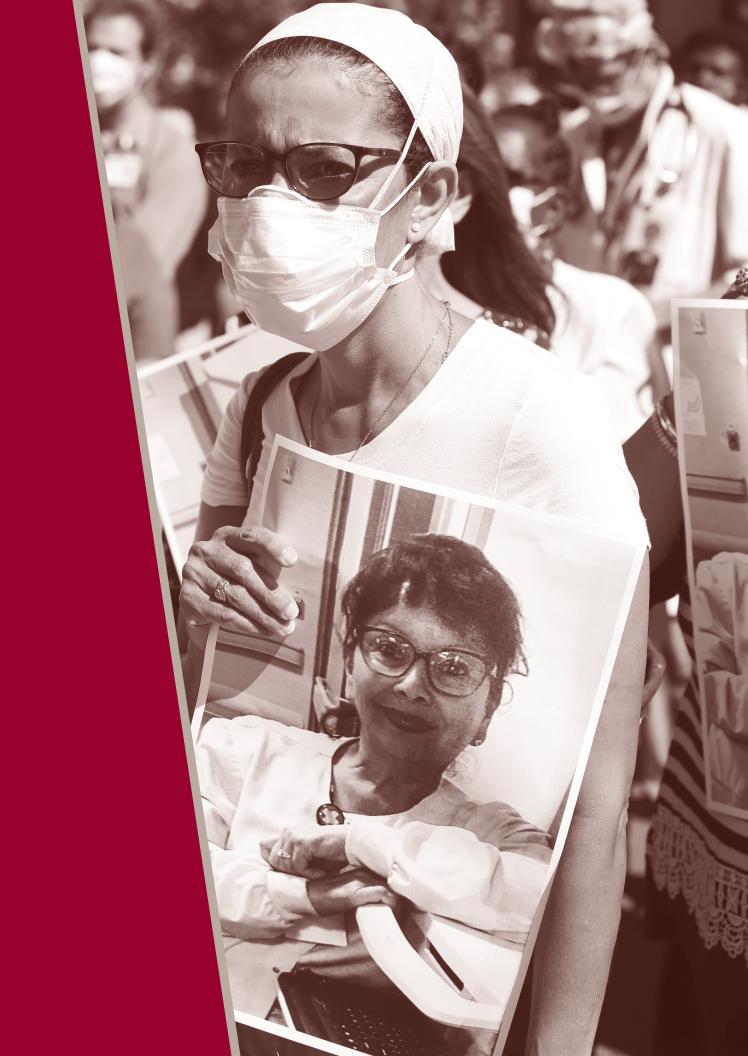
Sins of Omission

How Government Failures to Track Covid-19 Data Have Led to More Than 3,200 Health Care Worker Deaths and Jeopardize Public Health







Sins of Omission

How Government Failures to Track Covid-19 Data Have Led to More Than 3,200 Health Care Worker Deaths and Jeopardize Public Health

TABLE OF CONTENTS

Executive Summary	4
Key Findings	5
Introduction	6
Inadequate Data Collection and Disclosure	10
Covid-19 Registered Nurse Fatalities	12
Impact of Covid-19 on U.S. Registered Nurses of Color	13
Covid-19 U.S. Health Care Worker Fatalities	15
Health Care Worker Infections by State	16
Blaming Health Care Workers For Their Covid-19 Infections	18
Appendices	
» Appendix I. Registered Nurse Covid-19 Memorial	20
» Appendix II. Health Care Worker Covid-19 Memorial	33
» Appendix III. Methodology	66
Endnotes	68

EXECUTIVE SUMMARY

The rights of registered nurses (RNs) and other health care workers in the United States are being violated. Under the Occupational Safety and Health Act of 1970, employers have a "general duty" to provide safe workplaces. The right to a safe workplace includes the right to information. There is widespread resistance on the part of the health care industry to transparently provide information on nurse and other health care worker fatalities due to Covid-19. At the same time, federal, state, and local governments have failed to compel health care facilities to provide this data.

As of Feb. 11, 2021 we find that at least 329 registered nurses have died of Covid-19 and related complications and an estimated 3,233 health care workers, including RNs, have died of Covid-19 and related complications. National Nurses United (NNU) believes this is a conservative estimate. This report is an update of NNU's September 2020 "Sins of Omission" report. The cases reported herein have been documented by NNU using media reports, social media, obituaries, union memorials, federal and state reporting, and NNU internal reporting.

Of the 314 registered nurses who have died of Covid-19 and related complications, for which race and ethnicity data is available, 170 (54.1 percent) are nurses of color, reflecting the broader disproportionate impact of Covid-19 on communities of color in the United States. Just under one quarter (24.1 percent) of registered nurses in the United States are people of color.

Comprehensive disclosure and transparency with respect to Covid-19-related health care worker deaths have been all too rare. These deaths frequently have been met with silence or outright denials. If hospitals are not required to publicly disclose their Covid-19 deaths and infection rates, they lack important incentives not to become zones of infection. We cannot allow the now more than 3,200 deaths, many of which were avoidable, to be swept under the rug, and vanished from our collective memory by the health care industry.

NNU continues to call on the federal government to greatly expand domestic production of personal protective equipment through the Defense Production Act of 1950 and welcomes the Biden Administration's endorsement of this initiative in its Jan. 21, 2021 executive order.² NNU further calls for the federal Occupational Safety and Health Administration (OSHA) to be mandated to establish an emergency temporary standard on infectious diseases and for the Centers for Disease Control and Prevention (CDC) to fully acknowledge the reality of Covid-19 aerosol transmission. The ongoing failure to take these actions is costing the lives of registered nurses, other health care workers, and patients. A full list of NNU recommendations is available at Nurses' Proposal for a Comprehensive Federal Plan to Combat the Covid-19 Pandemic.3

"Hospitals see the bottom line — how can we run a profit. ...
I feel disrespected and slapped in the face every day that I go to work because I'm not respected for the job I do or the job that I want to do, which is take care of patients."

Marissa Lee, registered nurse, January 2021⁸

KEY FINDINGS

In the United States as of Feb. 11, 2021 »

- At least 329 registered nurses have died of Covid-19 and related complications.
- » 170 registered nurses (54.1 percent)* who have died of Covid-19 and related complications are nurses of color, reflecting the broader disproportionate impact of Covid-19 on communities of color in the United States.⁴ Just under one quarter (24.1 percent) of RNs in the United States are people of color.⁵
- » 83 registered nurses (26.4 percent)* who have died of Covid-19 and related complications are Filipino. Filipinos make up 4 percent of RNs in the United States.⁶ Just under half of registered nurses of color who have died to date have been Filipino (48.8 percent).
- 3 registered nurses (16.9 percent)* who have died of Covid-19 and related complications are Black. Black nurses make up 12.4 percent of RNs in the United States. Nearly one-third of RNs of color who have died to date have been Black (31.2 percent).

- At least 3,233 health care workers, including registered nurses, have died of Covid-19 and related complications.
- There are at least 791,158 cases of Covid-19 infection in health care workers, 197 percent of the 401,530 cases reported by the U.S. Centers for Disease Control and Prevention.

*Percentages are of the 314 registered nurses for which race and ethnicity data is available.



"Nursing, and nurses, are not valued. It's a shame, and maybe even a deadly shame, that hospital leaders don't care about nurses like we care for our patients."

Jaclyn O'Halloran, registered nurse in Covid-19 unit⁹

INTRODUCTION

Registered nurses (RNs) and other health care workers in the United States have had their rights systematically violated by federal and state governments and the health care industry during the Covid-19 pandemic. As an Amnesty International report on the widespread failure to protect health care and essential workers states: "The right to health includes 'The right to healthy natural and workplace environments,' which includes 'preventive measures in respect of occupational accidents and diseases' and 'safe and hygienic working conditions."

On Nov. 12, 2020, National Nurses United released the results of its Covid-19 survey of more than 15,000 nurses. The nationwide survey found that employers are still failing to provide registered nurses with the necessary personal protective equipment (PPE) to do their jobs safely, with "more than 80 percent of nurses report[ing] they are reusing at least one type of single-use PPE." 12 The November survey also found that "[o]nly one-third of RNs overall and fewer than half (42 percent) of RNs in hospitals report that they have ever been tested for Covid-19."13 More than 70 percent of nurses reported that "their employers do not inform them of exposures in a timely manner."14 An earlier NNU survey released July 28, 2020, found that just "24 percent of nurses think their employer is providing a safe workplace" and that "87 percent of nurses who work in hospitals report reusing at least one piece of PPE."15 Alarmingly, at that time, only "23 percent of nurses reported being tested."16

Under the Occupational Safety and Health Act of 1970 employers have a "general duty" to provide safe workplaces.¹⁷ On March 4, 2020 NNU petitioned the Occupational Safety and Health Administration (OSHA) for an Emergency Temporary Standard on Emerging Infectious Diseases.¹⁸ On Aug. 9, 2020, NNU registered nurses and our allies delivered more than half a million signatures calling for a congressional mandate ordering OSHA to issue an emergency temporary standard to ensure that employers protect front-line workers during the Covid-19 pandemic.¹⁹ NNU believes the standard must incorporate the evidence being gathered that the Covid-19 virus transmission is airborne,20 and as reflected in the arguments presented in the early July 2020 letter sent to the World Health Organization (WHO) by 239 scientists from 32 countries calling on WHO to "recognize the potential for airborne spread of Covid-19."²¹ On Feb. 15, 2021, leading U.S. infectious disease experts urged the Biden administration to

take "strong immediate action to strengthen measures to limit inhalation exposure to SARS-CoV-2 as a cornerstone" of the Biden administration's National Strategy for the Covid-19 Response and Pandemic Preparedness, stating, "For many months it has been clear that transmission through inhalation of small aerosol particles is an important and significant mode of SARS-CoV-2 virus transmission," citing the examples of countries such as Germany, Austria, and France, which have taken responsive action.²² And on Feb. 23, 2021, NNU and 44 allied unions and organizations called on the Centers for Disease Control and Prevention (CDC) to update its Covid-19 guidance to fully reflect the latest scientific evidence regarding SARS-CoV-2 transmission through aerosols.23 As Bonnie Castillo, RN and executive director of NNU stated, "The CDC's failure up to this point to recognize aerosols as the primary mode of transmission hurts all other guidance and efforts that stem from this lack of understanding. We urge the Biden administration to honor its commitment to listen to experts in the battle against Covid-19, which includes having CDC and other federal agencies explicitly recognize aerosol transmission."24

Unfortunately, despite the hospital, nursing home, and other industries' rampant failures, during the Trump administration, OSHA and its many counterparts at the state level were missing in action and failing health care and other essential workers who desperately need assistance and workplace protections.²⁵ "OSHA is AWOL," bluntly stated David Michaels, former OSHA head under the Obama administration, commenting in July 2020 on the Trump administration's failures.²⁶ A March 2021 report by the U.S. Labor Department's Office of Inspector General provided detailed evidence of the extent of the negligence engaged in by the Trump administration, revealing that for the period examined by the report, Feb. 1, 2020, through Oct. 26, 2020, "OSHA issued [just] 295 violations for 176 inspections related to covid-19 during the period, out of 11,041 complaints."²⁷

As of Feb. 11, 2021, we find that at least 329 registered nurses and 3,233 health care workers, including these registered nurses, have died of Covid-19 and related complications while working in health care settings. This report is an update of NNU's September 2020 <u>Sins of Omission</u> report, which documented these cases through Sept. 16, 2020.²⁸ NNU also released the December 2020 white paper Deadly Shame: Redressing the Devaluation of

Registered Nurse Labor Through Pandemic Equity, which examined the systematic devaluation of care work and the effects of moral distress and moral injury on registered nurses, which documented cases through Nov. 13, 2020.²⁹ NNU has documented these cases using media reports, social media, obituaries, union memorials, federal and state reporting, and our own internal reports. (*Please see Appendix III for a full description of our methodology.*)

NNU believes our estimates are conservative. First, many cases are not being reported by traditional news sources. Second, it appears that many deaths are not reported by public agencies. For instance, the CDC reports 1,390 health care worker deaths as of Feb. 11, 2021, but their data fails to collect occupational status in most cases.³⁰ As of Feb. 11, 2021, whether or not someone is a health care worker is included in just 18.5 percent of the 20.3 million cases reported on, and of that 18.5 percent of cases reported on, just 77.4 percent included data on whether or not the health care worker had died.³¹ The fact that occupational status is unavailable in more than one out of five cases suggests a substantial undercount, an undercount the CDC itself acknowledges.32

Further, federal agencies do not reconcile their publicly reported information. For example, as of Feb. 11, 2021, the CDC reports the death of 1,390 health care workers overall, while the Centers for Medicare & Medicaid Services' (CMS) Covid-19 nursing home dataset reported 1,567 deaths just of nursing home workers by Jan. 31, 2021.33 For this updated paper we utilized CMS's Covid-19 nursing home dataset for the week ending Jan. 31, 2021 released on Feb. 11, 2021.³⁴ (See Appendix III for our methodology.) Notably, the CMS nursing home dataset excludes assisted living facilities.35 CMS also did not require nursing homes to provide information, including data on total health care worker deaths prior to May 2020.36 By the beginning of May 2020, it should be remembered, overall deaths reported in New York had reached 18,231 and in New Jersey deaths had already reached 7,228, many in nursing homes, which presumably includes some nursing home health care workers.³⁷ While there were some initial problems flagged with respect to overreporting

certain total health care worker deaths, we have adjusted for this by removing nursing homes reporting in excess of five staff deaths per facility.³⁸

Unceasing (and well-deserved) praise is heaped upon the heroics of our health care workforce by hospital and health care industry executives and politicians alike. The simple fact is that in our modern data-driven world, "we treasure what we measure." The flip side of that is that what we fail to measure is devalued, ignored, and dismissed. It is simply an outrage that a year into the Covid-19 pandemic, we do not have comprehensive, consistent health care worker death and infection data. There is no "uniform national framework and [there are] inconsistent requirements across states for collecting, recording, and reporting [health care worker] mortality and morbidity data associated with COVID-19."39 The potential value of such a uniform national system was illustrated by a CDC study released on Oct. 30, 2020 utilizing data from 13 sites reporting to the Covid-19-Associated Hospitalization Surveillance Network (COVID-NET).40 The CDC study found that of 6,760 total hospitalizations: "6 percent of adults hospitalized from March through May were health care workers ... with more than a third either nurses or nursing assistants ... [and that] 27 percent, of those hospitalized workers were admitted to the intensive care unit, and 4 percent died during their hospital stay."41 While it is deeply troubling that it took the CDC nearly five months to produce a straightforward study documenting such data from the end of May, the study nevertheless illustrates the value that a far more comprehensive and robust national reporting system could have in protecting nurses, other health care workers, and their patients.

Just six states (California, Georgia, Minnesota, New Hampshire, Oklahoma, and Utah) now regularly make public totals for all deceased health care workers due to Covid-19. State of Illinois totals are available, but only upon request from the Illinois Department of Public Health.⁴² An eighth state, Vermont, also says that it is reporting this figure, but says it has no health care worker fatalities to report to date.⁴³



For its part, the widely cited "Lost on the Frontlines" project of The Guardian and Kaiser Health News (KHN), reports that as of Feb. 11, 2021, they are investigating the cases of 3,405 health care workers whose deaths are likely due to Covid.44 As late as Dec. 23, 2020, per the Internet Archive (archive.org) they were investigating just 1,463 health care worker deaths,⁴⁵ before the figure increased to 2,921 cases on Dec. 24, 2020,46 largely it appears due to the incorporation of anonymized records, such as the CMS Nursing home dataset. This is a very welcome change and is in keeping with the methodology we have been utilizing in our reporting all along. (Full disclosure: NNU provided a list of the names of 654 registered nurses and other health care workers to KHN (Aug. 4, 2020), and The Wall Street Journal (Aug. 6, 2020)).

There is widespread resistance in the hospital industry to transparently provide information on nurse and other health care worker fatalities. Meanwhile, federal, state, and local governments have failed to compel them to do so. This lack of transparency only aids and abets the hospital industry's continuing efforts to evade accountability for its ongoing failures to adequately protect nurses and other health care workers in the face of the Covid-19 pandemic. It is telling that in the middle of the pandemic, America's largest hospital corporation, the Hospital Corporation of America (HCA), somehow managed to make \$3.75 billion in profits, an increase of 7.1 percent over 2019, and an increase HCA CEO Sam Hazen attributed in part to "solid cost containment."47 For nurses "solid cost containment" likely translates to short staffing, shift cancellations,

shortages of optimal PPE and other measures that can endanger nurses, other health care workers, and patient safety.⁴⁸ HCA is far from the only hospital corporation raking in outsized profits while endangering patients and staff. As the battle against Covid-19 drifts towards becoming a "forever war" with the emergence of new Covid variants, the greed of HCA and other hospital corporations must be reined in. If hospitals are not widely required to publicly disclose their deaths and infection rates, they lack important incentives not to become zones of infection.

The success that some East Asian countries have had in combating Covid-19 may come in part from their recognition that hospitals cannot be allowed to become significant zones of transmission for infectious diseases. In South Korea, encounters with H1N1, SARS, and the Middle East Respiratory Syndrome (MERS) forced a recognition that maintaining the health and safety of health care workers is vital to preventing the spread of disease. As one Korea expert put it: "MERS was transfixing and frightening to Koreans, because the disease was spreading through crowded hospitals and their waiting rooms ... [p]eople were getting sick, but they were also afraid of going to the hospital for fear that it would make them even more sick."

Even U.S. hospitals with top reputations are not disclosing enough, nor are they being required to do enough. For example, Johns Hopkins Hospital in Baltimore, which prides itself on its national and international reputation, internally provided a Hospital Epidemiology and Infection Control (HEIC) presentation on June 3, documenting a 9 percent infection rate among tested Johns Hopkins Medicine staff as of May 6, 2020.⁵⁰ Johns Hopkins University's



Table 1. Covid-19 Health Care Worker Deaths » Registered Nurses and Other Health Care Workers, as of Feb. 11, 2021

	Registered Nurses, Deceased	Other Health Care Workers, Deceased	Total — Nurses & Other Health Care Workers, Deceased
Current Total — U.S.	329	2904	3233
Hospitals	203	489	692
Nursing Home, Medical Practice, EMS, and Other Settings	117	1894	2011
Unknown	9	521	530

now world-famous coronavirus tracker data had the number of infected for the city of Baltimore as a whole on May 6 at 2,800.⁵¹ That's approximately 0.47 percent of the city's population or 18 times less the 9 percent reported in the HEIC presentation. What attempts, if any, were made to warn the Baltimore community of the high rate of infection in one of Baltimore's and Maryland's major health care providers?

Conditions for nursing home workers have been particularly deadly, in part because so many Covid-19-stricken elderly were treated in their nursing homes, rather than transferred to hospital emergency rooms and intensive care units (ICUs).52 A June 16, 2020 article in *The Washington Post* explained that in recent years, "'Treat in place' was the mantra pushed by federal health agencies, academic researchers and geriatric physicians who argued that hospitals are not friendly environments for the frail and elderly ... [and so] when the novel coronavirus pandemic struck, nursing homes did not swamp hospitals with patients ... [nor] did they prevent the deaths of more than 30,000 of their residents."53 Nursing home workers, as well as nursing home residents, are bearing the brunt of this continuing calamity. As a July 28, 2020 commentary noted, "If [nursing home staff] deaths continue at this pace over a full year, it will equate to more than 200 fatalities per 100,000 workers. This would more than double the rate of previous years' deadliest occupations."54

As of Feb. 11, 2021, 3,233 total health care workers, including registered nurses, working in health care settings have died of Covid-19 and related complications. For 2,703 of the total health care workers, facility information was available: 692 (25.6 percent) of the registered nurses and other health

care workers who have died were working in hospital settings, while 2,011 (74.4 percent) worked in nursing home, medical practice, emergency medical services (EMS), and other settings. Nearly a third of the health care workers who have died, who worked in hospital settings are registered nurses: 203 (29.3 percent) of the 692 total. It is extremely likely that a larger number of hospital workers have died, but have gone unreported, due to the nearly complete absence of establishment-level reporting for the hospital industry, in stark contrast to what CMS has required for nursing homes since May. Among hospital systems, only the VA provides somewhat greater transparency by regularly reporting their health care worker death figures on a dedicated website at regional system levels.55

The state of Colorado stands alone in providing public-facing establishment-level reporting of worker infections and deaths for businesses in its state.⁵⁶ Unfortunately, even here the hospital industry appears to be getting a largely free pass. Acute-care hospitals in Colorado only began to make their appearance in establishment reporting on Sept. 30, 2020,57 when Kit Carson Hospital reported two staff infections. This is despite establishment-level reporting going back to April 2020.58 The fact that not a single infection was reported by an acute care hospital prior to Sept. 30, 2020, speaks volumes about the lack of transparency in Colorado's hospital industry. For its part, the state of Oregon provides establishment-level infection reporting for establishments in excess of five infections and refuses to report deaths out of an expressed concern for patient privacy.⁵⁹

INADEQUATE DATA COLLECTION AND DISCLOSURE

The human rights of registered nurses, health care workers, and the broader communities they serve are being violated with respect to access to information. A core human rights obligation is to provide "education and access to information concerning the main health problems in the community, including methods of preventing and controlling them."60 And, as the writer Milan Kundera famously pointed out, the struggle against power "is the struggle of memory against forgetting." We cannot allow the more than 3,200 deaths, many of them avoidable, of registered nurses and other health care workers, to be swept under the rug and vanished from our collective memory by the health care industry. While the government deserves its share of blame, the health care industry is also guilty of grievous misconduct. Hospital and other health care industry executives would prefer to shed all accountability for their scandalous mismanagement and overwhelming lack of preparedness in the face of the Covid-19 pandemic. If allowed, the health care industry will gladly cover its tracks with one hand and keep reaching out for more bailout funds with the other.

