Surveys to Inform SARS-CoV-2 Infection Prevention in 26 Skilled Nursing Facilities — Detroit, Michigan, March–May 2020." MMWR Morb Mortal Wkly Rep 2020;69:882-886.**
   doi: http://dx.doi.org/10.15585/mmwr.mm6927e1

This study analyzed the results of repeated point prevalence surveys (universal testing of all residents and staff at a facility regardless of symptoms at a specific point in time) in 26 Detroit SNFs between March - May 2020. The testing, combined with implementation of IPC activities, was conducted by the Detroit Health Department and their collaborative team of local government, academic, health care system, and CDC partners.

The team tested all residents who had not previously been tested based on symptoms at 26 Detroit SNF facilities. A second survey was conducted in 12 of the facilities, which were prioritized based on the percentage of positive tests and the feasibility of repeated testing. Additionally, the team conducted onsite IPC support, which included inspecting cohorting practices, supply and use of PPE, hand hygiene practices, staff plans, and other practices at all 12 facilities.

The authors of the report found that 44 percent of residents were positive for COVID-19 at the 26 Detroit SNFs. Within 21 days of diagnosis, 37 percent of those who were infected were hospitalized and 24 percent had died. Of the 12 facilities that participated in both rounds of surveys, the percentage of positive tests decreased from 35 percent to 18 percent.

The authors determined that repeated point prevalence testing can help identify COVID-19 cases and subsequently inform practices within a SNF and guide the distribution of resources. They also determined that repeated point prevalence surveys combined with onsite IPC support may have reduced transmission in SNFs in Detroit and that the practice may improve outcomes for residents in SNFs. The authors recommended the implementation of widescale universal testing for SNFs once testing becomes more available combined with onsite IPC support from local and state public health departments.

29. **Shmerling, Robert. 2020. "The plight of nursing home residents in a pandemic."** *Harvard Health Blog.* https://www.health.harvard.edu/blog/the-plight-of-nursing-home-residents-in-a-pandemic-2020061920214

This article discusses the social isolation of nursing home residents. The author discusses contributing factors to higher rates of cases and deaths in nursing homes, measures taken by nursing homes to keep patients safe, the negative effects of social isolation, and how nursing homes can move forward balancing the health of individuals with the need for social interaction.

The author discusses the importance of relaxing visitation restrictions when CMS guidelines have been met. While many areas may not meet the goals set by CMS for relaxing visitor restrictions, which include no new cases for at least one month and adequate staffing and PPE, some strategies can combat social isolation with visitation restrictions. These strategies included reintroducing activities that allow for social distancing, encouraging outdoor activities, having staff assist with video contact with family, establishing clusters of residents who can socialize with each other to limit interactions, and sending residents home if there is available support in the home.

30. **Schubel, Jessica. 2020. "States Are Leveraging Medicaid to Respond to COVID-19."** *Center on Budget and Policy Priorities.* https://www.cbpp.org/research/health/states-are-leveraging-medicaid-to-respond-to-covid-19.

This article describes policies that states have implemented to improve access to health care during the COVID-19 pandemic. The author also advocates for increased federal funding for Medicaid programs in order to carry out these policies and continue providing accessible health care.

Several policies states have implemented are particularly relevant to LTC facilities as they have strengthened HCBS and the health workforce. States have used 1915(c) waivers to increase accessibility to HCBS, which includes allowing providers to conduct virtual assessments and planning meetings, modify processes for level of care evaluations, extend reassessment and reevaluation due dates, and modify the planning process.

States are also using waivers to deliver new services, like home delivered meals, services in new settings, and services expanded past normal limits. Additionally, some states are increasing payment rates to the HCBS workforce, assisting providers in staying in business, and directly paying family members who provide care.

31. **Stall, Nathan, Carolyn Farquharson, Chris Fan-Lun, Lesley Wiesenfeld, Carla A. Loftus, Dylan Kain, Jennie Johnstone, et al. 2020. "A Hospital Partnership with a Nursing Home Experiencing a COVID-19 Outbreak: Description of a Multiphase Emergency Response in Toronto, Canada."** *J Am Geriatr Soc.* **2020;68(7):1376-1381. doi:10.1111/jgs.16625**

Nursing homes have been hit hard by the COVID-19 pandemic. In the United States and Canada, case fatality rates in nursing homes was reported to be as high as 33.7 percent. In Canada, more than 80 percent of all COVID-19 deaths have occurred among nursing home residents.

This article discusses a 371-bed acute-care hospital's emergency response to a 126-bed Toronto nursing home experiencing a COVID-19 outbreak. The article describes the phases of a hospital-nursing home partnership: 1) Engagement, relationship, trust building, 2) environmental scan, team building, immediate response, 3) early-phase response, 4) stabilization and transition period.

An environmental scan of the needs of the nursing home was conducted which included immediate needs of the facility such as direct access to palliative care, geriatric medicine, and IPAC clinicians. This also included a need for staffing and the hospital's human resources and occupational health leads worked with nursing homes to further understand the current and projected staffing shortages. The environmental scan also determined PPE stockpiles in the nursing home, supply chain, and expected burn rate as well as shortages and needs for medical equipment.

The hospital addressed key challenges during the four main phases. For example, in the stabilization and transition phase, there were no further unexpected resident deaths or transfers to the hospital, and the outbreak was stabilizing. During this period, the hospital focused on alleviating staffing shortages, providing psychosocial support for nursing home staff, and preparing the home for a transition back to its normal routine for clinical care and management.

While the nursing home was experiencing its peak of COVID-19 resident deaths, the hospital focused on establishing infrastructure for virtual care – this included remote access to the nursing home's electronic medical records, tablet computers donated by the hospital, and secure video communication.

32. **Van Ness, Lindsey. 2020. "COVID-19 Testing Falls Short in Long-Term Care Facilities."** *The Pew Charitable Trusts – Stateline*, **July 15, 2020.** https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/07/15/covid-19-testing-falls-short-in-long-term-care-facilities

This article discusses some of the issues faced by long-term care facilities in implementing widespread, quick testing for COVID-19. One major problem discussed is the issue of delayed results, with more than half of facilities in an American Health Care Association and National Center for Assisted Living (NCAL) survey reporting issues with test result processing. Negative test results are only useful for a few days, but nursing homes have said they are waiting 16 - 21 days for results.

