ISSUE BRIEF

Bridging Boundaries: Defining Frontline Essential Health Care Workers

Tish Singletary

Workforce challenges faced by frontline essential workers have been illuminated by the risk-reduction strategies employed to protect the health of the public over the past year and a half. One such challenge was defining "frontline" and "essential" work, and the roles of the people bridging the health care and public health responses to COVID-19.

Introduction

It seemed to happen overnight, the COVID-19 pandemic. News outlets were reporting on an outbreak of an unknown virus. Once identified, SARS-CoV-2, the novel coronavirus that causes COVID-19, would eventually result in more than 600,000 deaths in the United States alone [1]. The confusion and fear about what to do, where to go, and how to avoid the consequences of contracting COVID-19 was palpable. When public health and other government officials determined which risk-reduction strategies were needed to mitigate the spread of the virus, certain workers were deemed "essential," sometimes with an additional qualifier of "frontline."

What factors contribute to someone being called a frontline or essential worker, or both? "Essential," as an adjective, means: "of, relating to, or constituting essence: inherent; of the utmost importance: basic, indispensable, necessary" [2]. As a noun, essential means: "something basic; something necessary, indispensable, or unavoidable [2]." Throughout the pandemic, there have been references made to "the frontline essential workers." But there is no formal or legal description for either "essential" or "frontline," and throughout the past year, the terms have often been combined to describe a wide range of people and services vital to the functioning of our society. Definitions differ among agencies, industries, states, and localities. The Brookings Institution teases apart the terms to discuss the frontline worker (people who must physically go to work, making them vulnerable to contracting the virus) and the essential industry or sector (businesses and agencies that need to function in order to maintain public health, safety, security, and the economy) [3]. The United States Cybersecurity and Infrastructure Security Agency (CISA) has issued guidance on what it defines as the "essential critical infrastructure workforce," indicating that there are 16 sectors categorized as essential to the infrastructure of the country [4]. Specifically, CISA notes that the health care and public health sector is dependent on the following other sectors for continuity of operations: communications, emergency services, energy, food and agriculture, information technology, transportation systems, and water and wastewater systems [4]. While these industries are listed as essential, guidelines for who would be considered frontline workers within these industries were left up to employers and individual states [5].

As COVID-19 prevention strategies were modified, many frontline workers within these essential sectors were expected to ensure that the public complied with the wearing of masks, social distancing, and hand hygiene compliance. These tasks often fell on those who were not official public health professionals, but individuals whose conditions of employment required an onsite presence, often in close quarters with colleagues and the public. Many of these employees did not have the ability or the option to telework. At the start of the pandemic, there was a shortage of personal protective equipment (PPE). That shortage and so many other factors led to discussions about prioritizing access to supplies, and in turn, which essential workers' PPE requests should be prioritized. In North Carolina, prioritization has focused on preventing transmission of COVID-19 to those at highest risk of severe disease and assuring PPE to workers delivering emergent, life-saving services [6].

Demographically, many of the individuals identified as frontline workers are from historically marginalized populations, who are disproportionately impacted by the socioeconomic and health effects of the COVID-19 pandemic and its response. Nationally, 40% of long-term-care workers are African American or Latinx, and frontline workers are more likely to be Black and have incomes below $40,000 [7]. In North Carolina, 99% of farmworkers—critical infrastructure workers who often live in congregate housing—are Latinx [7]. As cases of COVID-19 soared, there were noticeable differences in outcomes between communities. The groups experiencing poorer outcomes included older peo-

Electronically published September 20, 2021.

Address correspondence to Tish Singletary, Division of Public Health, 1915 Mail Service Center, Raleigh, NC 27699-1915 (tish.singletary@dhhs.nc.gov)

N C Med J. 2021;82(5):329-332.
0029-2559/2021/82504

ple, individuals with chronic diseases, people living in congregate spaces and rural communities, and racial and ethnic minorities. In response, the Centers for Disease Control and Prevention (CDC), along with other leading health agencies, set up a COVID-19 Response Health Equity Strategy to identify and mitigate COVID-19 among those most susceptible to the virus [8]. The CDC used the combination term "essential and frontline workers" to refer to those employed in health care, food, and correctional facilities [8].

Meanwhile, the National Bureau of Economic Research (NBER) defines frontline workers as a narrow subset of a broader group of essential workers [9]. NBER reported that the differing demographic composition and working conditions of essential and frontline workers contribute to their increased risk of COVID-19 [9]. NBER purports that frontline workers are less educated, more male, receive lower wages, and are comprised of more racial and ethnic minorities, particularly Hispanic/Latinx people working in fields such as agriculture, transportation, manufacturing, construction, and other onsite trades [9]. Essential workers, on the other hand, are likely to be more educated, able to telework (employer-dependent), receive higher wages, and are more female, working in fields such as education, health care, and other social sector roles, according to NBER [9]. Yet, in this case both groups are likely to be at increased risk for COVID-19 exposure if their employment requires proximity to the public.