Comprehensive disclosure and transparency with respect to Covid-19-related health care worker deaths have been all too rare. These deaths have been too often marked with silence or outright denials.⁶¹ "Few medical facilities acknowledge the workers' deaths in public, much less that they

could have been infected on the job," reports The Atlanta-Journal Constitution on the situation in Georgia,⁶² a summary that accurately describes the entire country. Data collection is woefully inadequate, particularly within the hospital industry, which has been given a free pass on establishment-level infection and health care worker death reporting. Few health systems have been as open about the death of their health care workers as Northwell Health which held a "Day of Remembrance" on June 25 to "honor the memories and celebrate the lives of the 20 team members who died from coronavirus disease 2019 (Covid-19)" as of that date. 63 Far more typical is the response of Banner Health to the passing of Arizona nurse Shawna Snyder due to Covid-19 on July 3.64 Banner would only acknowledge Snyder's employment when asked by a reporter, and refused to comment further, citing "privacy concerns." 65 This lack of transparency on the part of the hospital and health care industry engenders a dangerous lack of accountability and is an unaddressed threat to public health.

Some of the hospital industry's reluctance to acknowledge health care worker deaths and infections likely comes from their interest in putting up barriers to Covid-19-related workers' compensation for registered nurses and other health care workers in many states. 66 Proving that one became infected by Covid-19 at work is a nearly impossible standard to meet. For example, a hospital might insist that an



RN never came into contact with a Covid-19 patient because they did not work in a Covid-19 ward. But a study from Spain suggested that the Covid-19 virus may be circulating rapidly throughout hospitals. In the hospital that was studied, medical/surgical non-Covid-19 areas had about the same percentage of infections (16.1 percent) as the Covid-19 areas (18.7 percent).⁶⁷

To add insult to injury, a number of states, including California, have laws that grant presumptive eligibility for workers' compensation to some public safety employees. These occupations, such as police officers and firefighters, have predominately male workforces. However, nurses and other health care workers in the predominately female health care workforce have not been granted such protections, even though, by the nature of their work, they suffer some of the highest risks of injury and illness of any profession. For further discussion of how nurses and other health care workers are being unfairly denied workers' compensation see NNU's December 2020 paper Deadly Shame: Redressing the Devaluation of Registered Nurse Labor Through Pandemic Equity. 68

In our methodology, we are building on the example set by the Colorado Department of Public Health and Environment (CDPHE) whose data collection and reporting notes that while "[i]t is possible that a person may have been exposed elsewhere (and we can rarely prove where any individual was exposed with a person-to-person pathogen) ... when a person worked/lived/spent time in a facility with a known outbreak, we attribute their illness to the outbreak even if there is no definitive determination that the case acquired the illness at the facility."69 However, even CDPHE's definition is too restrictive, as it unreasonably presumes knowledge of such outbreaks. In an environment of extraordinarily insufficient testing and virtually no genomic sequencing, a large number of asymptomatic cases, 70 in which asymptomatic individuals have been found to carry comparable viral loads as those with symptoms,⁷¹ and when dealing with Covid-19's lengthy incubation period, we believe a more reasonable standard is to assume that persons actively working or volunteering as health care workers broadly defined, may have been infected in a health care delivery setting. We include all such persons in our count. We recognize that the hospital and health care industry, as well as many in government, may find this politically inconvenient in their attempts to sweep the impact of Covid-19 on health care workers under the rug, but we believe that it better reflects the reality of the situation health care workers find themselves in.

State agencies have nearly uniformly bent over backwards to enable the hospital industry's lack of transparency. In one fleeting, apparent breakthrough for public transparency, on April 20, 2020, Ohio Governor Mike DeWine announced his intention to release hospital-level infection data stating that: "[I] n plain English, you will be able to see by hospital the number of their health care staff that, if any, have come down with Covid-19."⁷² However, months have passed, and this initiative appears to have been quietly snuffed out.

Florida has been among the most obstructive of states. For example, it rejected the *Miami Herald's* public records request for the state's internal count of health care worker deaths, on the grounds that the data does not exist.73 However, in mid-May 2020 reporters received state information through unofficial channels that 25 health care workers had died, according to one report; the number was 60, reported another source.74 According to Rebekah Jones, whistle-blower and ex-Florida Department of Health (DOH) employee, who ran the state's Covid-19 dashboard: "DOH keeps detailed data about every Covid-19 victim, including occupation and profession, and any insinuation they don't is a bold-faced lie."75 This rampant obstruction is happening, as Zenei Cortez, RN, a president of National Nurses United puts it, because "[t]hey don't want to take the blame for the number of deaths, because they have failed the workers."76 In Florida, NNU has documented 159 health care worker deaths due to Covid-19 as of Feb. 11, 2021.

Far more transparency has been required of the nursing home industry. In May 2020, CMS began requiring nursing homes to provide publicly available establishment-level Covid-19-related health care worker infection and mortality data to CMS.⁷⁷ As noted previously, however, CMS did not require nursing homes to provide information, including data on total health care worker deaths prior to May. The states of Colorado, Kentucky, Michigan, New Jersey, Nevada, Maryland, and South Carolina as well as the District of Columbia provide establishment-level Covid-19-related health care worker infection and mortality data for nursing homes, and in some cases (Colorado, Nevada, and Michigan, and Maryland) data from other congregate living facilities that is regularly updated and publicly available. For its part, the California Department of Public Health renders its data virtually unusable by masking establishment-level data for nursing homes with Covid-19-related infections and deaths numbering less than 12.78

COVID-19 REGISTERED NURSE FATALITIES

As of Feb. 11, 2021 at least 329 registered nurses have died of Covid-19 and related complications. This figure includes 19 members of NNU and its affiliates. (*Please see Appendix I. Registered Nurse Covid-19 Memorial for a listing of their names.*)

NNU believes many of these deaths would have been prevented if greater effort had been made to plan for and overcome the pitfalls of just-in-time supply chain management. Scaling up the capabilities for the stockpiling and rapid distribution of personal protective equipment (PPE) must be among the highest priorities of the hospital and nursing home industries and federal and state agencies going forward. NNU continues demand the federal OSHA be mandated to establish an emergency temporary standard on infectious diseases and for the CDC to fully acknowledge the reality of Covid-19 aerosol transmission.

As of Feb. 11, 2021, six states (California, Florida, Illinois, New Jersey, New York, and Texas) account for 176 (53.5 percent) of the 329 total registered nurse fatalities.

Table 2. Covid-19 Registered Nurse Fatalities by State

Total	329	100%
		100%
New York	60	18.2%
California	32	9.7%
New Jersey	25	7.6%
Illinois	21	6.4%
Texas	21	6.4%
Florida	17	5.2%
North Carolina	12	3.6%
Alabama	11	3.3%
Mississippi	11	3.3%
Michigan	9	2.7%
Ohio	8	2.4%
Arizona	8	2.4%
Maryland	6	1.8%

Table 2 **Covid-19 Registered Nurse**Cont. **Fatalities by State**

	Registered Nurse Fatalities	%
South Carolina	6	1.8%
Massachusetts	6	1.8%
Kentucky	6	1.8%
Pennsylvania	5	1.5%
Nevada	5	1.5%
Missouri	5	1.5%
Georgia	4	1.2%
Indiana	4	1.2%
New Mexico	4	1.2%
Connecticut	3	0.9%
District of Columbia	3	0.9%
Louisiana	3	0.9%
Tennessee	3	0.9%
Virginia	3	0.9%
Washington	3	0.9%
Colorado	3	0.9%
Idaho	3	0.9%
West Virginia	3	0.9%
Arkansas	2	0.6%
Nebraska	2	0.6%
Oklahoma	2	0.6%
lowa	2	0.6%
Utah	2	0.6%
Delaware	1	0.3%
Wisconsin	1	0.3%
New Hampshire	1	0.3%
Puerto Rico	1	0.3%
Rhode Island	1	0.3%
Guam	1	0.3%

IMPACT OF COVID-19 ON U.S. REGISTERED NURSES OF COLOR

Just under a quarter (24.1 percent) of registered nurses in the United States are persons of color.⁷⁹ But as of Feb. 11, 2021, 170 (54.1 percent) of 314 registered nurses, for whom race/ethnicity data is available, who have died of Covid-19 and related complications are nurses of color, reflecting the broader disproportionate impact of Covid-19 on communities of color in the United States.⁸⁰ By comparison, just over three-quarters (75.9 percent) of registered nurses are white, but so far have accounted for 144 (45.9 percent) of the deaths.⁸¹

Eighty-three (26.4 percent) of the 314 registered nurses, for whom race/ethnicity data is available, who have died of Covid-19 and related complications are Filipino. They make up 4 percent of registered nurses in the United States. ⁸² Just under half (48.8 percent) of the registered nurses of color who have died to date have been Filipino.

Table 3. Covid-19 U.S. Registered Nurse Fatalities by Race/Ethnicity

Race/Ethnicity	Covid-19 Registered Nurse Fatalities	%	
Total — Race/ Ethnicity Avail.	314	100.0%	
White	144	45.9%	
Filipino	83	26.4%	
Black	53	16.9%	
Latinx	25	8.0%	
Asian & South Asian (Non-Filipino)	6	1.9%	
Native American	3	1.0%	

The deadly threat of Covid-19 has also been noticed in the broader Filipino-American community. According to a July 21, 2020 article in the *Los Angeles Times*, "People with roots in the Philippines account for about one-quarter of the Asian Americans in California, yet data compiled by the

[Los Angeles] Times show that Filipino Americans account for at least 35 percent of Covid-19 deaths in the state's Asian population."83

Fifty-three (16.9 percent) of 314 registered nurses, for whom race/ethnicity is available, who have died of Covid-19 and related complications are Black. Black nurses make up 12.4 percent of registered nurses in the United States.⁸⁴ Nearly one-third (31.2 percent) of registered nurses of color who have died to date have been Black.

Large drops in life expectancy reported by the CDC in February 2021 for the first half of 2020 also illustrate the devastating and disproportionate impact of Covid on people of color, including nurses and other health care workers.⁸⁵ While the life expectancy dropped by one year for the population as a whole, for "non-Hispanic Black males ... life expectancy dropped by three years. Hispanic males ... saw ... a decline of 2.4 years. Non-Hispanic Black females saw a life expectancy decline of 2.3 years, and Hispanic females faced a decline of 1.1 years."⁸⁶

Race and ethnicity data was available for 1,208 health care workers, including registered nurses. Table 5 illustrates how even as the pandemic has spread to and deepened in rural and less racially diverse areas of the country, the impact on health care workers of color, including registered nurses has been substantial. Six in ten (59.2 percent) of the health care workers who have died, including registered nurses, have been people of color.

People of color working in the medical professions elsewhere in the world have also been disproportionately struck down by Covid-19. The acronym BAME (Black, Asian, and Minority Ethnic) is used in the United Kingdom to describe nonwhites. A May 25, 2020 report found that 6 in 10 (61 percent) of the 200 British National Health Service (NHS) workers who had died of Covid-19 and related complications to that date were of BAME backgrounds.87 Similarly, an April 22, 2020 report by the U.K.-based Health Services Journal (HSJ) examined the first 106 Covid-19-related deaths of NHS care and social workers and found that in 63 percent of cases, the deceased were of BAME background.88 The HSJ report found that while BAME nurses and midwives made up just 20 percent of these professions' workforce, they accounted for 71 percent of the total nurse and midwife Covid-19 deaths to that date.89

In July 2020, a group of medical researchers associated with the British Medical Association (BMA)

created a risk assessment tool for health care workers "amid evidence that health care workers are particularly vulnerable to developing severe or fatal Covid-19, and people from BAME backgrounds [are] at particularly high risk." According to the report, "In England, whereas 44 percent of medical staff are from BAME backgrounds, nearly 94 percent of the doctors who have so far died of Covid-19 and similarly disproportionately higher rates of other health care workers are of BAME heritage."

Table 4. Covid-19 Health Care Worker Fatalities by State

Health Care Worker Deaths (includes registered nurses)	Totals	%
U.S. Total	3,233	100%
California	376	11.6%
New York	358	11.1%
Texas	264	8.2%
Georgia	250	7.7%
New Jersey	235	7.3%
Illinois	176	5.4%
Florida	159	4.9%
Michigan	118	3.6%
Pennsylvania	79	2.4%
Indiana	70	2.2%
North Carolina	69	2.1%
Alabama	69	2.1%
Ohio	67	2.1%
Missouri	67	2.1%
Louisiana	64	2.0%
Mississippi	60	1.9%
Massachusetts	55	1.7%
Tennessee	52	1.6%
Arkansas	44	1.4%
South Carolina	41	1.3%
Arizona	39	1.2%
Maryland	38	1.2%
Virginia	35	1.1%

Table 4 Covid-19 Health Care Worker Cont. Fatalities by State

Health Care Worker Deaths (includes registered nurses)	Totals	%
Oklahoma	35	1.1%
Connecticut	35	1.1%
Colorado	35	1.1%
Minnesota	30	0.9%
Nevada	28	0.9%
Kentucky	27	0.8%
Iowa	26	0.8%
New Mexico	24	0.7%
Washington	23	0.7%
Puerto Rico	20	0.6%
Wisconsin	19	0.6%
West Virginia	18	0.6%
Utah	16	0.5%
District of Columbia	15	0.5%
Rhode Island	14	0.4%
Nebraska	12	0.4%
New Hampshire	11	0.3%
Kansas	11	0.3%
North Dakota	10	0.3%
Montana	10	0.3%
Wyoming	6	0.2%
South Dakota	6	0.2%
Oregon	6	0.2%
Idaho	3	0.1%
Maine	2	0.1%
Hawaii	2	0.1%
Delaware	2	0.1%
Virgin Islands	1	0.0%
Guam	1	0.0%
Alaska	0	0.0%
Vermont	0	0.0%

COVID-19 U.S. HEALTH CARE WORKER FATALITIES

As of Feb. 11, 2021, seven states (California, Florida, Georgia, Illinois, New Jersey, New York, and Texas) account for 1,818 (56.2 percent) of Covid-19 health care worker fatalities by state (including registered nurses).

Race and ethnicity data was available for 1,208 health care workers, including registered nurses. Table 5 illustrates how even as the pandemic has spread to and deepened in rural and less racially diverse areas of the country, the impact on health care workers of color, including registered nurses has been substantial. Six in ten (59.2 percent) of the health care workers who have died, including registered nurses, have been people of color.

Table 5. Covid-19 U.S. Health Care Worker Fatalities by Race/ Ethnicity (including RNs)

Total — Race/ Ethnicity Avail.	1,208	100.0%
White	493	40.8%
Black	332	27.5%
Latinx	171	14.2%
Filipino	149	12.3%
Asian & South Asian (Non-Filipino)	45	3.7%
Native American	18	1.5%



HEALTH CARE WORKER INFECTIONS BY STATE

As of Feb. 11, 2021 we have compiled from current public records 791,158 cases of Covid-19 infection in health care workers, 197 percent of the 401,530 cases reported by the CDC.⁹² As of Jan. 31, 2021 CMS's Covid-19 nursing home dataset reports 536,508 health care worker infections just from nursing homes, 134 percent of the cases reported by the CDC on Feb. 11, 2021.⁹³ Under the Biden administration, the CDC should take a more active role in data collection and reconcile its own figures with that of CMS.

We believe NNU's compiled infection total still represents a severe undercount. Just 18 states are providing infection figures for all health care workers on a daily, semiweekly, or weekly basis. ⁹⁴ An additional seven states and the District of Columbia (DC) provide infection figures regularly for nursing home workers that are used herein. ⁹⁵ Of these, only DC and New Jersey provide additional infection data for some state health workers. An eighth state, Florida also provides long-term care staff infection totals, but not in a usable format. For 26 states and territories that do not provide this data, we have utilized CMS's Covid-19 nursing home workers dataset. ⁹⁶

Florida's reporting and lack of transparency has also been particularly problematic. For example, Florida is not reporting cumulative totals for health care worker infections in long-term care facilities. Florida's peak reported infections of 7,298 was reported on July 23, 2020, but cumulative totals for Florida reported to CMS by nursing homes for the week ending Jan. 31, 2021, totaled 31,133.⁹⁷ We have included the latter cumulative figure from CMS in the infection total.

Even some states that publish overall health care worker infection totals appear to fall far short of a reasonable total. For example, the State of Pennsylvania reported on Feb. 1, 2021, an overall figure of 23,011 health care worker infections, or just 80.9 percent of the 28,433 figure reported by CMS on Jan. 31, 2021 for nursing home workers alone. 98 We have included the State of Pennsylvania's overall figure in our totals. Wisconsin and Oregon are among the overall healthcare worker infection reporting states that admit that they do not know if a large proportion of their infected totals are health care workers, with the State of Wisconsin reporting that for 55 percent of the infected there is no profession reported, and Oregon reporting no profession available in 41 percent of infections.99



Table 6. Covid-19 Health Care Worker Infections by State

lealth Care Worker nfections	Totals
J.S. Total	791,158
California	90,744
Ohio	53,934
llinois	43,892
1innesota	37,103
- exas	37,062
Georgia	36,027
New York	32,971
Florida	31,133
Visconsin	29,711
Pennsylvania	24,023
/irginia	22,637
New Jersey	21,576
Arkansas	21,385
1ichigan	19,407
South Carolina	18,890
Jtah	18,462
Alabama	17,762
ndiana	17,592
1issouri	15,902
North Carolina	15,019
Oklahoma	14,723
ennessee	13,870
Colorado	13,015
Kentucky	12,921
1assachusetts	11,665
owa	11,022
ouisiana.	10,970
Dregon	10,872

Table 6 Covid-19 Health Care Worker Cont. Infections by State

Health Care Worker Infections	Totals
Idaho	9,174
Kansas	8,633
Maryland	7,711
Mississippi	7,346
Connecticut	7,186
Arizona	5,727
Nebraska	4,856
Washington	4,349
North Dakota	3,977
New Hampshire	3,885
Nevada	3,878
Rhode Island	3,320
West Virginia	3,170
South Dakota	2,871
New Mexico	2,631
Delaware	1,668
Montana	1,506
Maine	1,304
District of Columbia	1,129
Vermont	1,024
Wyoming	997
Alaska	262
Hawaii	221
Puerto Rico	43

BLAMING HEALTH CARE WORKERS FOR THEIR COVID-19 INFECTIONS

As noted previously, it is likely that some of the hospital industry's reluctance to acknowledge health care worker deaths, as well as infections, likely comes from their interest in putting up barriers to Covid-19-related workers' compensation for registered nurses and other health care workers in many states.¹⁰⁰ Over the past year hospital administrators have deployed a variety of tactics to blame health care workers and "community spread" for their Covid-19 infections. An early example of this came in a April 3, 2020 report when the PeaceHealth system which operates hospitals in Lane County, Oregon and Vancouver, Washington claimed without evidence that all 14 of its infected caregivers "tested positive as a result of community or non-patient exposures."101 Similarly, Massachusetts General Hospital in late of March 2020 had more than 40 employees who tested positive for Covid-19, but the hospital insisted that "most" contracted the virus somewhere other than the hospital.¹⁰² University of Texas (UT) Southwestern of Dallas has gone to perhaps the greatest lengths to absolve itself from responsibility for its Covid-19 infected health care workers by posting a dashboard which claims that of 1,116 employee cases between March 1, 2020 and Feb. 4, 2021, 1,062 employees were infected in the community and claims that in just 19 cases, a campus patient infecting an employee was the identified "source of infection." 103 Another 35 infections were claimed to be caused by employee-to-employee exposure, as if interacting with coworkers was not a routine, necessary, and everyday part of the business of patient care. Can UT Southwestern produce a shred of evidence to back up its claims with respect to its ability to so confidently identify the "source of infection"? In the absence of widespread testing and genomic sequencing it is far more likely that this dashboard is simply a brazen attempt by UT Southwestern to absolve itself of any responsibility in a manner that is wholly unscientific, a betrayal of the public trust, and an insult to its employees and the community it purports to serve.

Medical systems such as Duke have also invested energy trying to shift blame for infections onto health care workers and "community spread." Duke-affiliated researchers published a study of health care worker infection on June 25, 2020, which found that "38% cases were community-acquired, 22% were healthcare-associated, and 40% did not have a clear source of acquisition." ¹⁰⁴ The Duke study stated, "Community-acquired SARS-CoV-2 cases were defined as HCWs [health care workers] who had an unmasked exposure to

a known positive person such as a family member, friend, or coworker outside of the hospital for greater than 10 minutes at less than 6 feet," a definition of exposure analogous to the CDC's, that is simply the documentation of possible exposure and does not amount to causation. While the Duke study's authors, unlike the UT Southwestern administration, are intellectually honest enough to admit that in four in ten cases the source was not clear, the study design itself involved interviewing infected health care workers, and the study authors acting as the panel deciding on a source of infection.¹⁰⁵ This is what a lay person might term an educated guess.

The Duke study also illustrates a larger problem with studies of its kind, specifically the arbitrary and shifting definitions of close contact and exposure relied upon in study designs seeking to correlate exposure with infection. As previously noted the Duke study utilizes a definition of exposure that is not identical, but analogous to the CDC's current operational definition of close contact as within six feet and prolonged exposure: "a cumulative time period of 15 or more minutes during a 24-hour period."106 In fact, the Duke study's definition is more similar to the CDC's previous definition, which until mid-October defined close contact as within six feet and prolonged exposure as a continuous 15 minutes.¹⁰⁷ These shifting and arbitrary definitions of exposure are setting aside a large body of evidence regarding coronavirus transmission outside of the CDC and others' overly restrictive definitions of exposure.¹⁰⁸ Arbitrary definitions of exposure allow for problematic study designs that can largely exclude the substantial potential for exposures to nurses and other health care workers which can occur during every patient care interaction with confirmed Covid patients, and with patients who may have Covid.