A survey of NCAL members found that over 60 percent of results were returned in up to four days, while about 25 percent took more than five days. Additionally, states were continuing to compete for testing resources, even as testing ramped up with the reopening of sports, companies, and schools.

While some states had done baseline testing of residents and staff, there were limited resources for repeated testing, which is critical in LTC facilities. Rapid testing was one solution recommended by several experts and advocates. Rapid tests have a higher chance of returning a false negative, but can provide on-site, same-day results. These tests can provide results much faster for long-term care facilities, but they haven't been implemented on a wide scale in the U.S.

Appendix D: Detailed Interview Summaries

Introduction

In addition to a comprehensive literature review and quantitative analysis of nursing home data, CHRT conducted 28 interviews with Michigan and national experts. The goal: To inform our evaluation of Michigan's COVID-19 nursing home response during the early months of the pandemic. Interviewees included nursing home administrators, health system administrators, nursing home association staff, long-term care (LTC) advocacy organizations, state ombudsman office staff, state agency staff, Medicaid health plan representatives, foundation staff, national policy experts, and researchers.

CHRT asked interviewees a series of structured questions about each state or organization's COVID-19 response in LTC facilities, including nursing homes, such as the challenges they faced, the most effective practices they implemented, the guidance documents they consulted, and more. Below, we summarize key takeaways from each interview. While we frame all takeaways in the active voice, these statements should be attributed to our interviewees. If there is any error in the portrayal of these statements, it is CHRT's.

National Interviews

Arizona

Managed care experts, interviewed July 30, 2020 and August 4, 2020 respectively.

Key takeaways

- Arizona prioritized home and community-based placement for persons with long-term care (LTC) needs. The state also developed services for individuals with intellectual and developmental disabilities (I/DD). Services for the population with I/DD may be an even greater focus going forward.

- Arizona incentivized Medicaid health plans to provide additional home and community-based services (HCBS), regardless of benefit eligibility, for COVID-19 patients discharged to home. Nutrition support and food delivery were identified as top priorities to enable individuals with COVID-19, or individuals who are self-isolating, to remain in the community safely.

- Arizona used health plans to manage the needs of COVID-positive residents in their managed care population as well as among those who are eligible for both Medicare and Medicaid.

- Some families preferred to take their loved ones home from acute care settings; Arizona worked with health plans to facilitate that process by making services available in the community regardless of whether the individual had long term services and supports (LTSS) benefits or not.

Arkansas

Arkansas Health Care Association (AHCA), interviewed August 18, 2020.

Key takeaways

- Arkansas used a combination of specialized COVID-only LTC facilities (only two facilities with limited capacity) and COVID-19 units in existing LTC facilities to house COVID-positive patients discharged from hospitals. Most nursing homes in the state had set up COVID-19 units (all were encouraged to do so), however some nursing homes had challenges isolating the movement of staff members within their facilities.

- Using references and training resources from the U.S. Centers for Disease Control and Prevention (CDC), the AHCA offers its members weekly webinars on federal regulations. Nurses from the Arkansas health department help with training programs and webinars. The nurses are able to clarify regulations and provide examples, as well as on-site evaluation of IPC, PPE, and testing protocols, and always set aside time for questions.

- The AHCA updates and simplifies the CDC guidance, in accordance with state policies. AHCA services have been available to every licensed nursing home (NH) facility during the pandemic. They maintain a COVID-19 website organized by agency and date so that facilities have one place to go for information.

- The AHCA has standing calls with the Survey and Certification Team to get updates, but was not able to obtain guidance or assistance on infection control and prevention (IPC) protocols. The team would audit nursing homes and fine them, but did not tell nursing homes how to properly use PPE.

- In Arkansas, nursing homes do not have strong relationships with hospitals. They have "good" relationships that help with referrals and admissions but not with PPE or testing.

- LTC regulations are very different from hospital regulations. Seventy percent of patients have dementia, which changes the dynamic of the facilities. To work effectively, hospital staff need to have LTC specific training and understand NH regulations. Additionally, dementia and other memory care issues make it more difficult for patients to comply with PPE use policies. Access to additional resources to address this issue would be helpful.

- Arkansas implemented testing policies that went above the minimum recommendations. From the beginning, nursing homes tested the entire facility within 48-72 hours if one individual tested COVID-19 positive. Because of this, NH staff were able to identify infections early, but turnaround times from the lab have since become an issue. They found many staff and residents (mostly staff) who were positive but asymptomatic with this testing approach.

- If a NH facility has a case, the AHCA facilitates communication with the health department. They have built relationships with efficient labs and connect the NH facility with a testing vendor to get tested quickly. They also provide test kits to facilities. Everything is centralized with the Arkansas health department.

- The AHCA tried to purchase PPE on behalf of independent NH homes because many vendors wouldn't sell to one facility/location. They were able to purchase at cost. They also facilitated donations of other PPE items. AHCA now has a database with PPE by facility, and a warehouse to store PPE they receive from the state or federal government.

California and Hawaii

Assisted living expert, interviewed August 6, 2020

Key takeaways

- Minimum wage workers cannot afford to shelter in place, and don't want to disclose when they are not feeling well. These people do not have a choice; they need to work.

- COVID-19 has complicated the assisted living business – you have to look at every intake differently and ask "can we care for them?" As intakes increase, assisted living facilities will eventually run out of beds. Skilled nursing facilities are taking on higher acuity patients than they are used to.

- Many nursing homes are performing "hygiene theater" for family members - what you clean that's important versus what you clean to keep families comfortable.

- In cases where residents control their own medication, an increase in resident overmedication has been observed.

- In assisted living settings, when they opened up visitation, there was a lot of pushback from nervous managers, but they also realized that families and residents needed visitation. Visits are conducted outside with 10-12 feet of space and mandatory masks.