Over the past year, all of these individuals, however they are categorized, have helped to maintain the foundations of our society; they have been a necessary cadre of workers that drive the economy. These were the people who worked to ensure that there was access to sources of food, housing, physical and mental health care, transportation, and education. They became our champions. Without them we experienced service disruptions of all types, limited access to supplies, and safety issues. *These were and are the people* who made sure that our way of normalcy still existed. A modified existence? Yes. However, still existing.

This issue is dedicated to recognizing and celebrating these workers and offering observations about how to continue to support the workforce that makes our new version of "normal" achievable. While the articles in this edition highlight a few types of frontline and essential workers, and some also use the term "direct care worker" to describe those who provide direct health care support to patients, there are so many more. As you read and reflect upon each article, take the time to remember other workers not featured but just as vital to the COVID-19 response and recovery: restaurant workers, sanitation workers, educators across the spectrum, first responders and law enforcement, and transportation workers, to name a few.

The COVID-19 pandemic exposed a myriad of issues and created unintended consequences beyond controlling the virus. We learned how easily the interconnected systems upon which we rely can be disrupted. We learned exactly what happens when social isolation increases, paychecks are delayed, work hours are cut, bills are due, eviction is near, there is no child care, unemployment looms, there are long lines for food distribution, outbreak occurs in congregate living quarters and college dorms, and students have to learn online.

It's time to pay attention to all that we have observed over the course of this pandemic. How do we intentionally translate the lessons learned to ensure that guardrails are in place for the next pandemic or global disaster that requires public compliance? What could we do differently the next time? Where should we invest our resources? How do we ensure that the work of public health is prioritized and not politicized, to protect the health of the public? How do we acknowledge the contributions of the spectrum of frontline essential workers during a public health crisis? How we do address the systems that perpetuate health, social, and economic inequities for these workers and their families? What supports can we provide now and in the future? What are the policies (big P and little p) that need to be in place?

In a nod to the resources and policies needed to support and protect frontline workers, Ciara Zachary's article about the American Rescue Plan Act outlines how this law contributes to a framework for enacting upstream changes through strategic investments [10]. The ARP's investments focus on economic, nutrition and agriculture, child care, and health care improvements beyond the testing and treatment of COVID-19. Zachary's commentary highlights the expanding umbrella over those considered frontline workers and the inequities faced by the many who are from historically marginalized populations. One of Zachary's most resonating points is on the need for equitable recovery: "Given the disproportionate burden frontline workers of color face, policy that addresses recovery and protection must address disparities and inequities" [10].

While Zachary outlines a framework of investment, other authors' contributions focus on particular types of frontline workers and the challenges they faced before and during the pandemic. Older residents living in congregate settings were some of the first to feel the impact of social isolation and death from COVID-19. In "The Caregiving Crisis: Significant Changes Needed to Fill the Void of Caregivers in North Carolina Nursing Homes," Adam Sholar offers a perspective on the aging population and the shortage of a readily available workforce to care for them [11]. Although the pandemic has contributed to lower numbers of caregivers in congregate settings, the issue is not new. The primary factor for this shortage is inadequate pay, and Sholar writes that the easiest solution would be for facilities to pay more, however, this is dependent on revenue derived from governmental payers. In a sidebar, Kristen Yntema writes about how the pandemic shined a light on hospice, revealing new opportunities [12]. Her comments reflect the adaptations made by hospice care workers as a result of social distancing measures. Changes to hospice services included virtual

caregiver support, drive-by parades, and virtual bereavement groups. Yntema posits that several of these innovative models have benefited the hospice care community and offers valid arguments for why those innovations should continue to exist, and be reimbursable [12].

Mark Hensley, in a commentary focused on caregivers, illuminates the toll of caregiving on both paid and unpaid individuals [13]. He stresses the fact that regardless of title, each caregiver is providing personal care that is necessary and the need for which will increase as the aging population in North Carolina continues to grow. Compounding the shortage of caregivers is the fact that nearly "53% of direct care workers live in or near poverty" [13]. The author offers hope for addressing the current challenges, including increased broadband, direct care wages, and support for unpaid workers.

