

Orange County, NC Interdisciplinary “Strike Team” Supports High-Risk Congregate Living Facilities in COVID-19 Response

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Many occupants of congregate living facilities are at increased risk of severe COVID-19 due to older age or underlying health conditions [1]. Asymptomatic and pre-symptomatic carriage of SARS-CoV-2 in skilled nursing facility (SNF) residents is common [2]. Proactive steps should be taken to curb the spread of COVID-19 in high-risk congregate living facilities, including the identification and exclusion from facility entry of potentially infected visitors and staff, active surveillance for potentially infected residents, and implementation of appropriate infection control and prevention measures [3].

To identify strategies to curb the spread of COVID-19 in congregate living facilities we distributed electronic surveys to North Carolina local health department (LHD) directors the week of June 22, 2020. Thirty-five of 84 contacted LHD directors responded to the survey. Most LHD directors (85.7%) reported development of specific strategies to work with high-risk congregate living facilities. The most common high-risk congregate living facilities being assisted were long-term acute care hospitals (LTACHs) or SNFs (85.7%) and group homes (74.3%). The most common tasks LHDs assist with are personal protective equipment (PPE) assessment and acquisition (80.0%), PPE education (74.3%) and infection control, and physical distancing planning site visits (74.3%).

In Orange County, North Carolina, an interdisciplinary strike team was formed to mitigate future COVID-19 outbreaks in high-risk congregate living facilities. The strike team was forged from a collaboration of representatives from Orange County Health Department (OCHD) and Orange County Emergency Services. Strike team members include an OCHD communicable diseases nurse, an emergency medical services training coordinator, a

firefighter, and a paramedic. Oversight is provided by the county public health services manager, medical director of OCHD, and medical director of Orange County Emergency Services. Additional support is provided by the local Emergency Management Division, which coordinates the Emergency Operations Center (EOC) following declaration of a state of emergency.

High-risk congregate-living facilities were identified through rosters previously known to the Orange County EOC, a public registry of licensed facilities found on the Orange County and Department of Health and Human Services websites, as well as through community organizations already working closely with vulnerable populations. The strike team identified 72 congregate living facilities (15 LTACHs or SNFs, 22 group homes, 23 substance use disorder recovery homes, 11 independent living homes, and one homeless shelter) and 13 farms worked by migrant farmworkers living in close quarters.

Activities performed by the strike team focus on the four domains of assess, educate, test, and “boots on the ground” support. The strike team provides PPE education, reviews proper donning and doffing procedures, and performs respirator fit testing. The strike team reviews facilities’ PPE needs, assists with PPE acquisition through the North Carolina EOC, and provides recommendations for purchasing of respirators approved by the Centers for Disease Control and Prevention (CDC). Wellness check-ins include site visits with a focus on reviewing infection control policies and addressing challenges to implementing physical distancing procedures.

The strike team develops and distributes guidance for group homes based on the CDC’s “Identify, Isolate, and Inform” algorithm to promote the early notification of the

strike team of suspected new COVID-19 cases. This allows for early testing and isolation of suspected cases to mitigate further disease spread. The strike team is available on call 7 days a week for evaluation of ill residents who require further evaluation for COVID-19 and assists with the coordination and execution of mass testing of residents and staff at facilities with new outbreaks. In addition, the strike team participates in weekly conference calls with congregate living facilities and the medical director of OCHD to reiterate important guidance. For workflow management and situational awareness, the strike team utilizes a web-based platform to organize documents, record notes and assessments, compile and update contact information for facilities, and maintain a daily and weekly schedule. This platform includes the option for mobile and tablet access to support real-time documentation by team members in the field.

Satisfaction with the strike team is high. Surveyed managers and site directors of high-risk congregate living facilities describe highly valuable strike team activities including having a designated group to contact regarding COVID-19, meeting the team in-person during site walkthroughs, reassurance that the facilities are not alone in navigating the challenges of COVID-19, respirator fit testing, and assistance with large scale testing following initial positive cases. Five of the six Orange County strike team members anonymously completed the Minnesota Satisfaction Questionnaire (MSQ)-short form, a 20-item employee satisfaction survey rated on a 5-point Likert scale. The Intrinsic, General, and Extrinsic satisfaction domains had mean scores of 4.57 ± 0.32 , 4.39 ± 0.55 , and 3.87 ± 0.65 , respectively.

Our results suggest that the advanced planning and early deployment of an interdisciplinary field team may be a strategy for augmenting future local health crisis response efforts by local health departments. **NCMJ**

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Acknowledgments

The authors wish to thank the Orange County COVID-19 Strike Team members—Zin Lyons, Jim Gusler, Landon Weaver, Will Potter, Mike DeFranco, and Carla Julian—for their dedication to the health of the community and for their warm welcome to two coauthors (C.C., R.P.) on this manuscript.

Potential conflicts of interest. The authors report no conflicts of interest.

References

1. CDC COVID-19 Response Team. Severe outcomes among patients with coronavirus disease 2019 (COVID-19)—United States, February 12–March 16, 2020. *MMWR Morb Mortal Wkly Rep.* 2020;69(12):343-346. doi: 10.15585/mmwr.mm6912e2
2. Arons MM, Hatfield KM, Reddy SC, et al. Presymptomatic SARS-CoV-2 infections and transmission in a skilled nursing facility. *N Engl J Med.* 2020;382(22):2081-2090. doi: 10.1056/NEJMoa2008457
3. McMichael TM, Currie DW, Clark S, et al. Epidemiology of Covid-19 in a long-term care facility in King County, Washington. *N Engl J Med.* 2020;382(21):2005-2011. doi: 10.1056/NEJMoa2005412

Electronically published January 4, 2021.

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N C Med J. 2021;82(1):58-59. ©2021 by the North Carolina Institute of Medicine and The Duke Endowment. All rights reserved. 0029-2559/2021/82112