Florida

Florida Health Care Association (FHCA), interviewed August 17, 2020.

Key takeaways

- In Florida (FL), the cohorting strategy evolved over time. Initially, when COVID-19 was identified in a facility, positive residents were transferred to hospitals, but putting asymptomatic or mildly symptomatic cases in hospitals was taking up beds Then the state created COVID-only facilities mostly in brand new buildings. These were nursing homes (NHs) that had been built recently but didn't have their licensure completed.

- Florida now has 23 COVID-positive wings or entire buildings (mostly wings) with the goal that no one needs to be transferred more than 90 minutes away to receive care. Since COVID-19 will be a long-term issue and NHs need to combine normal nursing care with COVID care, Florida put a stop to designating new COVID-only facilities. People should be treated in the most appropriate setting (and provided with the appropriate resources); In Florida, they started by transferring residents to hospitals. This wasn't the most appropriate approach, but it was the best they had at the time. Now, they are going back to basics: Treating individuals in the most appropriate setting.

- Florida used consultants to go into NHs to do infection prevention control (IPC) training; Infection control teams from the state (supported by the federal government through VA and FEMA dollars) went out to every NH and conducted inspections, consultations, and trainings. It was more training and consultation than inspection.

- Since 2004, the FHCA has had a seat at the state's emergency operation center. FHCA works hand-in-hand with the Medicaid regulatory body for every disaster (primarily hurricanes). Because of this, FHCA has connections with the regulatory body, and worked closely with them regarding COVID-19 policies.

- In Florida, there's a big brother/little sister relationship between hospitals and NHs, which is sometimes a good strategy, and other times does not work as well. Hospitals want to push individuals to SNFs, but SNFs may be

short-staffed, have an outbreak, etc. On the other hand, hospitals have helped SNFs with IPC training and testing.

- Policymakers in Florida feel that staffing is still the biggest challenge. Policymakers created a personal care aide (PCA) training program (aides that could assist certified nursing assistants, or CNAs) to increase the NH workforce. Policymakers also feel that the staffing shortages explained why COVID-19 beds were so limited in the beginning of the pandemic.

- Early on, obtaining PPE was a major challenge in Florida; some facilities had private groups making PPE for them. The state was able to make a big purchase and distribute. Now, the private market can mostly provide for PPE needs.

Maryland

Infectious disease expert, Johns Hopkins University, interviewed July 24, 2020.

Key takeaways

- Regular communication with nursing homes is important. Maryland (MD) had an ongoing hour-long call/webinar to present guidance updates to nursing homes and assisted living facilities with a Q&A session at the end.

- Maryland involved all large hospital systems on a daily call. Once the governor identified the need for strike teams, all facilities were required to have at least one round of universal testing of both staff and residents (tests were conducted by the National Guard); three different branches were included in Maryland's strike team approach: assessment teams, testing teams, and clinical care teams.

- There are issues with hospital discharge guidance; NHs have been pressured to take patients from hospitals without the resources to care for them, and politicizing the issue has added stress. Maryland should think strategically about guidance on this front; there wasn't any clear guidance in Maryland, and it resulted in a lot of confusion/stress.

- In Maryland, COVID-19 patients were not blocked from being admitted to facilities with no cases; however, if there was evidence of active transmission in a facility, local health departments could block that facility from accepting admissions (there were delays).

- Three components were needed to help reduce transmissions: 1) Having facilities do universal masking with face shields (as opposed to only universal masking) helped reduce transmissions; 2) ensure greater PPE supply (including N95 masks); and 3) make sure all personnel were fit tested.

- Delay in guidance regarding testing/universal testing was a big problem; When universal testing was conducted, nursing homes found many people tested positive for COVID-19 who would not have been tested otherwise. Surveillance testing for staff and residents should have started earlier. Johns Hopkins began the practice of testing anyone from a LTC setting at the door, regardless of the system. Many outbreaks were identified early on this way.

- The NHs that did well were the ones that limited staff to only work at one facility; this can only be achieved with hazard pay.

- Any guidance/mandate/policy from the state or federal government should be paired with an assessment of resources and the provision of resources. Most facilities still don't have the PPE or testing capacity required to respond to an outbreak in real time.

Massachusetts

MassHealth Office of Long-Term Services and Supports, interviewed August 12, 2020.

Key takeaways

- Massachusetts created a central command center as a partnership between MassHealth (MH), the Department of Public Health, and the Executive Office of Health and Human Services (EOHHS) with daily meetings.

- Massachusetts developed a dashboard to track key metrics including infection trends, staffing data, and PPE supplies.

- Massachusetts would benefit from strategically disseminating clear information to facilities (e.g. a toolkit) that aligns with CMS guidelines. Massachusetts initially developed a 28-point checklist but is no longer using it as it was too challenging to use with the CMS tools.

- There is always room for more training as it is difficult for facilities to make sense of the guidance they receive from federal, state, and local sources.

- In April – June, Massachusetts ran an accountability support initiative where the state provided support to nursing homes (NHs) with the help of consultants.

- Each week, Massachusetts responded to questions that were coming in from NHs, which built trust with facilities.

Massachusetts state policy experts, interviewed August 3, 2020.

Key takeaways

- Massachusetts (MA) converted Beaumont Rehabilitation and Skilled Nursing Center into its first COVID-19 treatment and recovery center in early April; this COVID-specific facility allowed for hospitals to discharge there directly. The plan to further convert COVID-19 facilities into COVID-only or "COVID-19 Care Centers," was abandoned due to preferred cohorting alternatives within existing NHs.

- In MA, it was noted as best practice to wear full PPE (masks, gloves, gowns, and eye protection) in a building with any COVID-positive patients.

- MA created a Rapid Response Clinical Team and Staff Resource on April 15, 2020, to provide short-term support for facilities with many cases or critical staffing needs.

- In MA, although staff members are designated to work with specific cohorts, there may be times when staff have to travel between multiple spaces in a facility. In this case, it is recommended that staff start with COVID-negative patients at the beginning of a shift, then move to COVID-positive patients.

