Building community and resilience in Massachusetts nursing homes during the COVID-19 pandemic

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Abstract
During the COVID-19 pandemic, frontline nursing home staff faced extraordinary stressors including high infection and mortality rates and ever-changing and sometimes conflicting federal and state regulations. To support nursing homes in evidence-based infection control practices, the Massachusetts Senior Care Association and Hebrew SeniorLife partnered with the Agency for Healthcare Research and Quality AHRQ ECHO National Nursing Home COVID-19 Action Network (the network). This educational program provided 16 weeks of free weekly virtual sessions to 295 eligible nursing homes, grouped into nine cohorts of 30–33 nursing homes. Eighty-three percent of eligible nursing homes in Massachusetts participated in the Network, and Hebrew SeniorLife’s Training Center served the vast majority. Each cohort was led by geriatrics clinicians and nursing home leaders, and coaches trained in quality improvement. The interactive sessions provided timely updates on COVID-19 infection control best practices to improve care and also created a peer-to-peer learning community to share ongoing challenges and potential solutions. The weekly Network meetings were a source of connection, emotional support, and validation and may be a valuable mechanism to support resilience and well-being for nursing home staff.

KEYWORDS
AHRQ ECHO National Nursing Home Action Network, COVID-19, nursing home, resilience, skilled-nursing facility

INTRODUCTION
Nursing home residents and staff across the world have borne a disproportionate share of the morbidity and mortality from the coronavirus disease 2019 (COVID-19) pandemic.1,2 Over 1.2 million people reside in nursing homes in the United States.3 In Massachusetts alone, there have been more than 35,000 COVID-19 cases among nursing home and rest home residents and staff and 5700 COVID-19 deaths, comprising approximately one-third of all COVID-19 deaths.4,5 Nursing home staff nationwide have also faced the potential for major risk and harm, with up to threefold likelihood of contracting COVID-19 themselves and experiencing more than 1922 deaths.6,7 The rate of infections and mortality in nursing homes is associated with several factors including timely and
reliable government guidance, the prevalence of the virus in the surrounding communities, the clinical status and care needs of residents, access to testing and results, the availability and proper use of personal protective equipment (PPE), evidence-based infection control standards, and a stable workforce.

The staggering infection and mortality rates, along with evolving knowledge about the COVID-19 virus, have unleashed a fury of ever-changing, sometimes conflicting, federal and state regulations as well as local public health guidance. This constant regulatory change and discordance have been a source of enormous stress for both leadership and frontline staff. Nursing home staff have also faced the heart-wrenching reality of caring for high-risk and sick residents, many of whom contracted COVID-19 despite staff’s best efforts, while simultaneously fearing for their own safety. It should come as no surprise that nursing home staff members face burnout, chronic stress, and trauma as they continue to protect and care for the country’s most vulnerable populations throughout the pandemic.

To better implement evidence-based infection prevention and safety practices to protect nursing home residents and staff across the nation, the Agency for Healthcare Research and Quality (AHRQ), the University of New Mexico’s ECHO® Institute, and the Institute for Healthcare Improvement (IHI) joined together to create the AHRQ ECHO National Nursing Home COVID-19 Action Network (hereinafter referred to as the Network). The Massachusetts Senior Care Association (MSCA) and Hebrew SeniorLife (HSL) joined the Network as a Training Center to support nursing homes in Massachusetts in infection control best practices. The program is funded by the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

THE NETWORK

This educational program provided 16 weeks of free weekly virtual educational sessions led by clinicians trained in geriatrics and nursing home leaders, as well as various subject-matter experts and coaches trained by IHI in Quality Improvement methods. The program adapted Project ECHO®’s video conferencing model, which promotes collaborative learning, All-teach All-learn concept, and is especially effective in contexts where access to subspecialty expertise may be limited. Each Training Center, in this case MSCA and HSL for the state of Massachusetts, was responsible for recruiting nursing homes, overseeing weekly video conference sessions, refining and reviewing the weekly curriculum, and retaining cofacilitators and subject-matter experts with nursing home expertise in clinical care, operations, and federal and state regulations. The Massachusetts Training Center served 295 eligible nursing homes, grouped into nine cohorts of 30–33 nursing homes.

