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The 'Heart-Wrenching' Toll of COVID-19 on Nursing Homes

Forgotten elders largely overlooked in pandemic response

By Gary Evans, Medical Writer

The combination of a highly infectious virus and a frail resident population in a closed environment — where infection control has been historically difficult to implement — has resulted in devastating outbreaks of COVID-19 in U.S. nursing homes.

Infection preventionists with oversight or consulting arrangements with nursing homes know that introduction of the pandemic coronavirus into these facilities may be the first wave of a perfect storm.

As of April 23, 2020, a report by the Kaiser Family Foundation (KFF) found that in the 23 states that publicly report mortality data, more than 10,000 reported nursing home residents and staff have died of COVID-19.¹

“Our data also finds that there have been over 50,000 reported cases, accounting for 11% of coronavirus cases in 29 states,” the report states.

“In six states reporting data, deaths in long-term care facilities account for over 50% of all COVID-19 deaths — Delaware, Massachusetts, Oregon, Pennsylvania, Colorado, and Utah.”

Although incomplete reporting undermines full accuracy, it is clear that nursing homes are bearing the brunt of the pandemic.

There are more than 1 million residents in about 15,000 nursing homes nationally, **Terry Fulmer**, PhD, RN, FAAN, president of the John A. Hartford Foundation, said during a recent webinar.

“Our healthcare system has failed our nursing homes and all those who live and work there,” she said. “It is heart-wrenching to see the devastating toll this is having on our residents and staff in long-term care facilities. We have to act now to prevent further death and suffering.”

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CMS Requires Reporting Respiratory Conditions

In one of the first reported nursing home outbreaks of COVID-19 in the United States, the Centers for Disease Control and Prevention (CDC) recently described a transmission in a Washington state facility that resulted in 23 deaths in February and March of this year.² The novel coronavirus infected 81 residents, 34 staff members, and 14 visitors. Overall, 57% of residents, 36% of visitors, and 6% of staff members were hospitalized. All staff members survived, but the mortality rate was 27% in infected residents and 7% in visitors, the CDC reported.

“Limitations in effective infection control and prevention, and staff members working in multiple facilities, contributed to intra- and interfacility spread,” the CDC concluded. “Long-term care facilities should take proactive steps to protect the health of residents and preserve the healthcare workforce by identifying and excluding potentially infected staff members, restricting visitation except in compassionate care situations, ensuring early recognition of potentially infected patients, and implementing appropriate infection control measures.” (See “*Clock Starts Ticking When COVID-19 Enters Nursing Home.*”)

According to the KFF report, about 40% of U.S. nursing homes were cited for infection control deficiencies in 2017. The Centers for Medicare & Medicaid Services (CMS) recently announced it will be enforcing existing standards for infectious disease reporting and develop specific regulations for

COVID-19.³ (See “*CMS Moves to Enforce Infection Control in Nursing Homes.*”)

While calling for “transparency,” CMS made it clear that nursing homes that do not comply could be subject to regulatory enforcement. This has raised concerns in nursing homes that CMS may take punitive actions even as the facilities are struggling to deal with the pandemic, says **Lori Popejoy**, PhD, RN, FAAN, associate dean for innovation and partnerships at the Sinclair School of Nursing at the University of Missouri in Columbia.

“Historically, ‘transparency’ has not necessarily been a friend of nursing homes,” she says. “Being transparent at this really vulnerable time is a challenge. Yes, we need them to be transparent and know what they are doing, but they are concerned that they are going to be receiving financial penalties.”

In addition to vigilant hand hygiene and environmental disinfection, communication is a bedrock prevention measure, emphasizes **Connie Steed**, RN, president of the Association for Professionals in Infection Control and Epidemiology (APIC).

“They need to keep the residents and the employees informed,” she says. “Don’t ignore COVID-19 — there really needs to be some communications [and planning]. How would they take action in a certain situation?”

Because some residents may have dementia, you cannot simply set out hand sanitizer at the bedside and expect it to be used properly, she says. This is but one example of how the intensity of care increases when you are dealing with an outbreak in a setting where people are normally encouraged to socialize.

As the staff work harder to keep residents safe, their own health becomes a key part of the outbreak response.

“The nursing homes need to ensure that they have sick leave policies for employees, so they will stay home if they have respiratory symptoms,” Steed says.

Although they care for one of most vulnerable patient populations, nursing home staff may be paid minimum wage and have few options for sick leave or personal healthcare coverage.

“The tragedy has spread across the country to every state. All of us have lessons to learn about actions to take,” Fulmer said. “Existing inequalities in our system are being exacerbated and highlighted. Unfortunately, this crisis has everything to do with how we as a country treat our nursing home communities.”

One problem in stopping these outbreaks is that investigators are finding long-term care residents with asymptomatic coronavirus infections. This is somewhat counterintuitive given their age and underlying health conditions.