- In MA's initial response, $100M in funding was made available to nursing homes due to challenges with usual discharges, a higher risk population, and the need to keep residents safe from COVID-19. MA put forward an additional $100M for setting incentives for facilities, which addressed important issues related to COVID-19.

- MA has a number of CMS Medicaid waivers that include providing home and community based services and a good deal of investment in the state is geared toward keeping people in their homes.

- MA created many FAQ documents, but facilities struggled with following multiple documents (guidance from the state and federal government). The state is currently looking at ways to better display its guidance documents; currently, guidance is posted on a long web page that is difficult to navigate.

- Conducting in-person facility assessments instead of just self-reporting is important and often prompts different perspectives. A facility may answer positively to a binary question, but the reality is different. For example, if states conduct in-person assessments it is easier for them to observe and correct any issues with screening and PPE protocols in NHs.

- MA is an example of integrating hospitals and NHs in the COVID-19 response. Hospital staff were heavily involved -- forging partnerships with NHs is very important; Partners Healthcare, for example, was very involved in post-acute settings and working with the NHs they discharged patients to. Partners Healthcare engaged on-the-ground staff with post-acute providers, steering patients away from institutional care where appropriate.

New York

John A. Hartford Foundation, New York, interviewed July 29, 2020.

Key takeaways

- Regular check-ins with nursing homes and other stakeholders were noted as a best practice and these "daily huddles" were recorded and made available online at no cost.

- There is too much variability in local public health guidance; instead, the Hartford Foundation relies on state and federal guidance. When you think about areas like NYC or the Adirondacks, they each have very different needs and challenges.

  Strike teams are key; In NY, strike teams were important and also utilized the National Guard to assist.

- The current NH plan is not working; bring back extended care wings in hospitals and post-acute patients should be transferred to a post-acute wing, not into the NH setting.

- 100 percent surveillance in NHs; If all rooms had cameras (given permission from families) this would solve issues of resident abuse/neglect and it would also be useful to monitor staff hygiene and PPE use (handwashing, cleaning/sanitizing, changing PPE).

- Racism in NHs is a major concern, particularly toward the staff. This must be considered when addressing the well-being and behavioral health needs of staff.

- The Northeast U.S. regional governors coordinated approaches to COVID-19 and this was an excellent best practice of working together that the Midwest could implement to be more effective.

- Family engagement is critical and communication with families is extremely important. Families need to be involved in choices for their loved ones and palliative care, goals, and preferences need to be discussed early on and frequently. NH communications with staff, families, stakeholders, and residents should better utilize media/news/radio to keep everyone informed.

- When acquiring new staff, we need to make sure that we are not just taking them from one facility to pay them slightly better elsewhere. We need to pay staff better overall and allocate extra funds to staff pay to increase retention.

Rhode Island

State Medicaid office, interviewed August 5, 2020.

Key takeaways

- Rhode Island (RI) set up a COVID-19 congregate care support/strike team as a one-stop shop for needs assessments and trainings on IPC, PPE, and staffing.

- Rhode Island set up a $25M resiliency fund for long-term services and supports with resources from the CARES Act. The goal was to increase the use of home and community-based services (HCBS). RI also used CARES Act funds for payroll incentives for patient care assistants in home health agencies.

- Rhode Island is working to address the demand and supply for HCBS; Demand - push no-wrong-door, person-centered counseling strategy involving hospital diversion. Supply - put money into recruitment incentives.

- Rhode Island implemented a temporary certified nursing assistant (CNA) licensure to increase staffing; it led to 389 more CNA candidates.

- RI developed a comprehensive checklist through the state Department of Health, administered through a combination of self-reported data and on-site surveys; CMS played no role in the initial guidance, but assisted with supplies and technical support.

- RI has contracts with two NHs to take hospital discharges but the state wound down contracts as demand decreased. COVID-positive patients are still moved to NHs, but the facilities are educated around IPC procedures.

- RI indicated they would have liked to have had a better understanding of where NHs stood in terms of quality and finance. They don't want to give money to facilities to take COVID-19 positive patients when those facilities could close in six months for financial reasons or should be closed due to low quality.

Michigan Interviews

Michigan Elder Justice Initiative (MEJI), interviewed August 13, 2020

Key takeaways

- MEJI suggested the creation of a hotline at the Michigan Department of Licensing and Regulatory Affairs (LARA) or the Michigan Department of Health and Human Services (MDHHS) that providers can call to obtain guidance and assurance that resident visits that comply with orders/guidance from the departments and CMS are permissible. This accessible information will ease fears of citation and provide a quick education resource for facilities.

- MEJI reported that basic services have not been consistently provided to NH residents (e.g. access to clergy, compassionate care visits, bathing, grooming/barbers). Additionally, key medical services with ancillary providers—including occupational therapy, physical therapy, speech, dental, and mental health—were not being provided consistently, or were not provided in a way to promote health (e.g. physical therapy sessions offered via e-visit).

- They would like to see all facilities identify a staff person who will be responsible for coordinating permissible visits between residents and families, in addition to sharing protocols for visitation and being a point of contact for families. It is important to ensure that the staff person has sufficient time to assume this role effectively or consider if a volunteer could fulfill this role effectively.

- The state should invest in adequate on-site oversight to ensure the safety of residents and adequate staffing levels to reduce the risk of community spread to the greatest extent possible, as well as to ensure the appropriate use of public funds. Additionally, on-site oversight would encourage more accurate reporting.

- Window visits have not been successful in some cases and it has led to confusion by the residents, particularly those residents with dementia or cognitive disorders.

- NHs are not consistently using the flexibility provided to them by MDHHS about visitation (compassionate care or special circumstances) because (1) they are unaware of the guidance, (2) they fear something could go wrong or they could be cited, (3) they often have staff shortages that limit their ability to support or supervise visitation. Some NHs facilitated video calls with iPads and some established policies for end-of-life visits by appointment only. However, there was still confusion about visitation allowed in special circumstances. Additionally, there is confusion overall about the lack of clear guidance regarding reopening.