Eighty-three percent of eligible nursing homes in MA participated in the Network, and HSL’s Training Center served the vast majority. Each cohort was assigned a geriatrics clinician and a nursing home leader to cofacilitate each of the sessions. Nursing home participants included medical directors, directors of nursing and infection preventionists, frontline clinical staff including nurses, and certified nurse assistants.

The 16 sessions were 90 min each and included topics such as COVID-19 prevention, outbreak management, and return-to-work policies. Each session followed a structured format, which started with a 20-min didactic component, followed by a 20-min pre-prepared case presentation, and then a 20-min portion on quality improvement strategies. The final 30 min was left open for questions and discussion. The curriculum was also modified in real time by the Training Center team as well as the cofacilitators to address current issues as they arose such as vaccine clinic implementation, changes in COVID-19 treatment options (e.g., monoclonal antibody therapy), and staff burnout. Leveraging the Zoom virtual conferencing platform, the program promoted collaborative learning by encouraging nursing home staff to share their experiences.

LESSONS LEARNED

Over the course of 16 weeks, which coincided with the second COVID-19 surge in Massachusetts, it became clear that there were many additional benefits beyond
infection control improvements that the Network could provide participants (Table 1). To begin, one of the most powerful was having a supportive community in the midst of a major disaster. Though the sessions were highly structured, they were also designed to be mostly interactive and used breakout groups, open discussion, and chat functionality to encourage peer support and mentoring. Nursing home participants could share challenges and receive open and honest feedback and suggestions from their peers, without the fear of regulatory enforcement and disclosure of any deficiencies.

Whereas previously, the participating nursing home leaders had been competitors, vying for potential patients and staff, as well as for high scores under the Centers for Medicare and Medicaid Services Five-Star Quality Ratings, they now found it possible and mutually beneficial to work together through the pandemic. The Network provided a forum to build relationships that fostered collaboration and a feeling of esprit de corps. A common bond developed as participants realized they were not alone, facing what some described as the biggest challenge of their professional careers. And better yet, the group itself could also be there to help solve problems or simply be a sounding board. By the end of the 16 weeks, several participants commented on how valuable their new community and peer network had become as they faced the daily grind of the pandemic.

The Network also encouraged a growth mindset and provided a unique forum to learn by creating a welcome space for sharing and peer-to-peer learning. Throughout the sessions, participants were encouraged through case examples or interactive didactics to share successful experiences or ongoing pain points. For the latter, follow-up discussion would often include group brainstorming of solutions and sharing of their own experiences or expertise based on current guidelines and best practices. In the beginning, only one or two participants participated in discussions during each session. But with each week, as trust strengthened, participants became familiar with each other, and a “learning community” developed. Participants

| Key components                                           | Barriers                                                                 | Facilitators                                                                 |
|----------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Supportive community that provided emotional and moral   | Nursing home participants faced tremendous moral distress, physical      | Created a safe space for participants and leaders to acknowledge and openly  |
| support amidst a disaster                                | exhaustion, and emotional trauma during a period of enormous responsibility and uncertainty | share feelings of helplessness, abandonment, anger, and humiliation, and to recount their traumatic experiences |
|                                                          | Didactics could be highly structured and unidirectional without effective framing and facilitation | Participants felt encouraged to speak, their voices were heard, and concerns were validated |
|                                                          | Curriculum topics may not be relevant or high priority for participants   |                                                                             |
| Collaboration, connection, and peer network              | Participating nursing homes and their leaders were previously competitors vying for potential patients and staff | A new peer network where nursing home participants realized they were not alone and could work together to solve shared problems |
|                                                          | Fear of regulatory enforcement                                            | Cofacilitators used chat functionality and breakout rooms to enable interaction between participants |
|                                                          |                                                                         | Nursing home participants could crowdsource solutions for pain points in real time with bidirectional feedback |
|                                                          |                                                                         |                                                                             |
| Growth mindset and learning community                     | Faced with perhaps the greatest challenge in their professional careers, nursing home participants reported feeling trapped, scared, and very alone | A unique virtual forum for sharing and peer-to-peer learning with interactive didactics, case-based learnings, and unstructured Q&A |
|                                                          | Nursing home participants dealt with unprecedented amounts of information and government regulatory guidance that was constantly shifting | Constant opportunities for celebration and best practice sharing of protocols, tools, checklists, equipment around common problems |
|                                                          |                                                                         | Provided regulatory clarity and support for best practice implementation    |
|                                                          |                                                                         |                                                                             |
| Promotion of resilience and well-being                    | The pandemic posed many threats to nursing home participants' and leader's resilience and well-being including uncertainty and doubt, fear of futility, isolation, exhaustion, moral distress, witnessing suffering | Creation of a steady, supportive learning community |
|                                                          |                                                                         | Safe space for sharing uncertainty and emotions, encouraging self-compassion |
began to share and interact more frequently on Zoom discussions or Zoom chat.