In "North Carolina's Migrant Farmworkers, An Essential Community Less Seen," George Hendrix discusses the effect of COVID-19 on the migrant and seasonal farmworkers in the state, who are predominately Latino men, and who represent the 6th-largest migrant farmworker population in the country [14]. He notes the challenges the workers have faced, including subpar congregate living quarters; low income/wages; language barriers; poor access to care; food insecurity; and transportation, physical, and mental health issues, all of which were exacerbated during the pandemic. The author notes that investments and interventions enacted during the COVID-19 response are ongoing, and upstream support is needed to protect this essential workforce.

In their article about the peer support workforce, Patrick Tang and Edwin Fisher provide their perspective on successful care models that have helped to improve patient outcomes, noting the role of paraprofessionals and volunteer peer support specialists [15]. Tang and Fisher argue for developing and supporting this workforce, sharing lessons learned from COVID-19 about how peer support workers help clients manage their chronic disease care despite the barriers erected by the public health mitigation response. In an accompanying sidebar, Jennifer Whitfield focuses on the mental health and substance use impacts of COVID-19 and the valued contributions of the peer support specialist workforce in this particular area [16]. These vital mental health frontline workers have made some pivots to ensure continuity of connection with their clients, such as offering teleservices that eventually "moved to outdoor, in-person, physically distanced meetings"; coaching; food delivery; and overall social support [16].

In "The Role of Community Health Weavers in the Microgeographies," Gary Gunderson and coauthors focus on the power of community health workers (CHWs) [17]. The authors provide an argument that reflects how the profession has evolved over time, with particular attention to the duality of CHWs' role in health care and community settings. They share their perspective from a faith-based lens to define the incredibly nuanced roles and skills of CHWs in context. In addition, they discuss the supports needed by CHWs to ensure their success when working in systems, including clearly defined roles, trained and informed supervisors, and supportive organizations. In a sidebar, Michele Benoit-Wilson shares the perspective of Black "frontline doctors representing the fields of pediatrics, psychiatry, family medicine, obesity medicine, and obstetrics and gynecology" who witnessed the impact of COVID-19 in their families and communities [18]. The author writes, "COVID-19 was killing people who looked like us at nearly three times the rate in the general population" [18]. Benoit-Wilson also opens the door for a discussion about the low number of Black woman physicians in the country and the personal and professional traumas of racism.

In another complementary sidebar to the article by Gunderson and coauthors, Je'Wana Grier-McEachin expands upon the role of CHWs as frontline essential workers in the continuing COVID-19 pandemic [19]. She offers a perspective from a small community-based organization charged with deploying CHWs in a two-county area of Western North Carolina with a focus on reaching historically marginalized populations. She shares how the foundation laid by the North Carolina Community Health Worker Initiative afforded the state the ability to quickly identify and deploy CHWs using investments from the CDC.

This edition's Tar Heel Footprint honoree is former local health director, medical director for Electronic Data Systems, and North Carolina's first woman secretary of the Department of Health and Human Services, Sarah Taylor Morrow [20]. Morrow epitomizes the definition of both "essential" and "frontline." Richard Rideout, former director of the Division of Special Schools for the Blind and Deaf, shares his thoughts and memories about Morrow's pioneering spirit and resolve throughout her illustrious career to improve the health of women and children in this state.

Looking toward the future of this workforce, Lori Byrd writes that pipeline development "must be flexible, engaging, and consistent with current evidence in practice related to the needs of the community" [21]. Byrd emphasizes the need for various essential sectors, from technology and cybersecurity to business and law, to come together to train the next generation of frontline workers, who will face "an ever-more challenging and volatile workplace" [21].

The COVID-19 pandemic remains with us as of the publication of this article. Vaccine hesitancy remains persistent and variants of the virus are causing another wave of cases [1]. During the height of the virus, this country experienced social unrest, economic uncertainties, political uproar, and a major health crisis. Some would argue that instead of a pandemic, the convergence of all these factors represents a syndemic, or aggregation of multiple concurrent epidemics exacerbating the burden of disease [22]. What will we do with the lessons we have learned?

If nothing else, the one lesson that should surely resonate with those of us in the business of health care and

public health is that we need our frontline essential workers. Responding to a health crisis of this magnitude cannot be done in isolation (the pandemic is global, after all), nor is it the sole domain of clinical, public health, and mental health professionals. It requires acknowledging the value of the people who live beyond the walls of our institutions. COVID-19 afforded an opportunity to experience public health as community/population health, and that community/population health belongs to the public, often implemented by unlikely frontline and essential workers who may not consider themselves public health professionals or colleagues, but rather neighbors helping neighbors. NCMJ

Tish Singletary, BA branch head, Community and Clinical Connections for Prevention and Health, North Carolina Department of Health and Human Services Division of Public Health, Raleigh, North Carolina.