- NHs should be required to establish a person-centered plan for each resident that identifies how their psychological and social needs will be met.

- NHs should allow nursing home residents to identify one – two individuals who would be their designated visitors or essential persons and who would, prior to their initial visit, undergo training on infection prevention and control protocols.

- Using funds from the Civil Monetary Penalty Fund, plexiglass cubicles should be provided to every facility in order to permit safer visitation. These booths are being used in a number of other states and the practice has been approved by CMS.

- MEJI shared anecdotal reports of extreme staff shortages at specific hubs; Staff levels may not always be reported accurately.

- In the beginning of the pandemic, some hubs were chosen based on bed availability; some interviewees noted quality issues with several of the hubs. If the hub strategy is kept, these interviewees recommended the selection process of hubs should be revisited, potentially with new or different incentives.

Health Department of Northwest Michigan, interviewed August 10, 2020

Key takeaways

- The Health Department of Northwest Michigan said it is generally referring to state guidance, and has found that state guidance is very much in line with CDC guidance. There is a need for standardizing guidance among local public health (PH) agencies, while still listening to the needs of individual facilities and local PH officials - one size does not fit all. Consistency of guidance is particularly difficult among local PH agencies, as all local health departments have experienced the pandemic in different ways (capacities, surges, populations at risk).

- Early on in the COVID-19 pandemic, health systems, local PH, and NHs found it challenging to follow updated and constantly changing guidance.

- "Community calls" to check-in with local nursing homes were helpful. Frequent communication is key.

- Local PH agencies learn from each other; they often share resources informally between jurisdictions and regions; Kalamazoo county shared a toolkit and how the county was implementing strike teams with many other counties.

- The regional health department met with local hospital leaders (before hubs were established) to create partnerships in case they needed to borrow staff for NHs or transfer COVID-19 residents to hospitals.

- The department developed a regional strike team to assist with onsite testing and this team of nurses physically conducted tests and delivered samples to labs. Additionally, they expanded and repurposed a local lab to process test results—the lab had primarily conducted water testing before COVID-19. This significantly decreased the turnaround time for test results.

- As a rural area, the regional health department noted that it appreciated state-provided resources and staff supports. Being able to tap into state resources and support was helpful during the surge, but then it was important to turn off the switch when the needs/demands were met so local staff would not be displaced.

- During slower times, the regional health department is trying to focus on giving staff a break. Working to prevent staff burnout by giving breaks/time off when things are "slow" is critical as we may be dealing with this on and off for a long time.

School of Public Health, University of Michigan, interviewed August 10, 2020

Key takeaways

- A toolkit distributed by the U.S. Substance Abuse and Mental Health Services Administration, "Promoting Emotional Health and Preventing Suicide: A toolkit for Senior Living Communities," shares resources to promote mental health, prevent suicide, and encourage active participation among residents.

- Currently, the focus is on protecting physical health at all costs, including at the cost of mental health, but this doesn't have to be a "zero sum" game. Social isolation harms both physical and mental health; people will experience declines (including in speech and vocabulary) if they don't have meaningful social interactions.

- Staff in this field often experience burnout, but it is worse now; we need to take steps to incentivize staff and prevent burnout: hazard pay, assistance programs, better pay in general (not just during the pandemic). Apathy is also a concern; some studies show that most staff expect their residents to be depressed.

- Staff themselves may have ideas as to what would be helpful to address both resident and staff behavioral health needs and other ways to improve care in the facility. NHs should solicit ideas from their staff.

- More effort should be placed on home health care; the state should consider ways to incentivize the use of home care (enable people to modify their homes, hire someone to help support people in their homes).

- The majority of suicides in LTC are among those who recently transitioned to a facility or think they're going to be transitioned to a facility; financial burden of facility care also contributes to suicide risk.

Henry Ford Health System (HFHS), interviewed July 31, 2020

Key takeaways

- Increased communication and daily phone calls with nursing homes, home and community-based service providers, and LTC providers is important, particularly regarding capacity and PPE supply.

- Henry Ford Health System (HFHS) developed IT platforms were developed to coordinate care for residents with COVID-19.

- HFHS donated their extra PPE to over 170 LTC and home-based care organizations in the area. Hospitals that partnered with NHs provided valuable resources for PPE.

- HFHS set up in-house testing within a week; they now have the capacity to assist NHs with testing. They also process lab tests quickly.

- SNFs are often held accountable and fined, but they are not taught how to carry out best practices.

- HFHS worked collaboratively with facilities, which helped in building a positive relationship; some health systems set up calls and built relationships, but some health systems did not build these relationships, which made it more difficult for those hospitals to assist local LTC facilities.

- If there is a bed shortage, patients should be discharged as soon as they are medically stable. SNFs should be able to take individuals with COVID-19 and a certain level of medical need; some SNFs asked for two negative tests before admitting residents, and that is not feasible during a surge.

- Early on, PPE was the biggest need; One concern health systems had was that assisted living facilities would send residents to the ER because there was not adequate PPE at their facilities.

- Staff desertion was an issue with SNFs and NHs. SNFs gave incentives to nurses working COVID-19 units (increased pay) and would check in on staff who called-in to say they couldn't work to make sure they were healthy. Additional support for staff occurred internally as there wasn't support/funding from the state initially.

- Early on, NHs and SNFs struggled to find a "gold standard" for reliable information regarding best practices on IPC and other protocols to handling COVID-19.

Médecins Sans Frontières (MSF), Detroit, Michigan, interviewed July 31, 2020

Key takeaways

- The infection preventionist needs to be an FTE that is a separate position from the Director of Nursing.

- Taking all COVID-19 positive residents and sending them to one specific facility in the region won't fix the issue of outbreaks; staff are still going to come and go, and infections will still occur that way.

- We cannot handle this with a "one size fits all" approach. Some nursing homes are equipped to keep and care for COVID-positive residents, and others are not. When homes don't have the capacity to care for a COVID-19 resident, that resident needs to be transferred to a more appropriate facility. There has to be a nuanced approach.

- It is important to create straightforward and brief guidelines and recommendations, particularly for infection prevention and control (IPC) guidance. The recommendations should be tailored to each NH's individual challenges, needs, and layout.