Northwestern-affiliated researchers have tried another tactic, dressing up their inability to accurately attribute the source of infection by combining survey data and statistical correlation with infection rates in Chicago communities. ¹⁰⁹ The resulting study is an implicit admission of their inability to document the source of infection. The Northwestern researchers cite a Minnesota Department of Health (MDH) study that found that of 373 infected health care personnel, those "exposed to household or social contacts with COVID-19 had the highest positivity rate (13%) among all exposure types." ¹¹⁰ Here again, in the MDH study, the attempt is being made to conflate an exposure with the cause of infection.

Furthermore, the MDH study covers just 373 positive cases by July 11, 2020 out of 3,906 cases of infected health care workers reported by MDH on July 9, 2020.¹¹¹ It is also noteworthy that the MDH study states that for health care personnel with higherrisk exposures: "If COVID-19-like symptoms were experienced, [health care personnel] were encouraged to get tested," an admission that an unknown portion of the 5,374 health care personnel who experienced high-risk exposures went untested.¹¹² In total, the study reports that 17,330 health care workers experienced 21,406 exposures, of which 5,374 were classified as high risk.¹¹³ The MDH study seems to indicate a shocking lack of interest in the testing of exposed health care workers.¹¹⁴

As noted previously, in an environment of extraordinarily insufficient testing and virtually no genomic sequencing, a large number of asymptomatic cases¹¹⁵ in which individuals have been found to carry comparable viral loads to those with symptoms,¹¹⁶ and when dealing with Covid-19's lengthy incubation period, it is simply not possible track or infer the source of infection with the certainty and confidence displayed in the above examples. We believe a more reasonable standard is to assume that persons actively working or volunteering as health care workers broadly defined may have been infected in a health care delivery setting.



APPENDICES

Appendix I. Registered Nurse Covid-19 Memorial

Nineteen National Nurses United (NNU) members are included in this memorial list who are believed to have died due to Covid-19 and related complications as of Feb. 11, 2021. Their names are highlighted in bold.

Note: We wish to apologize in advance for any errors or omissions. If you believe any name is included in error and would like it removed, or if you have a name you would like to be memorialized in a forthcoming version of this paper please contact: NNUMemorial@NationalNursesUnited.org.

Name	Age	Date Deceased	Employer	State of Employe
Tricia Moten		Feb. 5, 2021	First Surgical Hospital	Texas
Madalyn McMahan	58	Jan. 27	Caldwell Memorial Hospital	North Carolina
Cherie Freeman-McKay	57	Jan. 26	Lutheran Care Center	New York
Gwen Farley	65	Jan. 22		Idaho
Amelia Baclig	63		Emanate Health Inter- Community Hospital	California
Freddie Johnson	73			Texas
Regina Yumang		Jan. 17	Manhattan Veterans' Affairs	New York
Sandra Powell		Jan. 15	Merit Health Natchez	Mississippi
Rebecca Haddock		Jan. 15	North Alabama Regional Medical Center	Alabama
Janie McGhin	70	Jan. 15	Partners in Health Management	Georgia
Mary Meadows	59	Jan. 14	Cabell Huntington Hospital	West Virginia
Cheryl DiChiari		Jan. 15	Pike Internal Medicine	Alabama
John Vernier	62	Jan. 12	Mercy Hospital South	Missouri
Marjorie Imperial		Jan. 11	Sutter Solano Medical Center	California
Leticia Leal	56	Jan. 10		North Carolina
Betty Gallaher		Jan.10	Coos Valley Medical Center	Alabama
Thomas Picchi	71	Jan. 8	Desert Regional Medical Center	California
Valiente "Al-Al" Adaza	49	Jan. 8	Elevate Care Niles Nursing Home	Illinois
Barbara Clayborne	63	Jan. 8	St. Joseph's Medical Center	California
Marilee Eyring	65	Jan. 7		Arizona
Patricia Byers	62	Jan. 6		Pennsylvania

Sharon Combs	66	Jan. 5	Owsley County Healthcare Center	Kentucky
Tim Beasley	61			Texas
Ashley Gomez	30			California
Steven Neher	49	Dec. 29, 2020	Naph Care at Falkenburg Road Jail	Florida
Merry Beth Knierim	53	Dec. 29		South Carolina
Bonnie Lou Hall	62	Dec. 27	ContinueCare Hospital at Baptist Health Corbin	Kentucky
Chiuying Chien	54	Dec. 22	Huntsman Cancer Institute	Utah
Lizabeth Tarr	50	Dec. 22		Arizona
Vania Underwood	36	Dec. 19	Mercy Health St. Vincent Medical Center	Ohio
Therese Worrell-Leslie	57	Dec. 19	Buckeye Health Plan	Ohio
James Andrew Atkins	48	Dec. 16	Ivy Creek Family Care	Alabama
Leah Kile	65	Dec. 16	Duncan Regional Hospital	Oklahoma
Valeriano Luz	60	Dec. 16		California
Raymond Joe	48		Navajo Nation	New Mexico
Mona Rivera		Dec. 15	Kaiser Los Angeles Medical Center (LAMC)	California
Gayle Blomstrom	66	Dec. 15	Lydia Taft House	Massachusetts
Elizabeth Motzenbecker	61	Dec. 15	Venice Regional Bayfront Health	Florida
Jennifer McClung	54	Dec. 14	Helen Keller Hospital	Alabama
Rebecca Lawton	35	Dec. 11	Bishop Place	Washington
Freddy Espinosa	59	Dec. 10	Sound Physicians working at Dignity Health - St. Rose Dominican - Sienna	Nevada
Maria Ogas	53	Dec. 8		New Mexico
Emeregilda Kanney	65			Texas
Tawauna Averette	42	Dec. 8	Kettering Medical Center	Ohio
Sean Weaver	62	Dec. 7	Hannibal Regional Medical Group	Missouri
Janine Jones	58	Dec. 4	AUA Surgical Center	Texas
Helen Taylor		Dec. 3		Arizona
Kindra Irons	41			Indiana

Carla Wilson	62	Weekend of Nov. 28-29	Brian Center Health and Rehabilitation/Hickory Viewmont	North Carolina
Reba Beavers	73	Nov. 29	Duke Regional Hospital	North Carolina
Christine Gratzke	60	Nov. 27	Mercy Hospital	Illinois
Gary Woodward		Nov. 27	Ascension Saint Thomas Hospital West	Tennessee
Kelly Raether	42	Nov. 26	Ixonia Fire Department	Wisconsin
Valerie Louie	60	Nov. 24	Highland Hospital	California
Daphne Newton	57	Nov. 24	CHI Health Immanuel Hospital	Nebraska
Brittany Palomo	27	Nov. 21	Valley Baptist Medical Center	Texas
Bonnie Ciafre	64	Nov. 20	United Methodist Communities	New Jersey
Michael Rodriguez	67	Nov. 20	Norton Audubon Hospital	Kentucky
Brandy Calvert-Rahi	40	Nov. 18	Genesis Healthcare	New Mexico
Mohammed Nabie		Nov. 13		Virginia
Eugenie Alford	53	Nov. 13	Novant Health	North Carolina
Roberta Santisteven	48	Nov. 9	The Center at Parkwest	Colorado
Bill Ricketts	59	Nov. 9	MS Care Center of Alcorn County	Mississippi
Ryan Mulcahy	42	Nov. 8	LifeGift	Texas
Sherry Knowles	62	Nov. 8	Orlando Regional Medical Center	Florida
Santa Staples	59	Nov. 7	Mclaren Flint	Michigan
Patti Androy	58	Nov. 5	Dunlap Specialty Care	lowa
Elaine McRae	63	Nov. 5	Gulfport Memorial Hospital	Mississippi
Maribel Tabanguil-May	59	Nov. 2	Borgess Hospital	Michigan
Susan Borinsky	62	Nov. 1	Baltimore City Public Schools	Maryland
Michelle Wade	53	Oct. 31	University of Louisville Health - Jewish Hospital	Kentucky
Patrice Grossman	49	Oct. 31		Utah
Barbara Langburt	43	Oct. 30		Florida
Becky Fulenwider	57	Oct. 26	CHS Blueridge	North Carolina
Tamara Thompson	52	Oct. 24	VA Medical Center	New Mexico

Akua Bosompem	44	Oct. 23	Memorial Hospital	Florida
John Vereb	52	Oct. 23	Louisville VA Medical Center	Kentucky
Adrienne Phelps	36	Oct. 22		Missouri
Bonnie Johnson		Oct. 22	Hospice of West Alabama	Alabama
Sheila Clark		Oct. 20	Heart City Health	Indiana
Teresa Klimauskas	69	Oct. 12	Lake View House Nursing Home	Massachusetts
Donna Holloway	67	Oct. 12	Avalon Place	Texas
Mary Pabinguit	66	Oct. 10		California
Sally Solon Fontanilla	51	Oct. 5	Providence St. Mary's Medical Center Apple Valley	California
Sheila Nelson	59	Oct. 5	Mildred Mitchell Batemen Hospital	West Virginia
Jeannette Williams-Parker	48	Sept. 30	WVU J.W. Ruby Memorial Hospital	West Virginia
Shelly Smith	60	Sept. 28		Mississippi
Jack "Rick" Brewer Jr.	67	Sept. 24		Alabama
Greg Peistrup	53	Sept. 17	North Vista Hospital	Nevada
Pammela Baker	55	Sept. 16	Coastal Primary Care	North Carolina
Cheryl Smith-Longfellow	60	Sept. 10	Singing River Hospital	Mississippi
Pa Vang	40	Sept. 9	Atrium Health	North Carolina
Eugene McFeely	64	Sept. 8	Aventura Hospital and Medical Center	Florida
Nueva Singian	44	Sept. 5	CareMore Health	California
Oliver Isleta	58	Sept. 1	Community Regional Medical Center	California
Neuman Kiamco	48	Agu. 30	Macneal Hospital	Illinois
Jennifer Hayes	47	Aug. 28	Buckeye Transplant Services	Alabama
Jason Garcia	42	Aug. 26	CHRISTUS Spohn Hospital - Shoreline	Texas
Marnette Aggabao	62	Aug. 26	Guam Memorial Hospital	Guam
Wanda Key	64	Aug. 24	Center of Hope for Behavioral Health	Tennessee
Lisa Pinkstaff	52	Aug. 21	La Porte Hospital	Indiana
Ernest Garcia	39	Aug. 20	Axis Health Systems	Colorado

Bonita Long		Aug. 20	Marshall Medical Center South	Alabama
Patricia Edwards	62	Aug. 19	Bon Secours St. Francis Hospital	South Carolina
Ruth Noemi Olvera	50	Aug. 18		Texas
James White	27		Lake City VA Medical Center	Florida
Vincent DeJesus	39	Aug. 15	Sunrise Hospital and Medical Center	Nevada
Angel Sousa	53	Aug. 15	Rite Aid Urgent Care Center	Florida
Penny Scarangella Smith	48	Aug. 9	Baycare Bartow Regional Medical Center	Florida
Charles Manrique	71	Aug. 8	Marion County Jail	Florida
Sandy Sarantis	61	Aug. 8	Novant Health Huntersville Medical Center	North Carolina
Yolanda Coar	40	Weekend of Aug. 8-9	Augusta University Health Medical Center	Georgia
Daniel Morales	39	Aug. 3	El Paso	Texas
Arletta Smith		Aug. 3	Clinton Healthcare	Mississippi
John Cummings	56	Aug. 2	Mercy Hospital Berryville	Arkansas
Estrella Quillopa Malimban	65		Arrowhead Regional Medical Center	California
Tony Munoz Sanchez	73	July 30	Tulare	California
Sonia Brown	65	July 29	Kendall Regional Medical Center	Florida
Karen Wenk Smith	56	July 29	Medical Clinic of Houston	Texas
Jerome Arceneaux	50		Memorial Hermann Hospital	Texas
Virginia McCamish	61	July 27	Cleveland Clinic Martin Memorial Hospital	Florida
Ed Webster	47	July 25	Southpointe Rehabilitation	South Carolina
Marco DeLeon		July 24	NYU Winthrop Hospital	New York
Rolando Clemente Jr.	41	July 23		Arizona
Debbie Kain	67	July 23	St. Dominic Hospital	Mississippi
Marcia Barga	67	July 22	Community Health and Wellness Partners	Ohio
Zalika Kaza	42		St. Cloud Regional Medical Center	Florida
Aimee Williams		July 18	Hillcrest Medical Center	Oklahoma

Melinda Speers	62	July 17	Simpson General Hospital	Mississippi
Janine Paiste-Ponder	59	July 17	Alta Bates Summit - Sutter Health	California
Cynthia Pinard	61	July 17	Brooke Army Medical Center	Texas
Shannon Valmore	46	July 15	Opelusas General Health System	Louisiana
Mark Sterns	64	July 15	Med Central - Orlando Health	Florida
Samantha Hickey	45	July 13	St. Luke's	Idaho
Dione Malana	61	July 12	Community First Medical Center	Illinois
Katherine Hughart	61	July 12	Western Arizona Regional Medical Center	Arizona
Marsha Nelson	66	July 11	Mcleod Health Regional Medical Center	South Carolina
Laura Chavez	48	July 9	Los Angeles County - USC Medical Center	California
Lorenza "Lori" Guerrero	72	July 7	McAllen Medical Center	Texas
Joshua Obra	29	July 6	Intercommunity Care Center	California
Diane Wolfe	69	July 5	Mississippi State Hospital	Mississippi
Francis Mee	65	July 5	Tewksbury State Hospital	Massachusetts
John "Derrick" Couch	52	July 4	MedFirst Medical Center	Georgia
Deborah Sheridan	65	July 4	Maplewood Nursing and Rehab	Massachusetts
Dana Davis	51	July 3	Baptist Health	Kentucky
Jose Ruiz III	46	July 3	Valley Baptist Medical Center	Texas
Shawna Snyder	41	July 2	Banner-University Medical Center South	Arizona
Kathy Sims	62	July 1	Mcleod Health Regional Medical Center	South Carolina
Victor Ejimadu	56	June 30	VA Michael E. Debakey Medical Center	Texas
Loida Tobias	61	June 30	Harlem Hospital	New York
Crisalyn Viste	48	June 30	Kaiser Ontario	California
Larry Henning	67	June 26	Rockford Memorial Hospital	Illinois
Patricia Hudgins	57	June 23	First Choice Home Healthcare	Colorado
Sybil Freeman	62	June 22	Beaufort Memorial Hospital	South Carolina

Kerri Unsworth	56	June 20	Elmhurst Extended Care, Lifespan Hospitals	Rhode Island
Jose Luiz Maza	54		Kaiser San Diego	California
Elena-Beth Alejandre	68	June 19		Maryland
Emie Rimot	66	June 18		California
Robert "Bob" Armstrong	56	June 16	Rogelio Sanchez State Jail, Texas Tech University Health Sciences Center	Texas
Maria Cabatu	51	June 15	Hayward Healthcare and Wellness Center	California
Kristen Brooks	61	June 15		California
Ernesto Santos	47	June 8	San Dimas Community Hospital, San Gabriel Valley Hospital	California
Rosie Swain	64	June 7	City View Multicare Center	Illinois
Josefina Guno Javier	56	June 6	ManorCare Elk Grove Village	Illinois
Ellen Carandang	51	Reported June 4	Carepoint Health	New Jersey
Elda Ziko	42	Reported June 2	New York City	New York
Matthew Moeddel			Bridgeway Pointe	Ohio
Valrena "Val" Singer	57	May 30	Kayenta Health Center	Navajo Nation - Arizona
Grace Ocampo	50	May 29	Ozone Park	New York
Suzanne Koransky	62	May 29	Wayne Public Schools	New Jersey
Kurt Julian	63	May 29	Evergreen Medical Center	Washington
Joan Duda-Kissane	63	May 27	St. Anthony's Hospital	Illinois
Saramaria Ramirez	36	May 27		California
Nancy Veto	65	May 26	Community First Medical Center	Illinois
Sandra Oldfield	53	May 25	Kaiser Fresno	California
Madeline Johnson	70	May 25	Marcella Center (Nursing Home)	New Jersey
George Sisnero	63	May 24	University Hospital	New Jersey
Arlene Aquino	44	May 24	Mission Community Hospital	California
Kathy Stuart	61	May 22	Care One of Lowell	Massachusetts
Maria "Bambi" Roaquin	59	May 22	New York Presbyterian Hudson Valley Hospital	New York
Lyubov Semidubersky	62	May 22	Visiting Nurse Service	New York

Bernie Hailson Jr.	61	May 20	Holy Family Haverhill Hospital	Massachusetts
Aleksandr Vollmann	58	May 19	Harborview Medical Center	Washington
Renee French	54	May 19	New York Presbyterian	New York
Kathy Nelson	61	May 19	Kindred at Home	Virginia
Denny Gilliam	53	Reported May 18		Tennessee
Bernard Atta	66	Reported May 18	Correctional Reception Center	Ohio
Ellen B. Norman	66	May 17	Keystone Medical Center	Pennsylvania
Ilkah Hernandez	56	May 17	Abbot Terrace Health Center	Connecticut
Deborah Coughlin	67	May 16	iCare Health Management	Connecticut
Suppee Pojjananuvat	74	May 15	Montefiore-New Rochelle	New York
Judith L. Heimann	63	May 15	Carlyle Healthcare Center	Illinois
Michelle Herring	52	May 14	Martine Center for Nursing Rehabilitation & Nursing	New York
Pilar Palacios Pe	64	May 14	Adventist Fort Washington Medical Center	Maryland
Milagros Abellera	65	May 13	Baptist Medical Center, Kindred Hospital	Texas
Mavis Charles	63	May 12	St. Albans Community Living Center	New York
Jina Cadabono-Sisnero	62	May 11		New Jersey
Douglas Enteman	50	May 10		Delaware
Anne (Lucia) Gerardo-Repayo	60	May 10	Department of Veterans Affairs	New Jersey
Debra Rossler	58		Mercy Medical Center	New York
Erwin Lambrento	58	May 9	Elmhurst Hospital	New York
Irene "Rene" Burgonio	54	May 9	Fresenius Kidney Care Nephro West	New York
Rose Zubko	71	May 8	St. Joseph Hospital	New York
Kelly Mazzarella	43	May 8	Montefiore-Mount Vernon	New York
Brian Saddler	60	May 8	St. Joseph's Wayne Medical Center	New Jersey
Royce Villa		May 8	Beaumont Hospital - Royal Oak	Michigan
Danilo Bulima	54	May 7	University Hospital	New Jersey
Barbara Ann Stewart	57	May 7	Caswell Correctional Center	North Carolina

Rose Liberto	64	May 7	Atrium Health Cabarrus	North Carolina
Luisa Docil	51	May 7	Kindred Chicago Lakeshore	Illinois
Walter Asah	54	May 5	- In a chicago Lanconce	Maryland
Ann Hinkhouse	74	May 5	Wilton Care Center	lowa
Gary Angara	53	Tidy 5	Wilton Care Center	New Jersey
Maria E. Lopez	63	May 4	University of Illinois Chicago	Illinois
Carolyn McBride	65	May 2	Eden Village Retirement Center	Illinois
Linda Morris	73	May 2	Boro Park Center for Rehabilitation and Nursing (Nursing Home)	New York
Angel Santa Isabel	65	May 1	Shadow Hills Convalescent Hospital	California
Svetlana Vinokur	56	May 1	Coney Island Hospital	New York
Sheena Miles	60	May 1	Scott Regional Hospital	Mississippi
Marsha Kaye Bantle	65	May 1	Signature Healthcare of Newburg (Nursing Home)	Indiana
Necitas Galura	61	April 30		New York
Daniel Coronel	53	April 29	Brookdale Hospital Medical Center	New York
Maria Magdaleno	64	April 29	Center for Hispanic Elderly	Illinois
Robert David Reisinger	57	April 28	River Grove Fire Department	Illinois
Patrick DeGenaro	63	April 28	Hackensack University Medical Center	New Jersey
Lorna Ramirez Retener	60	April 27	Plaza Health	Florida
Azinet Pudpud	61	April 27	Lincoln Hospital	New York
Neff Rios	37	April 26	St. Francis Hospital	Tennessee
Maria Cabillon	63	April 26	Kings County Hospital	New York
Imelda Tangonan	53	April 24	Blythedale Children's Hospital	New York
Oluwayemisi "Yemi" Ogunnubi	59	April 24	Assigned to Symphony of Morgan Park (Nursing Home), employed by Concerto Renal Services	Illinois
Romeo "Romy" Agtarap	62	April 24	New York Presbyterian	New York
Samantha Collings Wissinger	29	April 24	Beaumont Hospital - Troy	Michigan
Gabriel Chinwendu	60	April 24	Catholic Charities	District of Columbia