Acknowledgments

Disclosure of interests. T.S. reports no relevant conflicts of interest.

References

1. Centers for Disease Control and Prevention. COVID-19 Data Sources. Accessed July 19, 2021. https://covid.cdc.gov/covid-data-tracker/#additionalcoviddata
2. Merriam-Webster. Essential. Accessed June 15, 2021. https://www.merriam-webster.com/dictionary/essential
3. Tomer A, Kane JW. To protect frontline workers during and after COVIE-19, we must define who they are. The Brookings Institution. Published June 10, 2020. Accessed June 29, 2021. https://www.brookings.edu/research/to-protect-frontline-workers-during-and-after-covid-19-we-must-define-who-they-are/
4. Wales B. Advisory Memorandum on Ensuring Essential Critical Infrastructure Workers' Ability to Work During the COVID-19 Response. U.S. Department of Homeland Security Cybersecurity & Infrastructure Security Agency; 2020. https://www.cisa.gov/sites/default/files/publications/ECIW_4.0_Guidance_on_Essential_Critical_Infrastructure_Workers_Final3_508_0.pdf Published December 16, 2020. Accessed August 6, 2021.
5. National Conference of State Legislatures. COVID-19: Essential Workers in the States. Published January 11, 2021. Accessed June 29, 2021. https://www.ncsl.org/research/labor-and-employment/covid-19-essential-workers-in-the-states.aspx
6. North Carolina Department of Health and Human Services. Guidelines for Allocation of Personal Protective Equipment (PPE) to Healthcare Settings. NCDHHS; May 27, 2020. https://covid19.ncdhhs.gov/media/133/download. Accessed September 7, 2021.
7. North Carolina Department of Health and Human Services. North Carolina Interim COVID-19 Vaccination Plan Executive Summary. Published October 16, 2020. Accessed July 19, 2021. https://covid19.ncdhhs.gov/media/675/open
8. Centers for Disease Control and Prevention. CDC COVID-19 Response Health Equity Strategy: Accelerating Progress Towards Reducing COVID-19 Disparities and Achieving Health Equity. Updated August 21, 2020. https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/cdc-strategy.html
9. Blau FD, Koebe J, Meyerhofer PA. Who are the Essential and Frontline Workers? Working Paper 27791. National Bureau of Economic Research. Published September 2020. Revised March 2021. Accessed June 29, 2021. https://www.nber.org/system/files/working_papers/w27791/w27791.pdf
10. Zachary C. The American Rescue Plan Act: protecting and supporting frontline workers. N C Med J. 2021;82(5):345-349 (in this issue).
11. Sholar A. The caregiving crisis: significant changes needed to fill the voice of caregivers in North Carolina nursing homes. N C Med J. 2021;82(5): 333-339 (in this issue).
12. Yntema K. Hospice shines during the pandemic, reveals expanded possibilities. N C Med J. 2021;82(5):334-335 (in this issue).
13. Hensley M. Caregivers—essential, frontline, paid, and unpaid: exploring the differences, similarities, and needs of this important sector of community care. N C Med J. 2021;82(5):340-344 (in this issue).
14. Hendrix GJ. North Carolina's migrant farmworkers—an essential community less seen. N C Med J. 2021;82(5):341-342 (in this issue).
15. Tang PY, Fisher EB. The peer workforce in chronic care: lessons and observations from Peers for Progress. N C Med J. 2021;82(5):357-361 (in this issue).
16. Whitfield J. Substance use peer support: needed more than ever. N C Med J. 2021;82(5):358-359 (in this issue).
17. Gunderson G, Cutts K, Moseley J. The role of community health weavers in the micro-geographies. N C Med J. 2021;82(5):350-356 (in this issue).
18. Benoit-Wilson M. How our sister-circle of six Black female physicians fought health care inequities to deliver a dose of hope. N C Med J. 2021;82(5):351-352 (in this issue).
19. Grier-McEachin J. Community health worker prevention services: COVID-19 and beyond. N C Med J. 2021;82(5):353-355 (in this issue).
20. Rideout RF. Tar heel footprints in health care: Dr. Sarah Morrow—a pioneer for health and human services. N C Med J. 2021;82(5):309-310 (in this issue).
21. Byrd L. The health care education-to-workforce pipeline: challenges and changes after the pandemic. N C Med J. 2021;82(5):363-366 (in this issue).
22. Gravlee CC. Systemic racism, chronic health inequities, and COVID-19: a syndemic in the making? Am J Hum Biol. 2020;32(5):e23482. doi: 10.1002/ajhb.23482