- On-site training should be conducted with nonclinical staff; many of them have never received training, but can unknowingly spread virus (food service, cleaning/janitorial staff). Non-clinical staff trainings should be conducted separately from clinical staff trainings so all staff are comfortable asking questions.

- MSF's "Pop-up model" can be expanded using local schools of nursing that send graduate-level nurses into the community to support NHs and other LTC facilities.

- Nursing schools should create strong partnerships with local health departments to imbed nurses in homes that need assistance.

- MSF observed that there was confusion in NHs over when extended use of PPE was appropriate. When there is adequate supply, best practices need to be followed.

- MSF observed that hubs appeared to have better training/understanding of PPE usage and IPC protocols.

- Go for the low-hanging fruit that can be addressed through education, training and support. Examples include high-to-low level cleaning; get the basics right--don't do too much with double gowns or rules that do not actually assist with IPC; how to properly cohort and staff those cohorts. Use well understood examples like infection control for C difficile, a bacterium; include nonclinical staff in trainings.

- Conspiracy theories - the COVID-19 pandemic has been full of them, and at times, staff are buying into them, so it is important to educate staff on "why" certain protocols are in place. Education is key in combating misinformation.

- Staff were more receptive to IPC trainings when completed in conjunction with mental health workshops. The social worker and nurse teamed up to complete these trainings together. The message was delivered jointly to address both resident and staff needs, "Here is what we need to do to protect residents, and we understand that's a lot to ask of you, so here's what we can do to take care of ourselves and staff at this time".

- On-site instruction, education, and training is key; imbedding knowledgeable nurses was a helpful best practice in training staff on how to clean, cohort, implement IPC, don/doff PPE.

- Education should also be frequent (re-educate staff).

Health Care Association of Michigan (HCAM), interviewed July 31, 2020

Key takeaways

- Task force workgroups in Michigan discussed whether or not swing beds in hospitals could be used to keep residents a bit longer before discharge; HCAM noted that this is all predicated on hospital capacity and the facilities themselves.

- HCAM's relationship with MDHHS and LARA was helpful and allowed them to answer members' questions about guidance more easily and effectively; they ensured that their members understood the guidance and how to apply it.

- Transferring residents between NHs in Michigan requires a complex approval process. The NH and rehabilitation communities and providers are not directly opposed to COVID-only facilities, but it may not be feasible here in Michigan.

- HCAM sends out a member update almost daily to convey guidance to its members (354 nursing facilities in the state).

- Hospitals and NHs have always had relationships, but without adequate supplies and testing, there was a lot of fear on both ends.

- Guidance needs to evolve to address resident isolation as well as physical and mental health; it's a double-edged sword when all actions are aimed at preventing and mitigating spread.

- PPE shortages were a big issue early on – NHs were tier two, not tier one, for PPE.

- Providers were trying everything to procure PPE on their own; some directly reached out to Chinese manufacturers to get PPE. Providers were saying that once they had the resources they needed (PPE & staff specifically) they could do their jobs and make the necessary changes.

- Testing strategy has been a game changer if you can get adequate, real-time results; test results need to be received within 72 hours to be meaningful and actionable. While some facilities are getting results with 48 hours, most are not, likely due to capacity issues and volume of samples.

- Staff "fall-off" was an issue; people stopped showing up to work or coming in, especially in Michigan where COVID-19 was particularly prevalent.

- We need to address the financial price facilities are paying; there have been significant revenue strains from higher wages, PPE costs, lower census, and fewer elective surgeries.

Michigan Health and Hospital Association (MHA), interviewed August 6, 2020

Key takeaways

- Other states have tried every approach when it comes to transferring COVID-19 patients to NHs (hub or not) that treat other patients. As long as they have appropriate precautions (PPE, separate wings, IPC, etc.) they can co-exist; it really comes down to how prepared NHs are and how they are trained with IPC measures and PPE.

- Overall, hospitals felt positively about the hubs, but the demand was so high for NHs at the time hubs rolled out that they still couldn't take all the transfers that were needed. There weren't enough hubs and sometimes they were hours away. Hubs or not, hospitals appreciate having designated nursing homes that are equipped to handle COVID-19.

- Hospitals are concerned about too many transfers. One patient could be transferred multiple times. There is an opportunity for a more streamlined approach (possibly direct admission to a hub if patients don't need to go to a hospital).

- The challenge of getting residents to dialysis is complicated and should be considered when discharging patients; a lot of patients need dialysis after their hospital stay.

- Some quality improvement organizations (QIOs) want to go on-site to conduct training and face-to-face education, but this causes concern for many nursing homes. We need to think about how we work with NHs in MI that are not currently impacted. There may be opportunities for video training programs, or education outside with social distancing.

- MHA looked at examples of where the MSF training module worked well; however, we need to be asking if it is appropriate for other entities such as quality improvement organizations (QIOs) to conduct the MSF training modules, as the QIOs do not have PPE or supplies onsite.

- MHA Keystone Center, part of Superior Health Quality Alliance, did a lot of work with quality improvement and linking hospitals and NHs through community coalitions across the state.

- Health systems are willing to provide teams to assist with discharge planning for transitions to NHs, as well as to share IPC strategies with facilities, but this is a big request for hospitals and payment would be helpful/needed.

- If hospitals have enough capacity, they could keep patients until they are COVID-negative, but during a surge it is in a hospital's best interest to create relationships with NHs. Once patients are medically stable, the hospital is not the most appropriate or safest place to keep them.

- Although hospitals in MI may be willing to assist NHs with staffing, the pushback may be "how can we help when we don't have staffing?" Furloughed staff may be able to assist NHs, but the skill sets for LTC are different. Many of these available staff members may not have the qualifications or ability to work in the NH setting or assist with infection control or PPE usage.

- When patients are hospitalized for COVID-19, they often require higher levels of care than can be provided at home. If they are healthy enough to go home – create discharge kits, send PPE, and give directions for when to call a doctor or go to the ER; MHA has had conversations with the state on this. Home care help is also needed.