Joyce Pacubas-Le Blanc	53	April 23	University of Illinois Chicago	Illinois
Carolyn Ettinger	53	April 22	Verrazano Nursing Home	New York
Paulette Thomas-Mickell		April 22	Amita Health St. Mary	Illinois
Steven Malagraph	55	April 22	Nyack Hospital	New York
Jose Mendeja	48	April 22		New Jersey
Lydia Tandoc Macuja	73	April 22	Ascension Providence Hospital - Southfield Campus	Michigan
Celia Yap Banago	69	April 21	Research Medical Center (HCA)	Missouri
Marlino Cagas		April 20	Harlem Hospital	New York
Cristino Fabro	70	April 20	Long Island Care Center (Nursing Home)	New York
Felicia Ailende	68	April 20	BRIA of Forest Edge (Nursing Home)	Illinois
Salome Frye	59		Pueblo Springs Rehabilitation	Arizona
Virdree Burns Jr		April 19	Wellcare	New York
Maria Grace Esteves Laureta			St. Barnabas	New York
Lisa Micek		April 19	CHI St. Francis	Nebraska
Sheila Faye Christian	66	April 19	Care Pavilion Nursing and Rehabilitation Center	Pennsylvania
Karla Dominguez	33	April 19	Providence Children's Hospital - Providence Memorial Campus (Tenet)	Texas
Emma Goolsby	56		Bellevue Hospital	New York
David Perea	35	April 19	Lakeside Health & Wellness Suites (MAS Medical Staffing)	Nevada
David Blagrove	55	April 19	Kirby Psychiatric Center	New York
Victor Sison	64	April 18	Complete Care Hamilton Plaza (Nursing Home)	New Jersey
Ryan Slattery	43	April 18	Jefferson Frankford	Pennsylvania
Faye Jackson	75		Crown Healthcare of Mobile (Nursing Home)	Alabama
Roxanne Bent	48	April 18	Brooklyn Methodist	New York
Lois Ashcroft-Merrell	57	April 18	Pine Bluffs Regional Medical Center	Arkansas
Taiwo Alubajo	54	April 18	Manorcare Health Service - Yeadon	Pennsylvania

Corazon Espinosa	62	April 18		New York
Celia Lardizabal Marcos	61	April 17	CHA Hollywood Presbyterian Medical Center	California
Renato Garcia	59		Newark Beth Israel Medical Center	New Jersey
Rosemary Sell	81	April 17		New York
Rebecca Yee	48	April 17	Mount Sinai	New York
Robert Tarrant	66		Robert Wood Johnson Barnabas Health	New Jersey
Livette Plan		April 16	Orange Regional Medical Center	New York
Pamela Orlando	56	April 16	Valley Hospital	New Jersey
Maureen Lunney	59	April 16	Richmond University Medical Center	New York
Helen Gbodi	55	April 16	Medstar Washington Hospital Center	District of Columbia
Joyce Brown-Wigfall				New York
Anjanette Miller	48	April 16	Community First Medical Center, Kindred Chicago Lakeshore, Bridgeway Senior Living	Illinois
Mike Marceaux	49	April 16	Christus Hospital	Louisiana
William Gassett	64	April 16	Baptist Medical Center	Mississippi
Barbara Birchenough	65	April 15	Clara Maas Medical Center	New Jersey
Ellyn T. Schreiner	68	April 14	Crossroads Hospice	Ohio
Ernesto "Audie" DeLeon		April 13	Bellevue Hospital	New York
Maevelyn Cabe Chavez	61	April 13	The Grove Nursing Home	Illinois
Rose Taldon	63	April 12	New England Baptist Hospital	Massachusetts
Irena Hartell	68	April 12		New York
Evelyn Caro	69	Weekend of April 11-12	Capital Women's Care	Maryland
Quen Agbor Ako	53	April 10	Future Care - Old Court (Nursing Home)	Maryland
Susan Sisgundo	51		Bellevue Hospital	New York
Yaw Asante	60		Lincoln Hospital	New York
Felicisimo "Tom" Luna	62	April 9	Trinitas Regional Medical Center	New Jersey

Rosemary Coutou-Figaro	52	April 9	KingsBrook Jewish Medical Center	New York
Paul Anthony Camagay		April 9	Emanate Health Inter- Community Hospital	California
Mary Ellen Porter	65	Death reported April 9	Richmond University Medical Center	New York
Elvira Pagala	69	Death reported April 9	Rehab at River's Edge	New Jersey
Theresa Berbano	58	April 8	New York Presbyterian	New York
Whitney Ballance	37	April 8	Mission Health (HCA)	North Carolina
Thyce Mattiss	60	April 7	Montefiore-Moses	New York
Gloria Minor	65	April 7	Metropolitan Hospital	New York
Aleyamma John	65	April 7	Queens Hospital Center	New York
Unknown Nurse		Death reported by VA April 7	Michael E. Debakey Medical Center	Texas
Vianna Thompson	52	April 7	VA Northern Sierra	Nevada
Rose Harrison	60	April 6	Marion Regional Nursing Home	Alabama
Divina "Debbie" Accad	72	April 6	VA John D. Dingell Medical Center	Michigan
Edwin Montanano	73	April 5	Hudson County Jails	New Jersey
Angela Lewis		April 5	Visiting Nurses Association of Staten Island	New York
Earl Bailey	56	April 5	Florida Medical Center, Palmetto General Hospital	Florida
Daisy Doronila	60	April 5	Hudson County Jails	New Jersey
Patrick Cain	52	Weekend of April 4-5	McLaren Flint	Michigan
Ali Dennis Guillermo	44	Week of April 5-11	Long Island Community Hospital	New York
Marilyn Howard	53	April 4	Spring Creek School	New York
Susan Cicala	60	April 4	Clara Maas Medical Center, for Rutgers University Correctional Healthcare at Northern State Prison	New Jersey
Elizabeth Bartolome Del Mundo	59	April 4	Crane's Mill (Nursing Home)	New Jersey
Angeline Bernadel	52	April 4	West River Healthcare Center (Nursing Home)	Connecticut
Sonia Roman		Death reported April 3	El Hospital Auxilio Mutuo	Puerto Rico

Mark Leighton Bowen	54	April 2	Highland Care Nursing Home	New York
John Abruzzo	63	April 2	Huntington Hospital	New York
Lisa Ewald	54	March 31	Henry Ford Hospital	Michigan
James House	40	March 31	Omni Continuing Care Nursing Home	Michigan
Maria Luisa Lopez		March 31	Bayonne Medical Center	New Jersey
Larrice Anderson	46	March 31	New Orleans Hospital East	Louisiana
Kevin Graiani	56	March 30	Rockland Medical Group	New York
Nicanor "Nick" Baltazar	60	March 30	Long Island Care Center (Nursing Home)	New York
Jeff Baumbach	57	March 30	St. Joseph's Medical Center	California
Unknown Nurse		Week of March 29-April 4	Piedmont Henry	Georgia
Unknown Nurse		Week of March 29-April 4	Los Angeles County Jails	California
Unknown Nurse		Death reported by Ohio Dept. of Health March 30		Ohio
Rosary C. Castro-Olega	63	March 29	All Care & Core Med Staffing Agencies	California
Freda Ocran	50	March 28	Jacobi Medical Center Psychiatric Unit	New York
Noel Sinkiat	64	March 27	Howard University Hospital	District of Columbia
Araceli Buendia Ilagan	63	March 27	Jackson Memorial Hospital	Florida
Cynthia "Chi" Mendoza	68	March 27	Sentara Leigh Hospital	Virginia
Kious Kelly	48	March 24	Mount Sinai West	New York
MaryBeth Pappetti	65	March 24	CareOne at Livingston Assisted Living	New Jersey
Theresa Lococo	68	Week of March 22-28	Kings County Hospital	New York
Judy Wilson-Griffin	63	March 20	SSM Health St. Mary's Hospital	Missouri

Appendix II. Health Care Worker Covid-19 Memorial

This memorial list includes the names of 981 health care workers who are believed to have died due to Covid-19 and related complications as of Feb. 11, 2021.

Note: We wish to apologize in advance for any errors or omissions. If you believe any name has been included in error and would like it removed, or if you have a name you would like to be memorialized in a forthcoming version of this paper please contact: NNUMemorial@NationalNursesUnited.org.

Name	Employer	State
Alyson Matthews	Glen Haven Health and Rehabilitation	Alabama
Candace Allen		Alabama
Casadear "Ceda" Williams	Mobile Metro Jail	Alabama
Dr. Catherine "Beth" Coward		Alabama
Dr. Chaihan Korn		Alabama
Chantale McCall		Alabama
Cheryl Norris	Self Healthcare and Rehab Center	Alabama
Elizabeth Milam	Northeast Alabama Occupational Medicine	Alabama
Harlan Stricklan	DCH Northport Medical Center	Alabama
Jacques Mcconico	Diversicare of Riverchase	Alabama
Jerry Alford	DCH Regional Medical Center	Alabama
Judy Ann Stephens	Crown Healthcare of Fort Payne	Alabama
Keoki "Keke" Ball	Montgomery Primary Healthcare	Alabama
LaCosta Miles	St. Vincent's Hospital	Alabama
Marion Sheppard Jr.	Oxford Health	Alabama
Stan Long	Huntsville Psychotherapy and Counseling Services	Alabama
Dr. Tuomah Sahawneh		Alabama
Arniece Brown	Little Colorado Medical Center	Arizona
Dr. Arnold Gorin		Arizona
Belinda Brown		Arizona
Brenda Cacinos	Callywise	Arizona
Bricias Gallegos		Arizona
Carlos Raygoza	DCI (Dialysis Clinic, Inc.) Tuscon	Arizona
Cheryl Thinn	Tuba City Regional Health Care Corporation	Arizona
Corrinna Thinn	Tuba City Regional Health Care Corporation	Arizona

Damian Lopez	San Carlos Apache Hospital	Arizona
Delora Roanhorse	Department of Veterans Affairs	Arizona
Elizabeth Ann Stahl	Department of Veterans Affairs	Arizona
Dr. Emilia Matos	Yuma Regional Medical Center	Arizona
Felipe Llorente	Havasu City Regional Medical Center	Arizona
Glenda Felix		Arizona
Johnny Gardner	Honor Health	Arizona
Josephine Arnold Morante		Arizona
Dr. Larry Smith		Arizona
Lizabeth Tarr		Arizona
Michael Willis	Copper Queen Community Hospital	Arizona
Dr. Nick Rizos	Havasu Regional Medical Center	Arizona
Patricia Wilke	Winslow Safeway	Arizona
Dr. Roberto Ruiz		Arizona
Tony Herrera	Kino Community Hospital	Arizona
Bruce Hutcheson	Community Blood Center of the Ozarks	Arkansas
Cheryl Morrow	Batesville Family Practice Clinic	Arkansas
Clint Watson II	Baptist Health - Conway	Arkansas
Kay Parker	Dardanelle Nursing and Rehabilitation	Arkansas
Linda Mays	Barrow Creek Health and Rehab	Arkansas
Linda Pledger	Lonoke Health and Rehab Center	Arkansas
Peggy Simpson	Conway Human Development Center	Arkansas
Richard Richardson	Central Arkansas Community Correction	Arkansas
Dr. Robert "Ray" Hull		Arkansas
Dr. Roy Lee	Mediquick Urgent Care	Arkansas
Shanta Batchelor	Arkansas Children's Hospital	Arkansas
Dr. Thomas Rose	Dale Medical Center	Arkansas
Adan Maldanado	El Centro Regional Medical Center	California
Adena Rodriguez	Kaiser Ontario	California
Dr. Adolfo Paglinawan	Palo Verde Hospital	California
Aldo Iniguez	Care Ambulance	California

Alex Palomo	Garfield Medical Center	California
Alfonso Ye Jr	PalmCare Pharmacy	California
Angel Jurado		California
Angelito Diwa	Kaiser Orange County North	California
Anthony Navata		California
Antonia "Tony" Sisemore	Woodland Senior Living Facility	California
Armando Rodriguez	Fountain Valley Regional Hospital	California
Brandy Houser		California
Brittany Bruner-Ringo	Silverado Beverly Place	California
Dr. Chester Banaang		California
Chris Mertz	Rancho Santa Fe Fire Protection District	California
Christina Baldado		California
Dr. Danny Thomas	Children's Hospital of Los Angeles	California
David Duran	California Hospital Medical Center	California
Da-wei Liang	Garfield Medical Center	California
Donna Frey	Adventist Health Lodi Memorial	California
Dulce Aguilo	Belmont Village	California
Eligio Cabuncal		California
Emmanuel Gomez	UCLA Ronald Reagan Medical Center	California
Esmeralda Campos	Glendale Medical Center	California
Eyvette Pascascio	Country Villa Terrace Healthcare Center	California
Francisco de Leon Dadis	Northgate Post Acture Care	California
Gaby O'Donnell	City of Hope (satellite clinic)	California
Garry Bowie	Being Alive	California
Garry Nagrampa	Department of Veterans Affairs	California
George Roque	Los Angeles Fire Department	California
Gwendolyn Robinson	Yountville Veterans Home	California
Helen Garcia	Kaiser Permanente Post-Acute Care Center	California
Hernando Sumangil		California
Imelda Sudira	Greater El Monte Community Hospital	California
Jean Paul Martinez	Department of Veterans Affairs	California

Dr. Jon Schrock		California
Jose Alvarez	Parkview Community Hospital	California
Jose Perez	Los Angeles Fire Department	California
Juan Segundo Sr.	Alta Bates Summit	California
Julie Baca	St. Joseph Medical Center	California
Lazaro Duremdes		California
Lepe Wightman Hakai		California
Mailee Xiong	EPU Children's Center	California
Marcus Mckesson	Kaiser Fresno	California
Maria Sigala	Monterey Park Hospital	California
Mark Cabusora	Kaiser Permanente	California
Nancy Dieppa	Community Hospital of San Bernardino	California
Nenita Proctor	Kindred Hospital La Mirada	California
Pablo Hernandez	St. Bernandine's Hospital	California
Dr. Paul Constantine		California
Dr. Payman Simoni		California
Pete Gascon	Providence St. Mary's Medical Center Apple Valley	California
Precy Vegiga Tolentino		California
Rick Malacas	Scripps Mercy Hospital Chula Vista	California
Robert Shankerman	United Health Centers	California
Roda Vicuna	Kindred Brea	California
Rosa Luna	Riverside Community Hospital	California
Dr. Ryan Salahi	County of San Diego Psychiatric Hospital	California
Sally Lara	Riverside Community Hospital	California
Sally Vazquez		California
Sarah Roncskevitz		California
Scott Blanks		California
Scott Tyrell	Walker Physical Therapy	California
Dr. Shawki Ali Zuabi	Orange Coast Memorial Hospital	California
Thong Nguyen	Garfield Medical Center	California
Valeria Viveros	Extended Care Hospital	California

Vedika Sharma	St. Joseph Medical Center	California
Vincent Vegna	Addiction Treatment and Family Center	California
Vivian Fierro	Impact Drug and Alcohol Treatment Center	California
Wanda Deselle	Dr. Mohammed Ashraf, M.D.	California
Dr. William Garnica	Community Health Centers	California
Dr. Atul Vahil	Digestive Disease Specialists	Colorado
Brian Garrett		Colorado
Connie Firethunder		Colorado
Marsha Knight	Saint Joseph Hospital	Colorado
Sheila Griesch	Mapleton Care Center	Colorado
Vincent Gaines	University Park Care Center	Colorado
Dr. Arthur Turetsky	Bridgeport Hospital	Connecticut
Cassondra Diaz	Chelsea Place Care Center	Connecticut
Charmaine Mcfadden	Yale New Haven Hospital	Connecticut
Curtis Hunt	Cornell Scott-Hill Health Center and New Reach	Connecticut
Douglas Hickok		Connecticut
Elva Graveline	Lawrence+Memorial Hospital	Connecticut
Glenford Morgan	St. Francis Hospital	Connecticut
Katherine Birkmaier	The Linden at Woodbridge	Connecticut
Luann Contois	Brookdale (Assisted Living)	Connecticut
Marlene Thompson	Southbury Training School	Connecticut
Michael Mark	Southbury Training School	Connecticut
Miriam Kwentoh	Willows	Connecticut
Patrick Brellis	Southbury Training School	Connecticut
Dr. Santo Buccherri		Connecticut
Sebastiana "Nella" Cardella	One Macdonough Place	Connecticut
Torrin Howard	Boys and Girls Village	Connecticut
Mykal Jones	Dover Behavioral Health Systems	Delaware
Calvin Richardson Jr.	Department of Veterans Affairs	District of Columbia
Nicky Leake	Medstar Washington Medical Center	District of Columbia
Veronica Norman	St. Elizabeth's	District of Columbia

Zaoa Makumbi	DC Public Schools	District of Columbia
Dr. Adam Bianchini	The Treatment Center	Florida
Dr. Alex Hsu	Northwest Medical Center	Florida
Alexander Bernardo		Florida
Brian Weiner	Solutions By the Sea	Florida
Dr. Carlos "Charlie" Vallejo		Florida
Dr. Clarence Scott		Florida
Dr. David Vastola		Florida
Devin Francis	Jackson Memorial Hospital	Florida
Dr. Eddie Negron		Florida
Dr. Eugene "Gene" J. Sayfie		Florida
Evert Diazgrandados		Florida
Felicitas Duque	JFK Medical Center	Florida
Fritzner Fabre		Florida
Dr. Gary Cannon		Florida
Dr. Glenn Barquet	Mercy Hospital	Florida
Helen Gutierrez-Zwick	Infinite Ways Network	Florida
Jerry Jones	Volusia County EMS	Florida
Dr. John J. Magri IV	Eau Gallie Medical Center	Florida
Jorge Mateo	Coral Gables Hospital	Florida
Dr. Jose Antonio Soto		Florida
Jose Lopez Jr.	NHT Transport Services	Florida
Juan Quintas	West Gables Rehabilitation Hospital	Florida
Julie St. Preux		Florida
Karen Astin	Lakeland Regional Health Center	Florida
Kenny Reagan	Memorial Regional Hospital	Florida
Laudelina Ochoa	Pointe of North Gables	Florida
Lloyd Losinger	Ocean City-Wright Fire Control District	Florida
Lucinda Mondragon	Affinity Home Health	Florida
Dr. Luis Caldera-Nieves	University of Miami (UM) Health	Florida
Marilyn Chi-Chi Cox Ghiz	Brevard County Family Social Services	Florida

Mario Mayorga Jr.	Mt. Sinai Medical Center	Florida
Marjorie Blackman	Seminole Pavilion and Rehabilitation Services	Florida
Dr. Norberto Fleitas		Florida
Dr. Orlando Espinoza		Florida
Renada Mcguire		Florida
Ricky Maples	Clifford C. Sims State Veterans' Nursing Home	Florida
Robert Ruiz	NeuroRestorative	Florida
Dr. Roman Pena	St. Mary's Medical Center	Florida
Romeo Bungubung	Brookdale Senior Living/Atrium	Florida
Ryan Sanders		Florida
Dr. Sam E. Scolaro	Florida Medical Clinic	Florida
Samantha Diaz	Dr. Nagavardhan Vasuki, MD	Florida
Shaquana Garrett	Holy Cross Hospital	Florida
Dr. Steven Silverman		Florida
Teresa Davis	Envision Healthcare	Florida
Therese Edwards	Tallahassee Developmental Center	Florida
Tyrone Cooper	About Recovery Center	Florida
Venezia Monroe	Bridgewater Park Health and Rehabilitation Center	Florida
William Vincent Murdock		Florida
Dr. Yecid Mora	Moore Haven Center	Florida
Betty Cass		Georgia
Billy Joe Gilbert	Wellstar Paulding Hospital	Georgia
Bishop Bruce Davis	Central States Hospital (Psychiatric)	Georgia
Cathy Dunwoody	Donalsonville Hospital	Georgia
Christopher Davis	Grady Memorial Hospital	Georgia
David Plater	Emory Hillandale Hospital	Georgia
Deborah Stevers		Georgia
Dierdre Wilkes	Piedmont Newnan Hospital	Georgia
Dr. Frank Lockwood		Georgia
Harold Boone	Monroe County Emergency Services	Georgia
Dr. John Marshall Jr		Georgia

Louise Williams	Phoebe Health	Georgia
Marion Cole	Irwin County Detention Center (I.C.E. Detention)	Georgia
Mark Bryson Delong	Central States Hospital (Psychiatric)	Georgia
Shameaka Montgomery	Tanner Medical Center	Georgia
Tracey Simmons		Georgia
Victoria Greco	Kaiser Georgia	Georgia
William Brett Tracy	Tracy's Medicine Center	Georgia
Wilma Bowen	Hiram Elementary School	Georgia
Adolfo Reynoso Jr.	Amita Adventist Glen Oaks	Illinois
Andrea Mammen	Psychology Specialists	Illinois
Baltazar Martinez	Lake Shore Healthcare Center	Illinois
Bryant Boyer-Killion	Carle Foundation Hospital	Illinois
Cephus Lee	Ludeman Developmental Center	Illinois
Cindy Druien	Generations at Neighbors	Illinois
Crystal Cantrell-Barbee	Advocate Healthcare	Illinois
Deshaun Taylor		Illinois
Diane Ward	Amberwood Nursing Home	Illinois
Dorothy Sims		Illinois
Duane Woodley	Amita Health St. Alexius	Illinois
Dr. Edward Rose		Illinois
Edward Singleton	Chicago Fire Department	Illinois
Edward Starling	Universtiy of Illinois Chicago Hospital	Illinois
Evelyn Ramirez	Aperion Care International	Illinois
Gabrail "Gabe" Ismayl	Swedish Covenant	Illinois
Dr. James McCreary	Amita Health St. Joseph	Illinois
Janice Jackson-Rawles	University of Illinois Hospital	Illinois
Jasslyn Saffold	Forum Extended Care Services	Illinois
Jerome Sutton		Illinois
Jose Velez	Ludeman Developmental Center	Illinois
Joseph Bongiorno Jr.		Illinois
Josephine Tapiru	Park View Rehab	Illinois