Specific examples included sharing processes for acquiring and reusing PPE, procedures for resident isolation and quarantine, reconfiguring spaces for resident visitations, and repurposing areas to accommodate the need for social distancing. Participating staff members often submitted photographs of their innovations and newly designed spaces or shared checklists and protocols they had developed. In one session, a facility shared its satisfaction with an anti-fog shield that better fit over eyeglasses. Right then and there, another facility inquired and ordered the same brand face shield to address similar needs of their staff.

In addition to providing education and ideas, the weekly Network meetings offered a source of emotional and moral support. Leaders often shared their daily struggles having to be a leader amidst so much uncertainty and an enormous responsibility. Some described emotional and physical exhaustion, including feelings of helplessness, moral distress, isolation, and overt burnout. Other participants openly discussed having post-traumatic stress disorder, especially when describing the waves of resident deaths that some of the nursing homes faced. One leader recounted the trauma and heartache of having multiple resident deaths on Easter Sunday in 2020. Another shared how hard it was for them when a member of their own staff died from COVID-19. Leaders also described feeling humiliation and personal failure from community criticism and negative media coverage and the difficulties meeting the ongoing regulatory requirements despite their best efforts.

Throughout the program, there was consistent feedback from the nursing homes about how important it was to feel that their voices were heard, their hard work was recognized, and that their pain was shared—and that they were not alone on this challenging journey. Nursing homes were also encouraged to submit best practices and share successful interventions. One facility shared a helpful support strategy where their chaplain began having weekly nonreligious meetings for all staff to be together and share moments of mindfulness and reflection. The following week, the chaplain was invited to and participated in the Network session, leading a moment of reflection and sharing his supportive process with the entire cohort. Another facility shared a quilt (Figure 1) made by staff in memory of residents who had died and included their initials in the stars embroidered in the quilt.

The final session topic was dedicated to the support of staff and residents. In the process of exploring strategies to build resilience, it was noted that many of the recommendations were addressed by the Network experience. For example, building connection and community, acknowledging uncertainty, creating space for emotions, encouraging reflection and self-compassion, and fostering a learning culture and adaptive leadership are all key aspects for promoting resilience and well-being.13,14 Although the program was designed to provide infection control best practices for nursing homes, it may have also provided an important framework to promote well-being for facility staff in a time of major need.

**FIGURE 1** Mary Ann Morse Quilt. This quilt was made by nursing home staff in memory of those who passed from COVID-19 at the Mary Ann Morse Healthcare Center. Each star and initials represent a resident that died. Permission to share this photograph was provided by the Mary Ann Morse Healthcare Center

**PROGRAM EXPANSION AND SUSTAINABILITY**

The pandemic has created new and exacerbated existing vulnerabilities for nursing homes, and it will be important to continue broadly support nursing homes.7 Although this work describes the experiences with a 16-week training program in Massachusetts, the Network was also rapidly scaled across the nation, with 9017 nursing homes participating.12 Additional training sessions beyond the 16-week program continue to support safety improvements and maintain engagement with peers.12 For optimal sustainability of future programs, a collaboration between local government and healthcare systems and organizations is essential. Commitment and engagement from nursing homes is also critical and might be optimized by aligning on persistent challenges such as workforce shortages. For example, a training program could focus on certified nursing assistants
or nurses and might provide mentorship and/or professional development opportunities. Ideally, the program should enable relationship building and provide valuable educational content.