Infection Prevention Response and Assessment Team (IPRAT), interviewed August 19, 2020

Key takeaways

- IPRAT provided guidance to local public health agencies to make sure all infection prevention and control protocols were implemented when outbreaks occurred in NHs.

- IPRAT is now focusing on increasing its staff to have more individuals whose sole focus is on IPC. Expanding with on-site teams is going to be really important. Ideally, they would be able to dedicate a team to a facility for four to five days at a time.

- IPRAT plans to establish strike teams and would like to continue some of the work done by MSF and continue those models. Strike teams are new to LTC in Michigan; IPRAT originally was conceived of as a strike team concept, but realized it wasn't feasible with resource constraints (lack of personnel, limited time of epidemiologists); they'd like to use data the state is collecting, not just referrals, to be more proactive.

Michigan nursing homes, six interviews

Key takeaways

- Early on, some NHs saw hospitals being hit and started preparing. One corporate NH separated their buildings into four units based on COVID-19 exposure. Most of their buildings had a separate COVID unit with fire-locked doors. They also had separate entrances, laundry, diet--all to avoid cross-contamination.

- Many NHs noted the importance of designating staff to work the COVID-19 unit and keeping their entrances and spaces separate. One NH stated that if staff work the isolation unit, they are never supposed to go back through the building again after work. Patients who are COVID-positive enter the back door directly to the COVID-19 unit.

- Dialysis was noted as a challenge for NHs to cohorting and preventing COVID-19 spread. In one NH, the short-term floor had COVID-19 spread occurring, and they attributed that to a dialysis patient who went out for treatment and was exposed to COVID-19. As a result, the nursing home created a new cohort area for their dialysis patients because they were the ones testing positive for COVID-19 most often as a result of regularly needing to travel outside of the facility for treatment.

- Many corporate facilities with multiple locations had an administrator or chief nursing officer take on the responsibility of reviewing, consolidating, and distributing updated guidance to all of their facilities each day. Administrators at individual facilities would then distribute the information to their staff through postings near time clocks or messaging/emailing staff directly. Some facilities even organized regular conference calls to distribute information to all facilities. This saved the individual facilities a lot of time and helped to create consistency among facilities. For smaller facilities without those connections, the administrative burden fell on the staff at the facility level to review updated guidance and educate all other staff members.

- Many NHs stated that there was a lack of clear guidance about reopening; Guidance needs to be clear to the advocates, surveyors, providers, and families. One administrator said they are more concerned now than they were in March/April. Many facilities have spent millions on PPE, shields, sensors, etc., and they still fear being penalized, despite the fact that much of the "reopening" information available seems conflicting or unreasonable to NH administrators.

- Some facilities reported that they were given unclear guidance, and then penalized when they did something wrong. One example: In March, there was fear around spread so they were given directives to move residents as little as possible. Because of this, facilities kept individuals in their rooms when they were undergoing testing.

The facilities were then cited for not separating residents from their roommates. They claim this citation was applied retroactively (after the guidance had changed), and that it could result in across-the-board citation.

- One NH administrator stated that the guidance and reporting requirements do not make sense, and that perhaps the numbers are skewed because some of the early deaths were hospice patients who had a few of the symptoms. Still, the administrator was required to report them as COVID deaths.

- One corporate NH noted that it received emails from the Health Care Association of Michigan (HCAM), that were helpful in getting letters out to their facilities with updated guidance.

- One corporate NH that conducted its own trainings suggested that instead of training, it would be helpful to have someone monitoring and re-directing staff. At some point, there is enough training, and people make mistakes because they're burnt out. It's more important to monitor staff for burn out. The nursing home said that any qualified staff (like hospital staff) would be welcome to help with training, but felt that IPC issues would be found in hospitals too if they were subject to the same surveillance. Staff burnout is the real issue.

- In the beginning, there was a misunderstanding around asymptomatic spread, so one corporate NH said it was accepting patients discharged from hospitals who hadn't been tested or who were asymptomatic and COVID-positive, but not isolating them in COVID-19 units.

- A Michigan NH administrator reported that while their NH had referral relationships with hospitals, there was not any support from hospitals because hospitals were struggling as well.

- One corporate NH established relationships with the Beaumont and Henry Ford Health Systems. The systems asked them to take patients. Their regional business development directors have strong relationships with referring hospitals. Before the pandemic, nurses would go into hospitals to check appropriateness, family wishes, and clinical needs to match patients with facilities. During COVID-19 surges, they were not as organized. It became more about getting patients out of the hallways. The hospitals didn't assist with PPE, but the administrator doesn't fault them - everyone was doing the best they could at the time.

- Many NHs implemented new policies regarding vendors, such as requiring vendors to drop off equipment outside facilities and having the staff bring in the supplies.

- Several Michigan NH administrators stated that the weekly testing strategy in Michigan is taking away from patient care and adding to staff workloads. Test results aren't coming back fast enough to be helpful (10-14 days). Providers should be able to provide input regarding the frequency of testing.

- In Michigan, one corporate NH with facilities across the state noted that turnaround time significantly varied by lab. Early on, the NH was waiting up to seven days. Now, the facility is waiting roughly three days.

- One corporate NH stated that it has had adequate staffing at its facilities, but it is extremely challenging to get staff from agencies. At times, this NH's staff work at multiple facilities. The NH has utilized sign on and other bonuses to retain staff and hired a recruiter.

- One corporate NH needed to increase staff to deal with COVID-19. The nurse training waiver helped the home get additional staff. They had a big recruitment campaign to target students and laid off health care workers from hospitals. They also needed to hire two occupational therapists to help with feeding who went between NHs. Before the waiver, they hired 600 staff within the first 60 days to focus on non-direct care.

- One NH observed that the media was saying things like "NHs were killing people," but the NHs didn't even have tests. It felt like an unfair picture was painted of NHs and their staff. This added to staff stress.