Juan Martinez	Univeristy of Illinois Chicago Hospital	Illinois
Karon M. Hoffman	Alden Terrace	Illinois
Kenneth Cheverko	Haymarket Center	Illinois
Kiara Anderson-McDade	ManorCare Health Services-Palos Heights West	Illinois
Krist Angielan Castro Guzman	Bolingbrook Adventist Hospital	Illinois
Leather Moss		Illinois
Leola Gradey	BRIA of Forest Edge	Illinois
Linda Savage	Vienna Correctional Center	Illinois
Lolo Ijeoma Afuke	Mado Healthcare Uptown	Illinois
Mario Araujo	Chicago Fire Department	Illinois
Michelle Abernathy	Ludeman Developmental Center	Illinois
Dr. Nicholas Emanuele	Loyola University Medical Center	Illinois
Pamela L. Hair	Bloomington Rehabilitation & Health Care Center	Illinois
Resheeta Thompson	Addus Home Care	Illinois
Robbie Sykes	The Grove at La Grange Park	Illinois
Robert Truevillian	Chicago Fire Department	Illinois
Rodelio Alam		Illinois
Ronald Whitfield	Haymarket Center	Illinois
Sandra Green	Symphony Of Joliet	Illinois
Spagnolia Tart	Rush University Medical Center	Illinois
Tammy Overturf	Logan Primary Care Center	Illinois
Timothy Branscomb		Illinois
Walter Veal	Ludeman Developmental Center	Illinois
Anna Richardson	Franciscan Health	Indiana
Darrell Robinson	Lake County Jail	Indiana
Dr. Frank Sequeira	Franciscan Health	Indiana
Dr. James Burkhart		Indiana
JoAnn Farner	Wittenberg Village	Indiana
John Schoffstall	Terra Haute Fire Dept	Indiana
Dr. Larry Mundy		Indiana
Linda Bonaventura	Wildwood Health Care Center	Indiana

Dr. Marques Larue Bolden		Indiana
Dr. Okechi Nwabara		Indiana
Patrick Buchanan		Indiana
Dr. Peter L. Yu	Memorial Hospital	Indiana
Dr. Ralph Inabnit		Indiana
Sue Williams Ward		Indiana
Dr. Susan Moore		Indiana
Donald Dreesman	Harmony House	Iowa
Jim Luensman	Area Ambulance Service	Iowa
Lisa Upah	Virginia Gay Hospital	Iowa
Michele Racanati	MercyOne Olewein	Iowa
Jason Taylor	Edwardsville Fire Department	Kansas
Jeffrey Allen		Kansas
Dr. Don Miller	Med Center Health	Kentucky
EJ Mike	Department of Veterans Affairs	Kentucky
Jeffrey Goble		Kentucky
Michelle Rose Thompson	Summit Manor	Kentucky
Michelle Wade	University of Louisville Health - Jewish Hospital	Kentucky
Dr. Mohammed Jawed	Bluegrass Medical Center	Kentucky
Pamela L. Hughes	Summit Manor	Kentucky
Dr. Rebecca Shadowen	Medcenter Health Bowling Green	Kentucky
Wanda Johnson	Medcenter Health Bowling Green	Kentucky
Dr. Adam Tassin Jr		Louisiana
Barbara Paul De Prato	Riverland Hospital	Louisiana
Bruce Cutrer	Amite Fire Department	Louisiana
Dr. Casey McVea	Raymond Laborde Correctional Center	Louisiana
Chris Lenard	Ouchita Parish Fire Department	Louisiana
Clair Marie Fuqua		Louisiana
Danielle Hanna	Glenwood Regional Medical Center	Louisiana
Jana Prince	Salvation Army	Louisiana
Leonard Coney	Shreveport Fire Department	Louisiana

Lidia "Bibi" Angulo Everett		Louisiana
Louella Williams	Oschner Medical Center	Louisiana
Dr. Paul E. Hyman	Children's Hospital	Louisiana
Rhonda Noble-Gibson		Louisiana
Richard Gabriel		Louisiana
Roy Coleman	Overton Brooks -Department of Veterans Affairs	Louisiana
Sandra Rose Carter	East Jefferson General Hospital, West Jefferson Hospital	Louisiana
Dr. Shaban Faruqui		Louisiana
Shenetta White-Ballard	Legacy Nursing and Rehabalitation	Louisiana
TeQuilla Parker	Villa Feliciano Medical Complex	Louisiana
William Salmon	Baton Rouge Regional Medical Center	Louisiana
Dr. Amanda Zivic		Maryland
Betty Olayinka Akinkugbe		Maryland
Chantee Mack	Prince George's County Health Department	Maryland
Curtis Orr	Express Dental Laboratory	Maryland
Dale Coates	Sunrise Senior Living	Maryland
Dr. Herbert Henderson		Maryland
John Mbah	UM Prince George's Medical Center	Maryland
Dr. Joseph Costa	Mercy Medical Center	Maryland
Joyce Shorter	Sagepoint Senior Living	Maryland
Lawrence Nokes	Pleasant View Nursing Home	Maryland
Dr. Lloyd Bowser		Maryland
Marchiel McDuffie	Baltimore City Department of Health	Maryland
Sean D. Boynes	AbsoluteCARE Medical Center & Pharmacy	Maryland
Alan Twofoot	Edith Nourse Rogers - Deparment of Veterans Affairs	Massachusets
Catherine Drouin	Palm Center	Massachusets
Cathy Carey	Life Care Center of Attleboro	Massachusets
Cheryl Ann Hodsdon	Bertram House	Massachusets
Cindy Locklear	Marlborough Hills Rehab& Health Care Center	Massachusets
David S. Ferranti	St. Elizabeth Medical Center	Massachusets

Dolores Ann (McBride) Woodford	Rheumatology Consultants	Massachusets
Francois Tovar	May Institute	Massachusets
Francoise Hilaire		Massachusets
James Joseph Footit	Family Medical Center	Massachusets
Dr. Janice Weisman	Boston University School of Medicine	Massachusets
Joanne Granger	Edward M. Kennedy Community Health Center	Massachusets
John Pope		Massachusets
Kettely Desire	Alliance Health at West Acre	Massachusets
Maria Krier	Life Care Center of Nashoba Valley	Massachusets
Maria MacDonald	DayBrook Village	Massachusets
Marie Deus	Brigham and Women's Faulkner Hospital	Massachusets
Marie Gail Armitstead	Connemara Senior Living	Massachusets
Michael Flynn	North Shore Medical Center - Salem	Massachusets
Michelle Dione	Oxford Nursing Home	Massachusets
Myrna Famania	Whitney Place	Massachusets
Patricia Gooddale	Life Care Center of Leominster	Massachusets
Paul Moore	Charlwell House Health and Rehabilitation Center	Massachusets
Raymond Aristhomene		Massachusets
Robert Doiron	UMass Memorial - Marlborough	Massachusets
Rosanna "Rose" Wilson	East Longmeadow Skilled Nursing Facility	Massachusets
Dr. Thomas C. Halliday III		Massachusets
Wilna Doresca	East Boston Neighborhood PACE	Massachusets
Dr. Angelo N. Patsalis	Henry Ford Medical Center - Livonia	Michigan
Antoinette Bell	Detroit Health Department	Michigan
Capt. Franklin Williams	Detroit Fire Department	Michigan
Carrie Hennig	Covenant Healthcare	Michigan
Catalino Buddy Bernardo		Michigan
Dr. Chris Firlit		Michigan
Christopher David Matus		Michigan
Darlene Williiams	Walter Reuther Psychiatric Hospital	Michigan

Deborah Gatewood	Beaumont Hospital - Farmington Hills	Michigan
Debra Mullennix		Michigan
Edward Nelson	Hurley Medical Center	Michigan
Gjergji "George" Naco	Beaumont Hospital Royal Oak	Michigan
Harold "Rex" Ruettinger	Garden City Hospital	Michigan
Jamice Sturdivant	Packard Health	Michigan
Dr. Keith Daniels	Hamilton Community Health Network North Pointe Clinic	Michigan
Kelly Rigi	American House East	Michigan
Lashaun Perez	Medilodge of Howell	Michigan
Lori Alioa	Department of Veterans Affairs	Michigan
Lydia Lopez	Samaritas Senior Living Center	Michigan
Lyle Ogilvie	Roosevelt Park Nursing and Rehabilitation Center	Michigan
Dr. Mark Henry	Wattles Family Practice	Michigan
Monica Echeverri Casarez	Harper Hospital	Michigan
Myron Dawson	Christ Child House	Michigan
Dr. Nancy Ajemian		Michigan
Paul Novicki		Michigan
Dr. Richard Miles	Wayne County Jail	Michigan
Roger Liddell	McClaren Flint	Michigan
Sarah Weber	Chippewa County War Memorial Hospital	Michigan
Wendell Quinn	McClaren Flint	Michigan
Dr. Albasha Hume	Open Cities	Minnesota
David Kolleh	Glenn Hopkins Catholic Senior Communities	Minnesota
Kyle Roos	CVS Pharmacy	Minnesota
Larrydean Goodrich	North Memorial Medical Center	Minnesota
Rina Tagomolila		Minnesota
Becky Myhand	Care Center of Aberdeen	Mississippi
Carol Faye Doby	Lakeside Health and Rehabilitation Center	Mississippi
Dorothy Jean Boles	Greenwood Laflore Hospial	Mississippi
Dustin Raines	Walls Fire Department	Mississippi

Dr. Edgar Barham	Merit Health Women's Hospital	Mississippi
Jonia Crosby	Care Center of Laurel	Mississippi
Dr. Kenneth Cronin	Three Oaks Behavioral Health	Mississippi
Mack McCann	AAA Ambulance Service Paramedic	Mississippi
Paul Cuevas	CVS Pharmacy	Mississippi
Robin Holland	Boyton Health and Rehabilitation	Mississippi
Tammy Grice		Mississippi
William David Martin	AMR Southwest Mississippi	Mississippi
Angel Dampier		Missouri
Billy Birmingham	Kansas City Fire Dept	Missouri
Brenda Susan Schaeg	Bethesda Meadow Skilled Nursing Facility	Missouri
Cynthia Crawford	Barnes Jewish Hospital	Missouri
Cynthia Whitfield	Grand Manor Nursing and Rehabilitation	Missouri
Dr. Edilberto Lorenzo		Missouri
Jazmond Dixon	Red Cross	Missouri
Jenniffer Anderson-Davis	Meremec Bluffs	Missouri
Dr. John Scowley	Ray County Memorial Hospital	Missouri
Marie Brumbaugh	Cox Health	Missouri
Dr. R. Balamohan		Missouri
Robert Rocha	Kansas City Fire Deparment	Missouri
Scott Davidson	Kansas City Fire Department	Missouri
Dr. Stephen J. Huber		Missouri
Tracy Kolterman	McCrite Plaza at Briarcliff	Missouri
Dr. Larry Amstutz	Billings Clinic	Montana
Larry Black Eagle	Indian Health Services	Montana
Samantha Black Eagle	Indian Health Services	Montana
Deborah Dewitt	Western Nebraska Veterans Home	Nebraska
Dr. Leland Lamberty		Nebraska
Prudence Waters		Nebraska
Alex Gousev	VA Northern Sierra	Nevada
Dr. Arthur Tayengco		Nevada

Veronica Oliver	St. Mary's Regional Medical Center	Nevada
Yulanda Hodge	St. Rose Dominican - San Martin	Nevada
Marjorie Gardner	Villa Crest Rehabilitation	New Hampshire
Albert Duncan Jr.	University Hospital	New Jersey
Alfredo Pabatao	Hackensack Meridian Health	New Jersey
Andres Benitez	Holy Name Medical Center	New Jersey
Angela "Anjie" Rodriguez	University Hospital	New Jersey
Anissa Edwards	St. Joseph's Wayne Medical Center	New Jersey
Dr. Anjali Verma		New Jersey
Antoinette Matthews "Toni" Powell	Manor Health and Rehabilitation	New Jersey
Arnold Abdullah Plant	University Hospital	New Jersey
Arriel Mascardo		New Jersey
Dr. Barry Sakowitz		New Jersey
Bruce Greene		New Jersey
Carlette Parker		New Jersey
Charles Arrington	Morristown Medical Center	New Jersey
Cheryl Roberts	Alaris Health at Hamilton Park	New Jersey
Darlene Andes	Mercer County Division of Public Health	New Jersey
Darrell Johnson	Morristown Medical Center	New Jersey
David Pinto		New Jersey
Delores Simon	University Hospital	New Jersey
Deloris Dockrey	Hyacinth Aids Foundation	New Jersey
Don Ryan Bayatola	South Mountain Healthcare and Rehabilitation Center	New Jersey
Earl A. Washington	Ann Klein Forensic Center (Psych Hospital)	New Jersey
Edgar Alberto	Andover Subacute Rehabilitation Center	New Jersey
Dr. Elliott Samet	St. Mary's General Hospital	New Jersey
Emmannuel Carrillo	Hackensack New Jersey Propsect Heights Care Center	New Jersey
Enrique Almoite	West Caldwell Care Center	New Jersey
Felicia Booker	University Hospital	New Jersey
Francis Molinari	Clara Maas Medical Center	New Jersey

Francisca Amponsah	Hackensack University Medical Center	New Jersey
Frank Gabrin	East Orange General Hospital	New Jersey
Dr. Gene Nebel	Greystone Park Psychiatric Hospital	New Jersey
Gloria Nabua	Deptford Center for Rehabilitation and Healthcare	New Jersey
Dr. Godwin Molokwu		New Jersey
Gonzalo Atiles Jr.	Hackensack Meridian Health System	New Jersey
Dr. Gus Gomez		New Jersey
Dr. Harvey Hirsch	Center for Health Education, Medicine and Dentistry	New Jersey
Israel Tolentino		New Jersey
Jacob Page		New Jersey
Dr. James Boudwin	RWJ Dayton	New Jersey
Jenni Claire Bartolome	Emerson Health and Rehabilitation Center	New Jersey
Jessie Ferreras		New Jersey
Jesus Villaluz	Holy Name Medical Center	New Jersey
Dr. Joaquin B. Garcia	Whippany Family Practice	New Jersey
John Careccia	Woodbridge Township Ambulance & Rescue Squad	New Jersey
John Cofrancesco	Family of Caring at Montclair	New Jersey
John Ferrarella		New Jersey
Dr. Jose Islani Allapitan Sapal Jr	St. Barnabas Medical Center	New Jersey
Josephine McElveen	Christian Health Care Center - Heritage Manor East	New Jersey
Dr. Kenneth Conte		New Jersey
Kevin Leiva		New Jersey
Kim King Smith	Newark University Hospital	New Jersey
Dr. Leo dela Cruz	Carepoint (Christ) Hospital	New Jersey
Liana Sa	Howell Police EMS	New Jersey
Martin Addison	St. Joseph Medical Center	New Jersey
Michael Burgio	Newton Medical Center	New Jersey
Michael Burke	Signac Volunteer Fire Department	New Jersey
Dr. Michael Giuliano		New Jersey

Monemise Romelus	NJ Veterans Memorial Home at Menlo Park	New Jersey
Dr. Nagi Abraham	University Hospital	New Jersey
Nancy Martelli	Palisades Medical Center	New Jersey
Nestor Bautista	Clara Maas Medical Center	New Jersey
Norman Einhorn		New Jersey
Obinna Chibueze Eke	University Hospital	New Jersey
Paul Moise		New Jersey
Peggy Levinson		New Jersey
Priya Khanna	Khanna Nephrology	New Jersey
Rebecca Plna	Greystone Park Psychiatric Hospital	New Jersey
Richard Kesner	CareOne	New Jersey
Richard Onouah	Greystone Park Psychiatric Hospital	New Jersey
Richard P. Campbell	Edison Division of Fire	New Jersey
Ritchie Villena	SportsMed Physical Therapy	New Jersey
Robert Weber		New Jersey
Saif Titi	Noble Pharmacy	New Jersey
Sandra Arrington	University Hospital	New Jersey
Sandra Hardy Rogers	Community Medical Center	New Jersey
Dr. Satyendar Khanna	Clara Maas Medical Center	New Jersey
Scott Geiger	Atlantic Mobile Health - Atlantic Health System	New Jersey
Severiana Gimenez	Holy Name	New Jersey
Sina Zaim		New Jersey
Solomon Donald	Trinitas Regional Medical Center	New Jersey
Susana Pabatao	Bergen New Bridge Medical Center	New Jersey
Tesfay Kebede	Matheny Medical and Educational Center	New Jersey
Barbara Bedonie	Cedar Ridge Inn of Farmington	New Mexico
Brianne Laughing	Na Nihzhoozhi Center Inc (NCI)	New Mexico
Charlie Miller	Lovelace Hospital	New Mexico
Glovis Foster	San Juan County EMS	New Mexico
Jody Mares		New Mexico
Jose Gomez	Alamo Navajo EMS	New Mexico

Lily Tsosie	San Juan Regional Medical Center	New Mexico
Roberta Gruber		New Mexico
Dr. Roland Sanchez		New Mexico
Dr. Rosalind Mitchell		New Mexico
Dr. Steve Ledesma	Encompass Rehabilitation Hospital	New Mexico
Whitney Taylor	Meca Therapies	New Mexico
Adiel Montgomery	Kingsbrook Jewish Medical Center	New York
Adlin Thomspon		New York
Adrienne Johnson	Terrace View Long-term Care	New York
Dr. Ajay Lodha	Queens Medical Services	New York
Dr. Alejandro Albano	Clove Lakes Healthcare and Rehabilitation	New York
Alex Bass	Coney Island Hospital	New York
Alex Ofori	Long Island Jewish Medical Center	New York
Dr. Ali Mamun	Brookdale Hospital Medical Center	New York
Ali Yasin	New York City Pharmacy	New York
Alvin Simmons	Rochester General Hospital	New York
Andrea McKenzie	Cliffside Nursing House	New York
Andrew DiMaggio	New Rochelle Fire Department	New York
Andrew Slaby		New York
Ann Mariea Lawrence	Mt. Sinai	New York
Anthony "Tony" Thomas	NYU Langone Brooklyn	New York
Dr. Arthur Friedman		New York
Ashraf Abdo		New York
Dr. Ashraf Metwally		New York
Dr. Barry Fischer		New York
Barry Persard	King's County Hospital	New York
Dr. Barry Webber	Mt. Sinai Queens	New York
Bassey Epko	Mount Sinai Beth Israel	New York
Benildo Texeira	NYC Health + Hospitals	New York
Benjamin Onodu	City of New York	New York
Bill Mantell		New York

Bredy Pierre-Louis		New York
Brian Danzinger	Medford Fire Department	New York
Dr. Caleb Anya	Corning Center for Rehabiliation	New York
Carlos Camacho	Montefiore St. Luke's Cornwall	New York
Celesteen Stephens	Dr Susan Smith McKinney Rehabilitation Center and Nursing Home	New York
Chanda Lori Bullock-Ogburn		New York
Dr. Charlie Chin Song Chen	Joseph P. Addabbo Family Health Center	New York
Chrissy Hunt	Montefiore	New York
Christina Dolandis		New York
Christopher Dean	Department of Veterans Affairs	New York
Cirino Zapala		New York
Corrine Smith	Visiting Nurse Services of New York	New York
Curwin King	SUNY Downstate Medical Center	New York
Danny Almonte	Visiting Nurse Services of New York	New York
Darlene Krawetz	Department of Veterans Affairs	New York
Darrin Santos	New York Presbyterian	New York
David Persaud		New York
David Strug		New York
Dr. David W. Finn	MMTP/HIV Primary Care Clinic Stapleton	New York
David Wolin	Brooklyn Hospital Center	New York
Denise Turowski		New York
Dennis Bradt	Conifer Park Substance Rehabilitation Center	New York
Denny Darby	Fulton Center	New York
Derik Braswell	Elmhurst Hospital	New York
Deyrold Arteaga	Hatzoloh EMS	New York
Doreen Tay	Montefiore Medical Center	New York
Dr. Doug Bass	Phoenix House	New York
Dr. Earline Austin		New York
Eddie Gancayco	Mount Sinai	New York
Dr. Edgar Ednalino		New York

Edward Becote	Brooklyn Hospital Center	п
Edward Mungin	Fire Department of New York	New York
Efrain Pineda	Glengariff Rehabilitation and Healthcare Center	New York
Eiman Fadda	Bayberry Nursing	New York
Dr. Eli Landau Z"L		New York
Ella Sutton	Care Giver at Sunset Lake	New York
Eresmildo Castiblanco		New York
Dr. Eriberto Lozado Sr		New York
Ernesto Roland III	New York Presbyterian	New York
Ernesto Rolon III	New York Presbyterian Westchester Behavioral Health Center	New York
Eugene Yurman	Walgreens	New York
Evelyn Ford	Fire Department of New York	New York
Fabricio Erik Cordova		New York
Fareeda Beharry		New York
Fermin Martinez		New York
Dr. François Hébert Brutus		New York
Frank Casano		New York
Franz Vital		New York
Froilan Magallanes		New York
Gaetana Deserto	GLD Gastro Intestine Liver Disease Specialist	New York
Gary Sclar	Mount Sinai Queens	New York
Gary Washington	Allen Hospital	New York
Gerry Balasta	Wonderful Beginnings	New York
Gianmarco Bertolotti	Lennox Hill Hospital	New York
Gregg Pappadake		New York
Gregory Hodge	New York City EMS	New York
Hailey Herrera	Aristotles's Psychological Center	New York
Hazel Mijares	Amsterdam Nursing Home	New York
Hector Rivera	Visiting Nurse Services of New York	New York
Helen Monah		New York
Ian William Wilson	Isabella Nursing Home	New York