CONCLUSION

The COVID-19 pandemic has placed unprecedented strain on nursing home residents and their families, nursing home staff, and clinicians. While the Network was originally designed to enhance technical competencies such as infection control knowledge in nursing homes, the weekly interactive video conferencing model also created a safe space for nursing home leaders and staff to share and validate their own experiences, participate in peer mentorship, and become a supportive community. The Network fostered engagement opportunities during the pandemic that may not have otherwise been available. By promoting connection, interpersonal support in an interactive platform, the Network has been a valuable mechanism to support resilience and well-being for long-term care staff and advance improvements in COVID-19 preparedness, safety, and infection prevention. Finally, the Network also provided a focused effort to improve the clinical care and experience during the pandemic for our older adult population that receives short-term post-acute care as well as long-term care in nursing homes.

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CONFLICT OF INTEREST

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AUTHOR CONTRIBUTIONS

All authors have contributed sufficiently to the manuscript conception, drafting, revision and final approval to be included as authors.

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REFERENCES

1. Centers for Disease Control and Prevention. COVID Data Tracker; 2021. https://covid.cdc.gov/covid-data-tracker/index.html#demographics. Accessed April 30, 2021.
2. Grabowski DC, Mor V. Nursing home Care in Crisis in the wake of COVID-19. JAMA. 2020;324(1):23-24. https://doi.org/10.1001/jama.2020.8524
3. Kaiser Family Foundation. Total Number of Residents in Certified Nursing Facilities. https://www.kff.org/other/state-indicator/number-of-nursing-facility-residents/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22%22sort%22:%22asc%22%7D.
4. Massachusetts Department of Public Health. COVID-19 Interactive Data Dashboard. https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-interactive-data-dashboard. Accessed April 16, 2021.
5. Centers for Disease Control and Prevention. COVID-19 Nursing Home Data. https://data.cms.gov/stories/s/COVID-19-Nursing-Home-Data/bkwz-xpgv/. Accessed April 16, 2021.
6. Shah ASV, Wood R, Gribben C, et al. Risk of hospital admission with coronavirus disease 2019 in healthcare workers and their households: nationwide linkage cohort study. BMJ. 2020; 371:m3582. https://doi.org/10.1136/bmj.m3582
7. Center for Medicare & Medicaid Services (CMS). COVID-19 Nursing Home Data. https://data.cms.gov/stories/s/COVID-19-Nursing-Home-Data/bkwz-xpgv/. Accessed June 10, 2021.
8. Agency for Healthcare Research and Quality. Nursing Home COVID-19 Action Network. https://www.ahrq.gov/nursing-home/index.html. Accessed May 23, 2021.
9. Assistant Secretary for Public Affairs. CARES Act Provider Relief Fund. U.S. Department of Health & Human Services. https://www.hhs.gov/coronavirus/cares-act-provider-relief-fund/index.html. Accessed May 26, 2021.
10. Arora S, Thornton K, Murata G, et al. Outcomes of treatment for hepatitis C virus infection by primary care...
11. Zhou C, Crawford A, Serhal E, Kurdyak P, Sockalingam S. The impact of project ECHO on participant and patient outcomes: a systematic review. *Acad Med.* 2016;91(10):1439-1461. https://doi.org/10.1097/ACM.0000000000001328

12. Agency for Healthcare Research and Quality. Data and Impact from the National Nursing Home COVID-19 Network. https://www.ahrq.gov/nursing-home/nursing-home-network.html. Accessed June 10, 2021.

13. Back AL, Steinhauser KE, Kamal AH, Jackson VA. Why burnout is so hard to fix. *J Oncol Pract.* 2017;13(6):348-351. https://doi.org/10.1200/JOP.2017.021964

14. West CP, Dyrbye LN, Erwin PJ, Shanafelt TD. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. *Lancet.* 2016;388(10057):2272-2281. https://doi.org/10.1016/S0140-6736(16)31279-X

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