- A corporate NH with facilities in Michigan and several other states noted that some suppliers limit how much PPE can be purchased – facilities purchase the maximum and have an emergency supply so if one facility is in

short supply, another can send PPE quickly (sharing across corporate entities is a best practice). Gowns can be more difficult to get now. In April, hand sanitizer and masks were in short supply. The supply changes.

- One NH group took a corporate response to COVID-19; A staff member at corporate ordered PPE for all facilities and they have a warehouse of supplies ready for this; they didn't have to resort to reusing PPE. One of the invoices for gowns was $23,000. They were able to have a great deal of supplies shipped to them.

- One corporate NH in Michigan had enough PPE, but it wasn't being used the way they would have preferred. They had to reuse N-95s and kept masks stored in bags. They hung gowns and marked them with markers. Now, they monitor PPE every week. They're stockpiling on PPE to prepare for a second surge.

- NHs expressed concern about the optics regarding hubs in Michigan. It didn't look great in the beginning with COVID-positive patients being brought into facilities, while family members were not allowed in. NH hubs feel they took a lot of heat (even from local public health departments), but other NHs were happy that hubs were taking residents.

- One hub partnered with Madonna University to take fourth year accelerated nursing students to increase its staff. Additionally, the hub gave hazard pay to COVID-unit staff, and staff in other units also got raises.

- Several interviewees reported that staff working in hubs were proud of their contributions. Hubs generally felt proud delivering care and rising to =challenges. The experience brought facilities and staff together.

MI Health Link/ MI Choice

Key takeaways

- MI Health Link plans and MI Choice waiver agencies emphasized the need to improve planning and preparedness for home-based COVID-19 care and resources.

- They identified issues with lack of PPE availability for home-based members with COVID-19 and their caregivers, as well as services that would enable them to return home following a hospital stay.

Other Interviews

National Policy Expert and Professor of Health Care Policy, interviewed July 23. 2020.

Key takeaways

- When breaking down CMS ratings, the data seems to run in all directions; it's hard to tell a consistent story. Staffing (payroll-based) or claims-based data are best – Minimum Data Set (MDS) measures may be worrisome.

- Overall quality of life in facilities is really about staffing and resources. For example, five-star facilities can be just as likely as one-star facilities to have a case, but the quality of life will probably be better at the five-star facility (especially with asymptomatic cases).

- It matters where staff live in determining whether or not they will bring in a case.

- Harvard Medical School (HMS) heard a lot of complaints about requirements in data reporting across levels of government, but has not found any good studies about how individual states are dealing with this.

- Setting up hubs seems to make a lot of sense, but it is important to note that it may not always be the best providers that will sign up to do this kind of care.

- Using overall deaths as an outcome is not recommended to evaluate how well a hub performed; Should analyze if one facility is better at keeping the COVID death rate down through infection control protocols or staffing measures.

- It does not make sense for NHs with zero COVID-19 cases to take COVID-19 admissions. While all NHs need to have plans in place to manage resident COVID-19 cases, very few facilities will want to make the investment to cohort COVID-19 admissions if they have not already had experience with COVID-19 cases, and these facilities may not be well equipped to manage COVID-19.

- In early survey data, only 10 percent of nursing homes nationally felt they could safely care for COVID patients coming from the hospital.

- It's a balance between residents' rights and residents' safety; Prolonged focus on safety, which results in prolonged isolation among residents, is worrisome. Some states can probably start reopening facilities to visits safely and thoughtfully (e.g., utilizing outdoor visitations or structured visitations).

Hebrew Senior Life (HSL), interviewed July 22, 2020

Key takeaways

- HSL stopped allowing visitation when the surge in COVID-19 cases began. HSL did wait a little longer to stop visitation at the start, as they wanted to balance both the mental and physical well-being of their residents.

- Visitation following screening was reopened when COVID-19 cases declined to allow for both indoor and outdoor visits with PPE and social distancing. If COVID-19 outbreaks occur again, HSL plans to close down visitation to that floor, but still allow visitation in other areas of the facility. HLS wants to preserve the quality of life and autonomy of their residents.

- A best practice for HSL going forward is to keep a six-month stockpile of PPE in the event of another surge; stockpile early and protect the supply. HSL also invested in a supply of reusable gowns that they can launder in-house to avoid reliance on outside vendors and disposable supplies; however not all facilities have the funds to make these large investments in supply and back stock.

- Ideally, HSL plans to cohort all COVID-positive individuals together on a separate floor of the facility.

- Having access to a full-time infection preventionist was a major benefit to HSL.

- Early emergency preparedness planning was key, but PPE shortages were a major challenge HSL had not predicted. The plan was in place, but that doesn't matter if you do not have the PPE (N95s were impossible to find).

- HSL partnered with the Harvard tertiary care center which helped with access to testing, faster results, staffing physicians, as well as fit testing of PPE.

- Family communications are very important. All pertinent information regarding policies and visitation was kept on the website, including communications to families; strive for transparency.

- In-house lab testing, multi-use swabs/tests (false negatives are at 20 percent) that can test for flu, RSV, and COVID-19 all in one swab are very helpful for being able to cohort appropriately and quickly.

- HSL has 40 FTE physicians, and many medical fellows (mostly with geriatric specialties) who are on-call 24/7 during off-shifts/weekends, which helps with providing on-site care and making decisions on patient transfers.

- The COVID-19 surge in the HSL facility corresponded to the outbreak in the surrounding community.

- When regularly screening residents, HSL noted that many geriatric residents did not present with traditional symptoms, they just looked "unwell." Even if their test was negative, they followed up and tested again and found many cases that way.

- Trauma-informed training for leadership is key so they can best assist staff with grief and trauma experienced during COVID-19 and prevent emotional burnout before they have to "run another marathon" in another surge. Occupational health keeping an eye on staff is also key (avoid staff "fall off" by checking on staff who do not show up for work).

- Appreciation pay, meals, lodging, and occupational health services for staff, as well as checking in on staff regularly to address their fears, were all utilized as staff retention tools. It is important to focus on staff well-being.

- HSL added two travel nurses to its staff as they needed extra help with implementing PPE and IPC protocols to care for residents. Even the need to don and doff full PPE creates a need for more staff.