Idris Bey	New York City EMS	New York
Dr. Irving Buterman	Lennox Hill Hospital	New York
Ishmael Burch		New York
Dr. Ivan Rodriguez	East New York Diagnostic Treatment Center	New York
Jadah Bey	Visiting Nurse Services of New York	New York
Jamal Uddin	New York City H.I.V./AIDS Services Administration	New York
Dr. James A Mahoney	SUNY Downstate Medical Center	New York
James Daniels		New York
Dr. James T. Goodrich	Montefiore Medical Center	New York
Janine Meritet	Saint Catherine of Sienna Medical Center	New York
Janissa Delacruz	Montefiore Nyack	New York
Jason McNamee	Fire Department of New York	New York
Dr. Javier Sloyer		New York
Dr. Jay Galst	Omni Eye Services	New York
Jeffrey Escher	Providence Rest	New York
Dr. Jesus Zambrano	Mount Sinai South Nassau	New York
Joan Neudecker	McAuley Residence Nursing home	New York
Dr. John Coman	NewYork-Presbyterian Medical Group Queens	New York
John Guadelupe	Lutheran Medical Center	New York
John Lara	Orange Regional Medcial Center	New York
John Poleon	Buffalo Medical Center	New York
John Redd	New York City EMS	New York
Juan V. Rodriguez	Montefiore St. Luke's Cornwall	New York
Judith Wilson	Alliance Homecare	New York
Karen Carmello	Maria Regina Nursing Home	New York
Karisma Dargan	HASA Greenwood	New York
Karley Rae McGuire	Bon Secours Community Hospital	New York
Keith Philip		New York
Kelvin Taylor	Brooklyn Hospital Center	New York
Ken Whitney	NYU Winthrop	New York
Kenneth Ricketts		New York

Ketty Beaubien	Lifespire	New York
Khaseem Rhames	City of New York	New York
Kofi Gyama	Institute of Applied Human Dynamics	New York
Kwabena Acheampong	Saints Joachim & Anne Nursing And Rehab Ctr	New York
Latifah Hoskins	Bellevue Hospital	New York
Dr. Lawrence Glassberg	Columbia University Irving Medical Center	New York
Lemuel Sison		New York
Lemule Frazier	NYC Health + Hospitals	New York
Lenora Casso	New York City Department of Health and Mental Hygiene	New York
Lindonna Connought	Visiting Nurse Services of New York	New York
Lolita Torres		New York
Lorna McEachron		New York
Dr. Louis Fontaine		New York
Louis Torres	Queens Boulevard Extended Care Facility	New York
Louise Lloyd	City of New York	New York
Luis Arrellano		New York
Mahdvi Aya	Woodhull Medical Center	New York
Maria Corazon Lamarroza Centron	Jacobi Medical Center	New York
Marie Petit-Homme		New York
Mario Salonga	Mount Sinai South Nassau	New York
Dr. Mark Allen Respler		New York
Marlene Piccone	Maimonides Medical Center	New York
Mary Sturdivant	New York Presbyterian	New York
Matthew Moore	Northwell Go Health Urgent Care in Eltingville	New York
Michael Field	Valley Stream NY	New York
Michael Hill		New York
Michael Holley	City of New York	New York
Dr. Mitch Horowitz	Mt. Sinai Beth Israel	New York
Nancy Norman	Visiting Nurse Services of New York	New York
Nanette Ham	Brooklyn Hospital Center	New York
Dr. Neil Blatt		New York

Nerissa Armesto	Rogosin Institute East	New York
Dr. Niaz Ali		New York
Dr. Nisar Quraishi	NYU Langone	New York
Orland Cuevas		New York
Pamela McCrory	Sisters Hospital	New York
Paul Cary		New York
Paul Charon		New York
Petal Williams Richards	Bronx Lebanon Hospital	New York
Peter Ji		New York
Philip To		New York
Prea Nankieshore	Long Island Jewish Forest Hills	New York
Priscilla Carrow	Elmhurst Hospital	New York
R' Yaakov Meltzer Z"L	Quality Health Care	New York
Rabbi Mordecai Katz	NYU Langone	New York
Rafael Cargill	"Brooklyn Hospital Center	п
Randall Bailey	Visiting Nurse Services of New York	New York
Randy Brown		New York
Rashida Ahmed		New York
Raul Gaule Jr.		New York
Reuben Rodriguez	New York City EMS	New York
Dr. Reza Chowdhury		New York
Rhena Chase	Park Gardens Rehabilitation and Nursing Home Center	New York
Dr. Ricardo Castaneda		New York
Richard Seaberry	New York City EMS	New York
Robert Crawford	Emma L. Bowen Community Service Center	New York
Robert Shannon		New York
Rodney Mack	NYU College of Dentistry	New York
Ronald Verrier	St. Barnabas Hospital	New York
Rosemarie Mancino		New York
Dr. Ruben Moronta		New York

Rustico Pasig		New York
Sal Mancusco	Blooming Grove Volunteer Ambulance Corp	New York
Sal Mancuso	Blooming Grove Volunteer Ambulance Corps	New York
Dr. Salvador Castells		New York
Shamim Al Mamun	North Shore University Hospital	New York
Sieunarine Ramnarine	DJ Ambulette Service	New York
Silverio Mazzella		New York
Sophia Stewart	Visiting Nurse Services of New York	New York
Stephen Demonteverde	Mount Sinai South Nassau	New York
Dr. Stephen Kamholz	Maimonides Medical Center	New York
Dr. Sudheer S Chauhan	Jamaica Hospital	New York
Dr. Sydney Mehl	New York University Langone	New York
Syed Bokhari	Woodhull Medical Center	New York
Dr. Tawfiqul Bhuiya	Northwell Central Region	New York
Thomas Soto	Woodhull Medical Center	New York
Dr. Tomas Pattugalan		New York
Tommy Smith III	Staten Island Hospital	New York
Ufen Ette	Northwell Health	New York
Valarie Fulton	New York Presbyterian	New York
Veronica Jimenez		New York
Wayne Edwards	Elmhurst Hospital	New York
Wayne Whyte		New York
William Plantt	Kirby Forensic Psychiatric Center	New York
William Thomas		New York
Yanick Beaubrun	Visiting Nurse Services of New York	New York
Dr. Ydelfonso Decoo	Somos	New York
Yolanda Valladares		New York
Dr. Yves Roseus	Brookdale Hospital Medical Center	New York
Yves-Emannuel Segui	Riverdale Pharmacy	New York
Dennis Hardy	Bertie County EMS	North Carolina
Dulce Garcia		North Carolina

Elizabeth Edwards	CarolinaEast Medical Center	North Carolina
Gary Mark Davis		North Carolina
Dr. Godfrey Fondinka		North Carolina
Jason Dean	Clayton Fire Department	North Carolina
Kenneth Jordan	Department of Veterans Affairs	North Carolina
Paul Glass	Brian Center Health and Rehabilitation/Hickory Viewmont	North Carolina
Reagan Henry	Deerfield Retirement Community	North Carolina
Stan Stolarcyk	Better Health	North Carolina
Tara Pendergrass	Graybrier Nursing Home	North Carolina
Ashlie Halvorson	Edgewood Vista	North Dakota
Dahir Ahmed	Family Healthcare	North Dakota
Joshua Lloyd	Trinity Hospital	North Dakota
Paul Letson	Southwest Healthcare Services	North Dakota
Aimee O'Connor	Kent Altercare	Ohio
Dr. Asaf Dar		Ohio
Claire Boughman	New Dawn Rehabilitation and Health Care Center	Ohio
Damon Bradley		Ohio
David Stanford	Lima Memorial Health System	Ohio
Don Beauchene		Ohio
Fernando Tanner	Physicians Ambulance	Ohio
Fr. Arcangelo Manzi	Cleveland Clinic Lutheran Hospital	Ohio
Jackie Scott	Suburban Healthcare and Rehabilitation Center	Ohio
Jeannie Danker	Wexner Medical Center	Ohio
Jeff Guernsey	Washington Township Fire Department	Ohio
Jennifer Bessemer Marando	Frontline Services	Ohio
Dr. Jerry Smucker		Ohio
Kipp Lyons	Ohio Living Rockynol	Ohio
Melissa Shannonhouse	First and Main Assisted Living	Ohio
Patric DeGood	Ohio Health	Ohio
Raymond James Lanzo	Generation Behavioral Health	Ohio

Richard Petras	Cleveland Fire Department	Ohio
Scott Gordon	Columbus Regional Health	Ohio
Theresa Geise	New Life Hospitce	Ohio
Tina Reeves	Pickaway Correctional Institute	Ohio
Tracy Heverly	Crandall Medical Center	Ohio
Andy Davis	Oklahoma City Fire Department	Oklahoma
Carrie Lyman	Duncan Regional Hospital	Oklahoma
Cole Brooks		Oklahoma
Courtney Van Buren	Seiling Nursing Center	Oklahoma
Faye Deason	Wilma P. Mankiller Health Center	Oklahoma
Dr. Giancarlo Piano	St. Francis Health System	Oklahoma
Janita Fields-Yanez	WW Hasting Hospital	Oklahoma
Kenneth McCallister	Conrad Marr Drugstore	Oklahoma
Maureen Dwira	Red River Youth Academy	Oklahoma
Dr. Michael Anderson	Mercy Clinic Primary Care	Oklahoma
Raven Voice		Oklahoma
Dr. Robert Oglesbee		Oklahoma
Rose Kalinski	Moore and Norman Physical Therapy Clinics	Oklahoma
Shanda Barnes		Oklahoma
Dr. Yee Se Ong	St. Francis Hospital	Oklahoma
Carola Montero	Providence Portland Medical Center	Oregon
Paul Odighizuwa	Oregon Health Sciences University	Oregon
Adrienne Kulak	Green Valley Skilled Nursing	Pennsylvania
Brad Blackman	Swarthmore Fire and Protective Association	Pennsylvania
Chad C. Eddinger	Department of Veterans Affairs	Pennsylvania
Connie Lefever		Pennsylvania
Dante Sanchez	Cognitive Behavioral Services	Pennsylvania
Donna Pintac	Belair Healthcare and Rehabilitation	Pennsylvania
Doug Dzubinski	Community LifeTeam, Pinnacle UPMC	Pennsylvania
Elizabeth Levan	The Birches Nursing Home	Pennsylvania
Elizabeth Wiles	Brighton Rehabilitation and Wellness Center	Pennsylvania

Eric Gore	Philadelphia Fired Department	Pennsylvania
Falneisha Adams	Children's Hospital of Philadelphia	Pennsylvania
James Anderson	St. Mary's Medical Center	Pennsylvania
Jeremy Emerich	Lehigh Valley Health Network MedEvac	Pennsylvania
Karen Sanders		Pennsylvania
Keith A. Jones		Pennsylvania
Kevin Bundy	Mercy Fitzgerald Hospital	Pennsylvania
Lisa Burhannan		Pennsylvania
Marilyn Long	Attleboro Nursing Home	Pennsylvania
Mark Kulp		Pennsylvania
Patricia Byers		Pennsylvania
Patricia Kuchera	Lehigh Valley Hospital	Pennsylvania
Robert Zerman		Pennsylvania
Stephen Sunday	Scranton Fire Department	Pennsylvania
Tamajin Ali	Centennial Healthcare and Rehabilitation Center	Pennsylvania
Troy Hughes	City of Philadelphia	Pennsylvania
Trudy Klinger	Susquehanna Nursing Home	Pennsylvania
Vincent Spellman Sr		Pennsylvania
Walter Ulmer	Abington Hospital	Pennsylvania
Dr. Abelardo Vargas Rivera		Puerto Rico
Ana Munoz	Ryder Hospital	Puerto Rico
Dr. Benjamin Cotto		Puerto Rico
Dr. Carlos Garcia-Goyco		Puerto Rico
Dayna Marrero Domena	Doctor's Center Hospital	Puerto Rico
Dr. Edith Pesquera		Puerto Rico
María Hernández Rodríguez		Puerto Rico
Migdalia Sanchez	Hospital San Francisco	Puerto Rico
Dr. Milagros Santos Otero		Puerto Rico
Nancy Baez	Hospital Hima San Pablo de Bayamon	Puerto Rico
Dr. Raul Rubio Burgos		Puerto Rico
Rosa Cosme	Hospital Universidad de Puerto Rico	Puerto Rico

Rosa Garcia	Hospital Auxilio Muto	Puerto Rico
Rosalina Cruz		Puerto Rico
Sonia Falu		Puerto Rico
Teresa Matos		Puerto Rico
Dr. Victor de Jesus Diaz		Puerto Rico
Jerald Ferreira	Our Lady of Fatima Hospital	Rhode Island
Joan Kershaw Swann	Kent Hospital	Rhode Island
Nancy Macdonald	Orchard View Manor	Rhode Island
Suchendra Singh	Memorial Hospital of Rhode Island	Rhode Island
Aaron Lorick		South Carolina
Donna Dehart	Veteran's Victory House	South Carolina
John Granger	VitalCare	South Carolina
Joshua Bush		South Carolina
Keith Brown	Medtrust Medical Transport	South Carolina
Louvenia White Shuler		South Carolina
Mack Timothy Brooker	G. Werber Bryan Psychiatric Hospital	South Carolina
Maurice Simmons	Whitten Center	South Carolina
Sandra Priester	Babcock Center	South Carolina
Tuan Nyugen		South Carolina
Dr. Bill Martin	Holston Medical Group	Tennessee
Bobby Harrell	Baptist Ambulance	Tennessee
Chris Ramsey		Tennessee
Dana Vega	Spring Meadows Healthcare Center	Tennessee
Donna Smith	Rhea County Primary Care	Tennessee
Dr. Freeland Leroy Williams II	Lauderdale Community Hospital	Tennessee
Dr. Joe Hall	Hall Medical Clinic	Tennessee
Lameisha Polk		Tennessee
Dr. Ray Fuller		Tennessee
Robert Calhoun	Trousdale Medical Center	Tennessee
Ronald Spitzer	Rocky Top Fire Department	Tennessee
Dr. Sithipol "Sid" Tantihachai	Rhea County Primary Care	Tennessee

Stu Baze		Tennessee
Vanda Earles	The Heritage Center	Tennessee
Woldemariam Fersha	Bethany Center	Tennessee
Yvette Forest	West Tennessee Healthcare	Tennessee
Yvette Forrest	West Tennessee Healthcare	Tennessee
Dr. Adeline Fagan		Texas
Adolfo Alvarado Jr.		Texas
Aida Chavez	Mission Trails Baptist Hospital	Texas
Alex Cardenas	Superior and Apollow Ambulance Services	Texas
Amador Marquez		Texas
Dr. Anand Mehendale		Texas
Angelica Chapman		Texas
Anthony "Tony" Brooks Tsai	San Antonio Military Medical Center	Texas
Anthony Pryor	City of Richmond, TX	Texas
Dr. Antonio Guzman	Corpus Christi Medical Center	Texas
Barry Deckard	Jerry Hodge Unit - Texas State Prisons	Texas
Beverly Savala Weaver		Texas
Blanca Leon	University of Texas Southwestern Medical Center	Texas
Bryant Anderson		Texas
Dr. Carlos Araujo-Preza		Texas
Carolyn Lewis	Briarcliff Skilled Nursing Center	Texas
Cathy Peeler	Regency Manor Nursing Home	Texas
Cindy Thomas		Texas
Cynthia Brown Druery	CHI St. Joseph	Texas
Cynthia Pinard	Brooke Army Medical Center	Texas
Daisy Rougeaux		Texas
Danny Marks	St. Elizabeth's Hospital	Texas
Danny Watkins	San Benito Fire Department	Texas
Darlene McCarty	Texas Oncology - Garland	Texas
David Prasifka	Atascosa County	Texas
Delilah Balboa	Avail Solutions	Texas

Diane Martinez		Texas
Donna Holloway	Avalon Place Trinity	Texas
Dorothy Davis	Southeast Nursing & Rehabilitation	Texas
Doug Beard	Abilene State Supported Living Center	Texas
Elida Jimenez	Valaverde Regional Medical Center	Texas
Elva Garibay		Texas
Enriqueta Ines Gonzalez	Laredo Medical Center	Texas
Dr. Eric Geibel	Southwest Radiology	Texas
Erika Martinez	Daybreak	Texas
Ernesto Peralta	HCA Houston Healthcare Southeast	Texas
Esther Gonzalez	Nix Health	Texas
Faustin Velasco	Department of Veterans Affairs	Texas
Frank Bengochea	City of Pasadena, TX EMS	Texas
Freddie Johnston		Texas
Dr. Gary Wright	University of Texas Medical Branch (UTMB)	Texas
Gerardo "Jerry" Pacheco	Houston Fire Department	Texas
Gordon Baker	Harris County Fire Department	Texas
Irma Santellanes	Valaverde Regional Medical Center	Texas
Isabelle Papadimitriou	Baylor, Scott and White	Texas
Isidoro Farias	South Texas Behavioral Health Center	Texas
Jaime Lozano	Odessa Regional Medical Center	Texas
Jennifer Garcia	Christus Spon Hospital Shoreline	Texas
Jessica Cavazos	Briarcliff Nursing and Rehabilitation Center	Texas
Jessica Fajardo	Center for Hypertension and Internal Medicine	Texas
Joe Guerra	Medical Center Hospital	Texas
John "Pops" Little Jr.	Texoma Medical Center	Texas
John Cooke	UT Health East Texas	Texas
Dr. John Gomez		Texas
John Waitt		Texas
Jose Sanchez	Del Sol Medical Center	Texas
Dr. Juan Fitz	Covenant Medical Center	Texas

Juan Rosas Jr.		Texas
Kent Stolarick	Mercy Center	Texas
Larry Lucio	Houston Fire Department	Texas
Dr. Leroy Collum		Texas
Maisha Muhammad-Brinkley	Medical City Dallas	Texas
Dr. Manuel Perez		Texas
Mary Rice		Texas
Maurice Dotson	West Oaks Nursing and Rehabilitation Center	Texas
Monica Montgomery	The Arbor Assisted Living & Memory Care	Texas
Nathan "Kyle" Coleman	Bexar County Emergency Management	Texas
Natividad Luevano	El Paso Psychiatric Center	Texas
Dr. Neera Bhutani	Clear Lake Pediatric Clinic	Texas
Randy Robinson	Fort Worth Fire Department	Texas
Ricardo "Ricky" Galvan Jr.	South Texas Cardiology Institute	Texas
Rick Pardo	Clarity Child Guidance Center	Texas
Dr. Roberto Estrada		Texas
Robin Carson		Texas
Rodolfo Solano	Texas Oncology, Harlingen Nursing and Rehabilitation Center-Regency	Texas
Rory Thomas	Lubbock Impact	Texas
Dr. Ruben Perchero	Rio Grande Valley Orthopaedic Center	Texas
Shon Matthews	LifeNet	Texas
Stephanie Hatton		Texas
Tommy Searcy	Houston Fire Department	Texas
Yolanda Huron	San Antonio State Hospital	Texas
Ana Paz	Alta View Hospital	Utah
Dr. Dwight Inouye		Utah
Paul Mokofisi		Utah
Ruffino Rodriguez	Utah Valley Hospital	Utah
Silvia D. Melendez		Utah
Patrick Reginald Richards Jr.	Juan F. Luis Hospital	Virgin Islands
Barbara Finch	Southern Virginia Regional Medical Center	Virginia

Deborah Patterson	Southern Virginia Mental Health Institute	Virginia
Denise Hargrove	City of Richmond	Virginia
Dr. Eugene Conti		Virginia
Gail Hicks	Kenner Army Health Clinic	Virginia
Janice Turner	Jeb Stuart Rescue Squad	Virginia
Joseph Carson		Virginia
Nina Forbes	Silverado Senior Living Inc	Virginia
Quang Bui	Inova Physical Therapy Center	Virginia
Seth Annan	Mount Vernon Healthcare Center	Virginia
Dr. Steven John Perez	Medical Center of Annandale	Virginia
Syvie Robertson		Virginia
Dr. Theodore Corcoran		Virginia
Clea Alberto-Hume	Queen Anne Health care	Washington
Dawn Nichols		Washington
Douglas Bwamo	Seattle Children's Hospital	Washington
Esqequiel "Zeke" Cisneros	Eastern State Hospital (Mental Health Facility)	Washington
James Simpson	Sunstone Youth Treatment Center	Washington
John Silversmith		Washington
Dr. Stephen Schwartz		Washington
Angel McCaley		West Virginia
Brian Mahaney	Pineville Nursing and Rehabilitation	West Virginia
Brian Ritchie		West Virginia
Jason Wurster		West Virginia
Rick Todd	Salem Volunteer Fire Department	West Virginia
Shaunie Sullivan	Huntington Health and Rehabilitation Center	West Virginia
Stephen Collis	West Virginia University Medicine East	West Virginia
Dr. Celestino Perez		Wisconsin
Cesar Capule		Wisconsin
Charles Sheppard	Department of Veterans Affairs	Wisconsin
Diane Bieringer		Wisconsin
Dr. Leonardo J. Aponte	Clinica Latina	Wisconsin

Lolita Dotson	Madison, WI (William S. Middleton)	Wisconsin
Mary Milligan	Ascension All Saints Hospital, Aurora Sinai Medical Center, Aurora West Allis Medical Center	Wisconsin
Robert Geiger	The Wellness Shack	Wisconsin



Appendix III. Methodology

Registered nurse and other health care worker accounts collected come from media reports, obituaries, union memorial pages, GoFundMe campaigns, and social media (primarily Facebook, Twitter and Reddit). Included in the totals are health care workers, broadly defined as all workers in care settings, including hospitals, medical practices, nursing homes, other health-related, congregate-living and home health care settings, who were actively working and reportedly died of Covid-19/Covid-19-related complications.

In our methodology we are following in large part the example set by the Colorado Department of Public Health & Environment (CDPHE) whose data collection and reporting noted that [while] "[i]t is possible that a person may have been exposed elsewhere (and we can rarely prove where any individual was exposed with a person-to-person pathogen) ... when a person worked/lived/spent time in a facility with a known outbreak, we attribute their illness to the outbreak even if there is no definitive determination that the case acquired the illness at the facility."117 However, even CDPHE's definition is too restrictive as it unreasonably presumes knowledge of such outbreaks. In an environment of extraordinarily insufficient testing and virtually no genomic sequencing, a large number of asymptomatic cases¹¹⁸ in which individuals have been found to carry comparable viral loads to those with symptoms, 119 and when dealing with Covid-19's lengthy incubation period, we believe a more reasonable standard is to assume that persons actively working or volunteering as health care workers broadly defined may have been infected in a health care delivery setting. We include all such persons in our count.

Our broad definition of health care workers includes registered nurses, licensed practical nurses, nursing assistants, emergency medical service personnel, physicians, technicians, therapists, phlebotomists, pharmacists, social workers, trainees, and persons not directly involved in patient care, but who could be exposed to infectious agents that can be transmitted in the delivery of health care such as clerical, dietary, environmental services, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel.

Centers for Medicare & Medicaid Services' (CMS) data provides totals by nursing home facility

for health care worker deaths due to Covid-19.120 For this paper we utilized CMS's Covid-19 nursing home dataset for the week ending Jan. 31, 2020 released on Feb. 11, 2021. 121 Importantly, the CMS nursing home dataset excludes assisted living facilities and other group home settings.¹²² Employee fatality totals by nursing home facility are compared to the collected health care worker accounts to identify which have been previously identified and which have not yet surfaced. In order to reconcile the totals, the previously identified health care workers are subtracted from the facility and resulting state-level totals. In the instances where place of employment is not identified in a particular health care worker account, they are subtracted from the overall CMS state total.

Due to issues identified with high facility-level miscounts in the initial CMS reporting of state-level totals, especially in Massachusetts, ¹²³ health care worker death figures greater than five per facility are excluded from the CMS data included in this report. Notably, CMS did not require nursing homes to provide information on health care worker deaths prior to May 2020, by which time reported overall deaths in New York had reached 18,231 and New Jersey had already reached 7,228, many in nursing homes.¹²⁴

Some states are releasing data identifying the long-term care facility employer of health care workers who died. Where detailed state data is available, this data was used instead of reporting to CMS. These states include Colorado, Florida, Kentucky, Maryland, Michigan, Nevada, New Jersey and South Carolina as well as the District of Columbia. The data from these areas is reported for nursing homes and in some cases (Nevada, Maryland) other health-related congregate living settings, while Colorado provides more extensive establishment-level reporting as noted previously. These states all report deaths by employer establishment, making it possible to reconcile these deaths with news reporting and other sources.

State reported health care worker Covid fatality data from seven states: California, Georgia, Illinois, Minnesota, New Hampshire, Oklahoma, and Utah, is used instead of CMS reporting because these states, with the exception of Illinois, are regularly making public releases of totals for all deceased health care workers, including hospital and outpatient settings as well as congregate living settings. State of Illinois data is only available upon request from the Illinois Department

of Public Health. An eighth state, Vermont, is also reporting this figure, but has no health care worker fatalities to report as Feb. 11, 2021. In all these states, establishments are not reported by name — with the exception of California, where only skilled nursing facility establishments are named and fatality figures below 12 are masked - rendering reconciliation by establishment impossible. For California we are using the overall totals reported to the California Department of Public Health by local health departments, and not the skilled nursing facility data. For the seven states reporting deaths, California, Georgia, Illinois, Minnesota, New Hampshire, Oklahoma and Utah, all case counts collected were subtracted from the overall totals.

As mentioned previously, only the Veterans Administration provides somewhat greater transparency than the states by reporting health care worker deaths at regional system levels. VA totals for California, Georgia, Illinois, Minnesota, New Hampshire, Oklahoma, and Utah are subtracted from overall state totals.

Health Care Worker Infections

As of Feb. 11, 2021, we have compiled 791,158 cases of Covid-19 infection in health care workers, 197 percent of the 401,530 cases reported by the CDC.¹²⁶ However, we believe this represents a severe undercount. Just 18 states are providing infection figures for all health care workers on

a daily, semiweekly, or weekly basis.¹²⁷ An additional seven states and the District of Columbia provide cumulative infection figures regularly for nursing home workers that are used herein.¹²⁸ Of these, the District of Columbia and New Jersey provide additional infection data for some public-sector health workers. An eighth state, Florida, also provides long-term care staff infection totals, but not in a usable format. For 26 states and territories we utilize CMS's Covid-19 nursing home dataset for the week ending Aug. 30, 2020 released on Sept. 10, 2020.¹²⁹

As noted previously, Florida's reporting has been particularly problematic: The state is not reporting cumulative totals for health care worker infections in long-term care facilities. Florida's peak reported infections in long-term care facilities was 7,298 reported on July 23, 2020 but cumulative totals for Florida reported to CMS for the week ending Jan. 31, 2021 totaled 31,133. We have included the latter cumulative figure from CMS in the infection total.

Even some states that publish overall health care worker infection totals appear to fall far short of a reasonable total. For example, the State of Pennsylvania reported on Feb. 1, 2021 overall figure of 23,011 health care worker infections, or just 80.9 percent of the 28,433 figure reported by CMS on Jan. 31, 2021 for nursing home workers alone.¹³¹ We have included the State of Pennsylvania's overall figure in our totals.



ENDNOTES

- 1 National Nurses United (NNU), Sins of Omission How Government Failures to Track Covid-19 Data Have Led to More Than 1,700 Health Care Worker Deaths and Jeopardize Public Health, September 2020, https://www.nationalnursesunited.org/sites/default/files/nnu/graphics/documents/0920_Covid19_SinsOfOmission_Data_Report.pdf, accessed 2/2/21.
- 2 United States, Executive Office of the President Joe Biden, Executive Order on a Sustainable Public Health Supply Chain, 1/21/21 https://www.whitehouse.gov/briefing-room/ presidential-actions/2021/01/21/executiveorder-a-sustainable-public-health-supply-chain/, accessed 2/2/21; National Nurses United (NNU), Nurses Applaud Biden's National Strategy for the Covid-19 Response, press release, https:// www.nationalnursesunited.org/press/nursesapplaud-bidens-national-strategy-covid-19response, accessed 2/2/21.
- 3 National Nurses United (NNU), Nurses' Proposal for a Comprehensive Federal Plan to Combat the Covid-19 Pandemic, 12/10/20, https://www.nationalnursesunited.org/sites/default/files/nnu/graphics/documents/1220_NNU_Covid19_Comprehensive_Plan_Biden_12-10-2020.pdf, accessed 2/2/21.
- 4 PM Research Labs, The Color of Coronavirus: Covid-19 Deaths by Race and Ethnicity in the U.S., https://www.apmresearchlab.org/covid/deaths-by-race, accessed 9/15/20; The Fullest Look Yet at the Racial Inequity of Coronavirus, *The New York Times*, 7/5/20, https://www.nytimes.com/interactive/2020/07/05/us/coronavirus-latinos-african-americans-cdc-data.html, accessed 2/2/21.
- 5 Bureau of Labor Statistics (BLS), Labor Force Statistics from the Current Population Survey, 2019 https://www.bls.gov/cps/cpsaat11.htm, accessed 2/2/21.
- 6 Nursing ranks are filled with Filipino Americans. The pandemic is taking an outsized toll on them, *STAT*, 4/28/20, https://www.statnews.com/2020/04/28/coronavirus-taking-outsized-toll-on-filipino-american-nurses, accessed 2/2/21.
- 7 Bureau of Labor Statistics (BLS), Labor Force Statistics from the Current Population Survey, 2019 https://www.bls.gov/cps/cpsaat11.htm, accessed 2/2/21.
- 8 National Nurses United (NNU), Deadly Shame: Red Scrub Talk, 1/6/21, https://www.facebook.

- com/139599847972/videos/1120068958426008, accessed 2/24/21.
- 9 "I'm a nurse in a Covid-19 unit. My hospital's leaders frighten me more than the virus," *STAT*, 5/6/20, https://www.statnews.com/2020/05/06/nurse-frightened-hospital-administrators-more-than-covid-19, accessed 2/2/21.
- 10 Exposed, Silenced, Attacked: Failures to Protect Health and Essential Workers During the Covid-19 Pandemic, Amnesty International, 7/13/20, https://www.amnesty.org/en/documents/pol40/2572/2020/en, accessed 2/2/21.
- 11 National Nurses United, "National nurse survey exposes hospitals' knowing failure to prepare for a Covid-19 surge during flu season" (press release), 11/12/20, https://www.nationalnursesunited.org/press/national-nursesurvey-4-exposes-hospitals-knowing-failure-prepare-covid-19-surge, accessed 2/2/21.
- 12 Ibid.
- 13 Ibid.
- 14 Ibid.
- 15 National Nurses United, "National nurse survey reveals devastating impact of reopening too soon" (press release), 7/28/20, https://www.nationalnursesunited.org/press/national-nursesurvey-reveals-devastating-impact-reopening-too-soon, accessed 2/2/21.
- 16 Ibid.
- 17 Occupational Safety and Health Administration (OSHA) OSHA Act of 1970, General Duty Clause 29, U.S.C. § 654, 5(a)1, https://www.osha.gov/laws-regs/oshact/section5-duties, accessed 2/2/21.
- 18 National Nurses United, Letter to The Honorable Eugene Scalia, Secretary of Labor, United States Department of Labor and The Honorable Loren Sweatt, Principal Deputy Assistant Secretary of Labor for Occupational Safety and Health, Occupational Safety and Health Administration, Re: National Nurses United Petitions OSHA for an Emergency Temporary Standard on Emerging Infectious Diseases in Response to COVID-19, 3/4/20, https://www.nationalnursesunited.org/sites/default/files/nnu/graphics/documents/NNUPetitionOSHA03042020.pdf, accessed 2/2/21.
- 19 Nurses Deliver Half a Million Signatures to Congress, Calling on Congress to Protect Nurses During Covid-19 Pandemic, Press Release, 8/7/20, https://www.nationalnursesunited.org/

- press/nurses-deliver-half-million-signatures-congress-calling-congress-protect-nurses-during-covid, accessed 2/2/21.
- 20 'A Smoking Gun': Infectious Coronavirus Retrieved From Hospital Air, *The New York Times*, 8/11/20, https://www.nytimes. com/2020/08/11/health/coronavirus-aerosolsindoors.html, accessed 2/2/21.

See also:

Noorimotlagh Zahra et al., A systematic review of possible airborne transmission of the COVID-19 virus (SARS-CoV-2) in the indoor air environment, Environmental Research, Volume 193, 2021, 110612, ISSN 0013-9351, https://doi.org/10.1016/j.envres.2020.110612.

Bourouiba L. "Turbulent Gas Clouds and Respiratory Pathogen Emissions: Potential Implications for Reducing Transmission of COVID-19." *JAMA*. Mar 26, 2020; 323(18): 1837– 38. doi:10.1001/jama.2020.4756.

Van Doremalen N et al. "Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1." *New England Journal of Medicine*. Apr 16, 2020; 382: 1564–67. doi:10.1056/NEJMc2004973.

Wolfel R et al. "Virological Assessment of Hospitalized Patients with COVID-2019." *Nature*. Apr 1, 2020; 581: 465-69 (2020). doi:10.1038/s41586-020-2196-x.

- For additional studies, see National Nurses United's Covid-19 bibliography at this link: https://www.nationalnursesunited.org/covid-19.
- 21 239 Experts With One Big Claim: The Coronavirus Is Airborne, *The New York Times*, 7/4/20, https://www.nytimes.com/2020/07/04/health/239-experts-with-one-big-claim-the-coronavirus-is-airborne.html, accessed 8/14/20, Lidia Morawska, Donald K Milton, It is Time to Address Airborne Transmission of Covid-19, *Clinical Infectious Diseases*, 7/06/20, https://academic.oup.com/cid/article/71/9/2311/5867798, accessed 2/2/21.
- 22 University of California San Diego (UCSD), (press release), Leading Experts Call for Immediate Action to Address Inhalation Exposure to Prevent COVID-19, 2/17/21, https://ucsdnews.ucsd.edu/pressrelease/leading-experts-callfor-immediate-action-to-address-inhalation-exposure-to-prevent-covid-19-infecti, accessed 2/25/21.
- 23 National Nurses United (NNU), (press release) Nurses, Unions, Allies Urge CDC to Acknowledge Covid-19 Aerosol Transmission to Help Bring Virus Under Control, 2/23/21, https://www. nationalnursesunited.org/press/nurses-unions-

- allies-urge-cdc-to-acknowledge-covid-19-aerosol-transmission, accessed 2/25/21.
- 24 Ibid.
- 25 "California worker safety agency 'missing in action' during the coronavirus, critics say," *Los Angeles Times*, 7/16/20, https://www.latimes.com/politics/story/2020-07-16/california-agency-responsible-for-protecting-workers-ismissing-in-action-critics-say, accessed 2/2/21.
- 26 'OSHA is AWOL': Critics say federal agency is where workplace Covid-19 complaints go to die, *Tampa Bay Times*, 7/16/20, https://www.tampabay.com/news/2020/07/16/osha-is-awolcritics-say-federal-agency-is-where-workplace-covid-19-complaints-go-to-die, accessed 2/2/21.
- 27 New report says failures at OSHA under Trump could have put more workers at risk during pandemic, *The Washington Post*, 3/2/21, https://www.washingtonpost.com/business/2021/03/02/osha-inspections-covidoig-report/, accessed 3/5/21.
- 28 National Nurses United (NNU), Sins of Omission How Government Failures to Track Covid-19 Data Have Led to More Than 1,700 Health Care Worker Deaths and Jeopardize Public Health, September 2020, https://www.nationalnursesunited.org/sites/default/files/nnu/graphics/documents/0920_Covid19_SinsOfOmission_Data_Report.pdf, accessed 2/2/21.
- 29 National Nurses United (NNU), Deadly Shame Redressing the Devaluation of Registered Nurse Labor Through Pandemic Equity, December 2020, https://www.nationalnursesunited.org/ campaign/deadly-shame-report, accessed 2/2/21.
- 30 Centers for Disease Control & Prevention (CDC), CDC Covid-19 Data Tracker, Cases in the U.S., Unique Populations, Healthcare Personnel, Cases & Deaths among Healthcare Personnel, 2/11/21, https://covid.cdc.gov/covid-data-tracker/?CDC_#health-care-personnel, accessed 2/11/21.
- 31 Ibid.
- 32 How many health workers has COVID killed? Fla. says it has no data. False, ex-data guru says, *Bradenton Herald*, 7/30/20, https://www.bradenton.com/news/politics-government/state-politics/article244582087.html, accessed 2/2/21.
- 33 Centers for Disease Control & Prevention (CDC), CDC COVID Data Tracker, Cases in the U.S., Unique Populations, Healthcare Personnel, Cases in the U.S., Cases & Deaths among Healthcare Personnel, 2/11/21, https://covid.cdc.gov/covid-data-tracker/?CDC_#health-care-personnel,

- accessed 2/11/21; Centers for Medicare & Medicaid Services (CMS), Covid-19 Nursing Home Dataset, https://data.cms.gov/Special-Programs-Initiatives-Covid-19-Nursing-Home/Covid-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/12/21.
- 34 Centers for Medicare & Medicaid Services (CMS), Covid-19 nursing home dataset, 2/11/21 https:// data.cms.gov/Special-Programs-Initiatives-COVID-19-Nursing-Home/COVID-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/11/21.
- 35 Ibid.
- 36 Nursing Homes Don't Have to Report Pre-May Covid-19 Deaths to U.S. Officials, *The Wall Street Journal*, 5/21/20, https://www.wsj.com/articles/nursing-homes-dont-have-to-report-pre-may-covid-19-deaths-to-u-s-officials-11590077565, accessed 2/2/21.
- 37 Centers for Medicare & Medicaid Services (CMS), Covid-19 Nursing Home Dataset Interim Final Rule Updating Requirements for Notification of Confirmed and Suspected Covid-19 Cases Among Residents and Staff in Nursing Homes, 5/6/20, https://www.cms.gov/files/document/ aso-20-29-nh.pdf, accessed 2/2/21; N.J. Coronavirus Tracker, NJ.com, https://projects. nj.com/coronavirus-tracker/, accessed 2/2/21; "Coronavirus timeline in New York: Here's how we got here and where we're headed," 2/2/21, Lohud.com https://www.lohud.com/story/news/ politics/2020/03/13/coronavirus-timelinenew-york-how-we-got-here-and-where-wereheaded/5045463002, accessed 2/2/21. Note: see regularly updated "Coronavirus in New York" tracking table with data attributed to the N.Y. Governor's Office.
- 38 Months into Pandemic, Number of Deaths of Nursing Home Workers is Unclear, *The Boston Globe*, 6/9/20, https://www.bostonglobe.com/2020/06/09/metro/state-disputes-federal-report-deaths-mass-nursing-home-workers, accessed 2/2/21.
- 39 Rapid Expert Consultation on Understanding Causes of Health Care Worker Deaths Due to the COVID-19 Pandemic, 12/10/20, National Academies of Science, Engineering, Medicine, *The National Academies Press*, https://www.nap.edu/read/26018/chapter/1#4, accessed 2/2/21.
- 40 Kambhampati AK, O'Halloran AC, Whitaker M, et al. COVID-19-Associated Hospitalizations Among Health Care Personnel COVID-NET, 13 States, March 1-May 31, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1576-1583. https://www.cdc.gov/mmwr/volumes/69/wr/mm6943e3.htm.
- 41 Nurses Are at High Risk for Covid Among Health Workers, C.D.C. Says, *The New York*

- *Times*, 10/26/20, https://www.nytimes.com/2020/10/26/health/covid-nurses-.html, accessed 2/21/21.
- 42 Requests for data can be sent to: Covid.Media Covid.Media@illinois.gov. We have combined fatality and infection data reported by Illinois for health care workers and first responders.
- 43 Vermont Department of Health, Covid-19, Current Activity, Weekly Data Summary, 2/11/21, https://www.healthvermont.gov/covid-19/ current-activity/weekly-data-summary, accessed 2/11/21.
- 44 Lost on the Frontline, *The Guardian/Kaiser Health News*, https://www.theguardian.com/usnews/ng-interactive/2020/aug/11/lost-on-thefrontline-covid-19-coronavirus-us-healthcareworkers-deaths-database, Feb. 11, 2021, accessed 2/11/21.
- 45 Lost on the Frontline, The Guardian/Kaiser Health News, 12/23/20, https://web.archive.org/web/20201223122241/https://www.theguardian.com/us-news/ng-interactive/2020/aug/11/lost-on-the-frontline-covid-19-coronavirus-us-healthcare-workers-deaths-database, accessed 2/5/21. Note: access link using Internet Explorer for best results.
- 46 Lost on the Frontline, *The Guardian/Kaiser Health News*, 12/24/20, https://web.archive.org/web/20201224133023/https://www.theguardian.com/us-news/ng-interactive/2020/aug/11/lost-on-the-frontline-covid-19-coronavirus-us-healthcare-workers-deaths-database, accessed 2/5/21. Note: access link using Internet Explorer for best results.
- 47 Hospital Corporation of America (HCA), HCA Healthcare Reports Fourth Quarter 2020 Results and Provides 2021 Guidance (press release), 2/02/21, https://investor.hcahealthcare.com/news/news-details/2021/HCA-Healthcare-Reports-Fourth-Quarter-2020-Results-and-Provides-2021-Guidance/default.aspx, accessed 2/12/21.
- 48 National Nurse United (NNU), (press release) Nurses: Patient, RN and worker safety cuts a price for HCA's huge profits amid pandemic, 2/02/21 https://www.nationalnursesunited. org/press/hca-safety-cuts-huge-profits-amid-pandemic, accessed 2/12/21.
- 49 What's Behind South Korea's Covid-19 Exceptionalism? *The Atlantic*, 5/6/20, https://www.theatlantic.com/ideas/archive/2020/05/whats-south-koreas-secret/611215, accessed 2/2/21.
- 50 Coronavirus Disease 2019 (Covid-19) HEIC Updates for Psychiatry at JHH, 6/3/2020.

- 51 Johns Hopkins University & Medicine Coronavirus Resource Center, Covid-19 United States Cases by County, Baltimore City, 5/6/2020, https://coronavirus.jhu.edu/us-map, accessed 2/2/21.
- 52 Nursing homes say they 'treat in place.'
 Then came covid-19. *The Washington Post*,
 6/16/20, https://www.washingtonpost.com/
 business/2020/06/16/nursing-home-deathscoronavirus-hospital-transfers, accessed 2/2/21.
- 53 Ibid.
- 54 "Nursing home workers now have the most dangerous jobs in America. They deserve better." *The Washington Post*, 7/28/20, https://www.washingtonpost.com/opinions/2020/07/28/nursing-home-workers-now-have-most-dangerous-jobs-america-they-deserve-better, accessed 2/2/21.
- 55 U.S. Department of Veterans Affairs, Department of Veterans Affairs, Summary of VA Employee Covid-19 Related Deaths, https://www.accesstocare.va.gov/Healthcare/ COVID19EmployeeDeaths, accessed 2/2/21.
- 56 State of Colorado, Colorado Department of Public Health and Environment, Outbreak Data https://covid19.colorado.gov/data/outbreak-data, accessed 2/2/21, accessed 2/5/21.
- 57 State of Colorado, Colorado Department of Public Health and Environment, Outbreak Data https://covid19.colorado.gov/data/outbreak-data, accessed 2/5/21, State of Colorado, Colorado Department of Public Health and Environment, Outbreak Data, Outbreak Data Archived, September 2020 https://drive.google.com/drive/u/1/folders/10PZ3sgv6Yp8XEm8sEVufFtYjaVZS-zXn, accessed 2/5/21.
- 58 State of Colorado, Colorado Department of Public Health and Environment, Outbreak Data https://covid19.colorado.gov/data/outbreakdata, accessed 2/5/21. State of Colorado, Colorado Department of Public Health and Environment, Outbreak Data, Outbreak Data Archived, https://drive.google.com/drive/u/1/folders/1UbzPojULOVIHdWvV_2_cPJH7Ult-baxv, accessed 2/5/21.
- 59 State of Oregon, Oregon Health Authority, COVID-19 Weekly Report Oregon's Weekly Surveillance Summary Novel Coronavirus (COVID-19) https://www.oregon.gov/oha/ covid19/Documents/DataReports/Weekly-Outbreak-COVID-19-Report.pdf, accessed 2/2/21.
- 60 Human Rights Dimensions of Covid-19 Response, Human Right Watch, 3/19/20, https://www. hrw.org/news/2020/03/19/human-rights-

- dimensions-covid-19-response#_Toc35446579, accessed 2/2/21.
- 61 "Michigan coronavirus medical deaths at 16, more than some hospitals say," Bridge (MI), 4/27/20, https://www.bridgemi.com/michigan-health-watch/michigan-coronavirus-medical-deaths-16-more-some-hospitals-say, accessed 9/15/20; For health care 'heroes,' death toll keeps rising, *The Atlanta Journal-Constitution*, 8/14/20, https://www.ajc.com/news/coronavirus/for-health-care-heroes-death-toll-keeps-rising/UJMMAJS2ZBEDZLEBI6VKRLZLYQ, accessed 2/2/21.
- 62 For health care 'heroes,' death toll keeps rising, The Atlanta Journal-Constitution, 8/14/20, https://www.ajc.com/news/coronavirus/for-health-care-heroes-death-toll-keeps-rising/ UJMMAJS2ZBEDZLEBI6VKRLZLYQ, accessed 2/2/21.
- 63 Northwell Health, Northwell honors employees lost to Covid-19 with "Day of Remembrance, 6/26/20, https://www.northwell.edu/coronavirus-covid-19/news/the-latest/northwell-honors-employees-lost-to-covid-19-with-day-of-remembrance, accessed 2/2/21.
- 64 At least three health care workers in Arizona have died of Covid-19. Each had a special gift, 7/24/20, https://www.azcentral.com/story/news/local/arizona-health/2020/07/24/coronavirus-deaths-3-health-care-workers-died-covid-19-each-had-gift/5445824002, accessed 2/2/21.
- 65 Ibid.
- 66 Sick nurses must prove they got Covid-19 on the job, The Press-Democrat, 4/16/20, https://www.pressdemocrat.com/article/news/sick-nurses-must-prove-they-got-covid-19-on-the-job, accessed 9/15/20; Families of Health Workers Killed by COVID Fight for Denied Workers' Comp Benefits, Kaiser Health News, 7/13/20, https://khn.org/news/adding-to-covid-stress-families-of-health-workers-fight-for-denied-workers-comp-benefits, accessed 2/2/21.
- 67 I. Suarez-Garcia, M.J. Martinez de Aramayona Lopez c , A. Saez Vicente d , P. Lobo Abascal., "SARS-CoV-2 infection among healthcare workers in a hospital in Madrid, Spain," *Journal* of *Hospital Infection*, 7/15/20, https://www. journalofhospitalinfection.com/article/S0195-6701(20)30351-0/pdf, accessed 2/2/21.
- 68 National Nurses United (NNU), Deadly Shame Redressing the Devaluation of Registered Nurse Labor Through Pandemic Equity, December 2020, https://www.nationalnursesunited.org/campaign/deadly-shame-report, accessed 2/2/21.

- 69 State of Colorado, Colorado Department of Public Health and Environment, Outbreak Data https://covid19.colorado.gov/data/outbreak-data, accessed 2/2/21.
- 70 Forty percent of people with coronavirus infections have no symptoms. Might they be the key to ending the pandemic, *The Washington Post*, 8/08/20 https://www.washingtonpost.com/health/2020/08/08/asymptomatic-coronavirus-covid, accessed 2/2/21.
- 71 Even Asymptomatic People Carry the Coronavirus in High Amounts, *The New York Times*, 8/06/20, https://www.nytimes.com/2020/08/06/health/coronavirus-asymptomatic-transmission.html, accessed 2/2/21.
- 72 Ohio will publicly release hospital-level data on coronavirus infections of health care workers, *Cleveland.com*, 4/20/20, https://www.cleveland.com/open/2020/04/ohio-will-publicly-release-hospital-level-data-on-coronavirus-infections-of-health-care-workers.html, accessed 2/2/21.
- 73 How many health workers has COVID killed? Fla. says it has no data. False, ex-data guru says, *Bradenton Herald*, 7/30/20, https://www.bradenton.com/news/politics-government/state-politics/article244582087.html, accessed 2/2/21.
- 74 Ibid.
- 75 Ibid.
- 76 Ibid.
- 77 Centers for Medicare & Medicaid Services (CMS), Covid-19 nursing home dataset, 2/11/21 https://data.cms.gov/Special-Programs-Initiatives-Covid-19-Nursing-Home/Covid-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/11/21; Centers for Medicare & Medicaid Services (CMS), Covid-19 Nursing Home Dataset Interim Final Rule Updating Requirements for Notification of Confirmed and Suspected Covid-19 Cases Among Residents and Staff in Nursing Homes, 5/6/20, https://www.cms.gov/files/document/qso-20-29-nh.pdf, accessed 2/2/21.
- 78 California Department of Public Health, Skilled Nursing Facilities: Covid-19, SNF Data Dashboard https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Covid-19/SNFsCOVID_19.aspx, accessed 2/2/21.
- 79 Bureau of Labor Statistics (BLS), Labor Force Statistics from the Current Population Survey, 2019 https://www.bls.gov/cps/cpsaat11.htm, accessed 2/2/21.
- 80 APM Research Labs, The Color of Coronavirus: Covid-19 Deaths by Race and Ethnicity in the U.S., https://www.apmresearchlab.org/covid/ deaths-by-race, The Fullest Look Yet at the

- Racial Inequity of Coronavirus, *The New York Times*, 7/5/20, https://www.nytimes.com/interactive/2020/07/05/us/coronavirus-latinosafrican-americans-cdc-data.html, accessed 2/2/21.
- 81 Bureau of Labor Statistics (BLS), Labor Force Statistics from the Current Population Survey, 2019, https://www.bls.gov/cps/cpsaat11.htm, accessed 2/2/21.
- 82 Nursing ranks are filled with Filipino Americans. The pandemic is taking an outsized toll on them, *STAT*, 4/28/20, https://www.statnews.com/2020/04/28/coronavirus-taking-outsized-toll-on-filipino-american-nurses, accessed 2/2/21.
- 83 Little noticed, Filipino Americans are dying of Covid-19 at an alarming rate, *Los Angeles Times*, 7/21/20, https://www.latimes.com/california/story/2020-07-21/filipino-americans-dying-covid, accessed 2/2/21.
- 84 Bureau of Labor Statistics (BLS), Labor Force Statistics from the Current Population Survey, 2019, https://www.bls.gov/cps/cpsaat11.htm, accessed 2/2/21.
- 85 American Life Expectancy Dropped By A Full Year In 1st Half Of 2020, *National Public Radio (NPR)* 2/18/21, https://www.npr. org/2021/02/18/968791431/american-life-expectancy-dropped-by-a-full-year-in-the-first-half-of-2020, accessed 2/21/21.
- 86 Ibid.
- 87 Six in 10 UK health workers killed by Covid-19 are BAME, *The Guardian*, 5/25/20, https://www.theguardian.com/world/2020/may/25/six-in-10-uk-health-workers-killed-by-covid-19-are-bame, accessed 2/2/21.
- 88 Exclusive: deaths of NHS staff from covid-19 analysed, *Health Services Journal (HSJ)*, 4/22/20 https://www.hsj.co.uk/exclusive-deaths-of-nhs-staff-from-covid-19-analysed/7027471.article, accessed 2/2/21.
- 89 Ibid.
- 90 Covid risk calculator aims to help keep BAME healthcare workers safer, *Medical Xpress*, https://medicalxpress.com/news/2020-07-covid-aims-bame-healthcare-workers.html, accessed 2/2/21
- 91 Ibid.
- 92 Centers for Disease Control & Prevention (CDC), CDC COVID Data Tracker, Cases in the U.S., Unique Populations, Healthcare Personnel, Cases in the U.S., Cases & Deaths among Healthcare Personnel, 2/11/21, https://covid.cdc.gov/covid-data-tracker/?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fcases-

- updates%2Fcases-in-us.html#health-care-personnel, accessed 2/11/21.
- 93 Centers for Medicare & Medicaid Services (CMS), Covid-19 nursing home dataset, 2/11/21 https:// data.cms.gov/Special-Programs-Initiatives-Covid-19-Nursing-Home/Covid-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/11/21.
- 94 These 18 states are: Alabama, Arkansas, California, Colorado, Georgia, Idaho, Illinois, Minnesota, New Hampshire, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Utah, Virginia, Vermont, and Wisconsin. Illinois' data is available upon request. Requests for Illinois data can be sent to: Covid.Media Covid.Media@illinois.gov. We have combined fatality and infection data reported by Illinois for health care workers and first responders.
- 95 These seven states are: Kentucky, Louisiana, Maryland, Michigan, New Jersey, Nevada, and West Virginia.
- 96 Centers for Medicare & Medicaid Services (CMS), Covid-19 nursing home dataset, 2/11/21 https://data.cms.gov/Special-Programs-Initiatives-Covid-19-Nursing-Home/Covid-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/11/21. These 26 states and territories are: Alaska, Arizona, Connecticut, Delaware, Florida, Hawaii, Iowa, Indiana, Kansas, Massachusetts, Maine, Missouri, Mississippi, Montana, North Carolina, North Dakota, Nebraska, New Mexico, New York, Puerto Rico, Rhode Island, South Dakota, Tennessee, Texas, Washington, and Wyoming.
- 97 Florida health, Florida Covid-19 response, current situation in Florida, long-term care facilities with positive Covid-19 cases, https://web.archive.org/web/20200806153820/http://ww11.doh.state.fl.us/comm/_partners/covid19_report_archive/ltcf_latest.pdf, accessed 2/2/21.
- 98 Department Of Health Provides Update On COVID-19: More Than One Million Vaccinations To Date (press release) Pennsylvania Department of Health, 2/1/21, https://www.media.pa.gov/pages/health-details.aspx?newsid=1276, accessed 2/11/21; Centers for Medicare & Medicaid Services (CMS), Covid-19 nursing home dataset, Feb. 11, 2021, https://data.cms.gov/Special-Programs-Initiatives-Covid-19-Nursing-Home/Covid-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/11/21.
- 99 Wisconsin Department of Health Services, Percent of Covid-19 cases who are health care workers, https://www.dhs.wisconsin.gov/ covid-19/hosp-data.htm, accessed 2/11/12; Oregon Health Authority, Oregon's Covid-19 Update, https://public.tableau.com/profile/ oregon.health.authority.covid.19#!/vizhome/

- OregonCOVID-19Update/CaseandTesting, accessed 2/11/12.
- 100Sick nurses must prove they got Covid-19 on the job, *The Press-Democrat*, 4/16/20, https://www.pressdemocrat.com/article/news/sick-nurses-must-prove-they-got-covid-19-on-the-job, accessed 9/15/20; Families of Health Workers Killed by COVID Fight for Denied Workers' Comp Benefits, *Kaiser Health News*, 7/13/20, https://khn.org/news/adding-to-covid-stress-families-of-health-workers-fight-for-denied-workers-comp-benefits, accessed 2/2/21.
- 101 Coronavirus infections among healthcare workers keep climbing in Oregon, SW Washington, *The Oregonian* (OregonLive. com), 4/3/20, https://www.oregonlive.com/coronavirus/2020/04/coronavirus-infections-among-healthcare-workers-keep-climbing-in-oregon-sw-washington.html, accessed 2/2/21.
- 102 "More than 150 employees at 4 Boston Hospitals Have Tested Positive for Coronavirus." CNN, 3/27/20, https://www.cnn.com/2020/03/26/health/boston-coronavirus-hospitals-employeestest-positive/index.html, accessed 2/2/21.
- 103 More health workers are getting COVID-19, but UTSW says they're safer on the job than out, *The Dallas Morning News*, 7/3/20, https://www.dallasnews.com/business/commentary/2020/07/03/more-health-workers-are-getting-covid-19-but-utsw-says-theyre-safer-on-the-job-than-out-and-about/, accessed 2/10/21; UT Southwestern Medical Center, What to Know About Covid-19, The Latest Covid-19 Numbers, UTSW campus https://www.utsouthwestern.edu/covid-19/, accessed 2/10/21.
- 104Seidelman JL, Lewis SS, Advani SD, Akinboyo IC, Epling C, Case M, Said K, Yancey W, Stiegel M, Schwartz A, Stout J, Sexton DJ, Smith BA. Universal masking is an effective strategy to flatten the severe acute respiratory coronavirus virus 2 (SARS-CoV-2) healthcare worker epidemiologic curve. *Infection Control & Hospital Epidemiology* 2020 Dec; 41(12):1466-1467. doi: 10.1017/ice.2020.313. Epub 2020 Jun 25. PMID: 32576336; PMCID: PMC7520637.

105 lbid.

- 106 Centers for Disease Control & Prevention (CDC), Interim U.S. Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel with Potential Exposure to SARS-CoV-2, 2/16/21, https://www.cdc.gov/coronavirus/2019ncov/hcp/guidance-risk-assesment-hcp.html, accessed 2/21/21.
- 107CDC Reduces Consecutive Minutes Of COVID-19 Exposure Needed To Be A 'Close Contact', National Public Radio (NPR), 10/21/20, https://

- www.npr.org/sections/coronavirus-live-updates/2020/10/21/926365995/cdc-reduces-consecutive-minutes-of-covid-19-exposure-needed-to-be-a-close-contac, accessed 2/21/21.
- 108'A Smoking Gun': Infectious Coronavirus Retrieved From Hospital Air, *The New York Times*, 8/11/20, https://www.nytimes. com/2020/08/11/health/coronavirus-aerosolsindoors.html, accessed 2/2/21.

See also:

Noorimotlagh Zahra et al., A systematic review of possible airborne transmission of the COVID-19 virus (SARS-CoV-2) in the indoor air environment, *Environmental Research*, Volume 193, 2021, 110612, ISSN 0013-9351, https://doi.org/10.1016/j.envres.2020.110612.

Bourouiba L. "Turbulent Gas Clouds and Respiratory Pathogen Emissions: Potential Implications for Reducing Transmission of COVID-19." *JAMA*. Mar 26, 2020; 323(18): 1837-38. doi:10.1001/jama.2020.4756.

Van Doremalen N et al. "Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1." *New England Journal of Medicine*. Apr 16, 2020; 382: 1564-67. doi:10.1056/NEJMc2004973.

Wolfel R et al. "Virological Assessment of Hospitalized Patients with COVID-2019." *Nature*. Apr 1, 2020; 581: 465-69 (2020). doi:10.1038/s41586-020-2196-x.

For additional studies, see National Nurses United's COVID-19 bibliography at this link: https://www.nationalnursesunited.org/covid-19.

- 109 John T Wilkins, Elizabeth L Gray, Amisha Wallia, Lisa R Hirschhorn, Teresa R Zembower, Joyce Ho, Naomi Kalume, Ojoma Agbo, Alex Zhu, Laura J Rasmussen-Torvik, Sadiya S Khan, Mercedes Carnethon, Mark Huffman, Charlesnika T Evans, Seroprevalence and Correlates of SARS-CoV-2 Antibodies in Health Care Workers in Chicago, *Open Forum Infectious Diseases*, Volume 8, Issue 1, January 2021, ofaa582, https://doi.org/10.1093/ofid/ofaa582.
- 110 Fell A, Beaudoin A, D'Heilly P, et al; Minnesota Department of Health COVID-19 HCW Monitoring Response Team; Minnesota Department of Health COVID-19 Response Task Force. SARS-CoV-2 exposure and infection among health care personnel Minnesota, March 6-July 11, 2020. Morbidity and Mortality Weekly Report (MMWR) 2020; 69:1605-10., https://www.cdc.gov/mmwr/volumes/69/wr/mm6943a5.htm, accessed 2/11/21.
- 111 Minnesota Department of Health, COVID-19 Weekly Report, 7/9/21, https://www.health.

- state.mn.us/diseases/coronavirus/stats/covidweekly28.pdf, accessed 2/10/21.
- 112 Ibid.
- 113 Ibid.
- 114 Ibid.
- 115 Forty percent of people with coronavirus infections have no symptoms. Might they be the key to ending the pandemic, *The Washington Post*, 8/8/2020, https://www.washingtonpost.com/health/2020/08/08/asymptomatic-coronavirus-covid, accessed 2/2/21.
- 116 Even Asymptomatic People Carry the Coronavirus in High Amounts, *The New York Times*, https://www.nytimes.com/2020/08/06/health/coronavirus-asymptomatic-transmission.html, accessed 2/2/21.
- 117 State of Colorado, Colorado Department of Public Health and Environment, Outbreak Data, https://covid19.colorado.gov/data/outbreak-data, accessed 2/2/21.
- 118 Forty percent of people with coronavirus infections have no symptoms. Might they be the key to ending the pandemic, *The Washington Post*, 8/8/2020, https://www.washingtonpost.com/health/2020/08/08/asymptomatic-coronavirus-covid, accessed 2/2/21.
- 119 Even Asymptomatic People Carry the Coronavirus in High Amounts, *The New York Times*, 8/6/20, https://www.nytimes.com/2020/08/06/health/coronavirus-asymptomatic-transmission.html, accessed 2/2/21.
- 120 Centers for Medicare & Medicaid Services (CMS), Covid-19 Nursing Home Dataset, 2/11/21 https://data.cms.gov/Special-Programs-Initiatives-Covid-19-Nursing-Home/Covid-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/11/21.
- 121 Ibid.
- 122 Ibid.
- 123 Months into Pandemic, Number of Deaths of Nursing Home Workers is Unclear, *The Boston Globe*, 6/9/20, https://www.bostonglobe.com/2020/06/09/metro/state-disputes-federal-report-deaths-mass-nursing-home-workers, accessed 2/2/21.
- 124 Centers for Medicare & Medicaid Services (CMS), Covid-19 Nursing Home Dataset Interim Final Rule Updating Requirements for Notification of Confirmed and Suspected Covid-19 Cases Among Residents and Staff in Nursing Homes, 5/6/20, https://www.cms.gov/files/document/qso-20-29-nh.pdf, accessed 2/2/21; N.J. Coronavirus Tracker, NJ.com, https://projects.nj.com/coronavirus-tracker, accessed 2/2/21;

- "Coronavirus timeline in New York: Here's how we got here and where we're headed," 3/13/20, Lohud.com, https://www.lohud.com/story/news/politics/2020/03/13/coronavirus-timeline-new-york-how-we-got-here-and-where-were-headed/5045463002, accessed 2/2/21.
- Note: see regularly updated "Coronavirus in New York" tracking table with data attributed to the N.Y. Governor's Office.
- 125 U.S. Department of Veterans Affairs, Department of Veterans Affairs, Summary of VA Employee Covid-19 Related Deaths, 9/15/20, https://www.accesstocare.va.gov/Healthcare/COVID19EmployeeDeaths, accessed 2/2/21.
- 126 Centers for Disease Control & Prevention (CDC), CDC COVID Data Tracker, Cases in the U.S., Unique Populations, Healthcare Personnel, Cases in the U.S., Cases & Deaths among Healthcare Personnel, 2/11/21, https://covid.cdc.gov/covid-data-tracker/?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fcases-updates%2Fcases-in-us.html#health-care-personnel, accessed 2/11/21.
- 127 These 18 states are: Alabama, Arkansas, California, Colorado, Georgia, Idaho, Illinois, Minnesota, New Hampshire, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Utah, Virginia, Vermont, and Wisconsin. Illinois' data is available upon request. Requests for Illinois data can be sent to: Covid.Media Covid.Media@illinois.gov. We have combined fatality and infection data reported by Illinois for health care workers and first responders.
- 128 These seven states are: Kentucky, Louisiana, Maryland, Michigan, New Jersey, Nevada, and West Virginia.
- 129 Centers for Medicare & Medicaid Services (CMS), Covid-19 Nursing Home Dataset, 2/11/21 https://data.cms.gov/Special-Programs-Initiatives-Covid-19-Nursing-Home/Covid-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/11/21. These 26 states and territories are: Alaska, Arizona, Connecticut, Delaware, Florida, Hawaii, Iowa, Indiana, Kansas, Massachusetts, Maine, Missouri, Mississippi, Montana, North Carolina, North Dakota, Nebraska, New Mexico, New York, Puerto Rico, Rhode Island, South Dakota, Tennessee, Texas, Washington, and Wyoming.
- 130 Florida health, Florida Covid-19 response, current situation in Florida, long-term care facilities with positive Covid-19 cases, https://web.archive.org/web/20200806153820/http://ww11.doh.state.fl.us/comm/_partners/covid19_report_archive/ltcf_latest.pdf, accessed 2/2/21.

131 Department Of Health Provides Update On COVID-19: More Than One Million Vaccinations To Date (press release) Pennsylvania Department of Health, 2/1/21, https://www.media.pa.gov/pages/health-details.aspx?newsid=1276, accessed 2/11/21; Centers for Medicare & Medicaid Services (CMS), Covid-19 Nursing Home Dataset, 2/11/21, https://data.cms.gov/Special-Programs-Initiatives-Covid-19-Nursing-Home/Covid-19-Nursing-Home-Dataset/s2uc-8wxp, accessed 2/11/21.