Morgan Katz, MD, a physician at Johns Hopkins Hospital investigating COVID-19 outbreaks in long-term care, says the more you test, the more asymptomatic cases you find.

“The results we got from universal testing were really stunning,” she says.

“If we had one or two symptomatic cases in the facility, we find that about three-fourths [of residents] were positive. About 60% to 70% of those were completely asymptomatic. There really hasn’t been enough attention given to infection prevention in this setting.”

CMS Moves to Enforce Infection Control in Nursing Homes

Existing regs in force, COVID-19 requirements coming soon

The Centers for Medicare & Medicaid Services (CMS) has announced a new emphasis on infection control in nursing homes and has fast-tracked a regulation to enforce COVID-19 reporting.

“In light of the recent spread of COVID-19, we are providing additional direction to nursing homes to help control and prevent the spread of the disease,” CMS stated in a memorandum issued recently.¹

Some of the CMS actions include reporting requirements.

“To ensure appropriate tracking, response, and mitigation of COVID-19 in nursing homes, CMS is reinforcing an existing requirement that nursing homes must report communicable diseases, healthcare-associated infections, and potential outbreaks to state and local health departments,” CMS stated.

In rulemaking that will follow, CMS is issuing a specific reporting requirement for COVID-19. “Failure to report cases of residents or staff who have confirmed COVID-19 and Persons under Investigation (PUI) could result in an enforcement action,” CMS warned.

The proposed reporting requirement will include a new mandate for facilities to notify residents, their representatives, and the health department about residents or staff with suspected or confirmed COVID-19; residents with severe respiratory infection resulting in hospitalization or death; or three or more residents or staff with new-onset respiratory symptoms within 72 hours of each other. This reporting eventually will be done through the Centers for Disease Control and Prevention’s National Health Safety Network (NHSN) system.

“Currently, this information is provided optionally by nursing homes,” CMS states. “The required collection of this information will be used to support surveillance of COVID-19 locally and nationally, monitor trends in infection rates, and inform public health policies and actions. This information may be retained and publicly reported in accordance with law.”

At a minimum, once these requirements are in place, nursing homes must inform residents and their representatives within 12 hours of the occurrence of a single confirmed infection of COVID-19, or three or more residents or staff with new-onset of respiratory symptoms that occur within 72 hours.

“Facilities will include information on mitigating actions implemented to prevent or reduce the risk of transmission, including if normal operations in the nursing home will be altered,” CMS states. ■

REFERENCE

1. Centers for Medicare & Medicaid Services. Upcoming requirements for notification of confirmed COVID-19 (or COVID-19 persons under investigation) among residents and staff in nursing homes. April 19, 2020. <https://www.cms.gov/files/document/qso-20-26-nh.pdf>

Ethical Issues

As with other aspects of the pandemic — such as the heightened risk to people of color or those who bear longstanding socioeconomic burdens — the plight of nursing homes raises ethical questions about the pandemic response, says **Nancy Berlinger**, PhD, a research scholar at the Hastings Center, a bioethics institute in Garrison, NY.

Partially as the result of social stigmas about death and aging, nursing homes were something of an afterthought as the pandemic hit.

“I look at it like they just were not ‘dealt in,’” she tells *Hospital Infection Control & Prevention*. “We sometimes talk about a population being ‘invisible’ — if not invisible, neglected.

“I think part of that is we can imagine ourselves using hospitals — because they have emergency rooms and people have babies — more readily than we can imagine using a nursing home. We don’t associate nursing homes with positive experiences, and that [is related] to how we think about aging and disability. It’s almost a foregone conclusion that when we think of nursing homes, we say, ‘I don’t want to go there.’”

One of the lessons that will come out of the pandemic is that early interventions in long-term care could have prevented some hospitalizations, relieving some pressure from a healthcare delivery system threatened with being overwhelmed.

“Long-term care facilities have to be on our mental map, or as we sometimes call it in ethics, our moral imagination,” she says. “I think some of the hospital-based doctors really felt this very keenly. Some said maybe the best way to

protect an older person was to have gone way upstream and made sure these facilities had adequate gear [and resources]. Then we would not have these patients in hospitals in a condition where we could not do anything for them.”

The idea of avoiding hospitalizations by detecting and treating illness in nursing homes has been the goal of a project begun by Popejoy and colleagues at the University of Missouri in 2012. The intent is to head off more invasive and intensive care that could include multidrug-resistant bacteria — and now COVID-19.

“We are seeing nursing homes really try to minimize hospital transfers now, keeping the residents and not sending them to where they could be potentially exposed to COVID-19,” she says. “This has really made the facilities rethink when they might transfer them otherwise. That’s really been an emphasis all along, keeping people in facilities and treating them as much as they can.”

On the other hand, when residents show symptoms of the coronavirus, such as respiratory illness and onset of fevers, they are being sent to hospitals for needed acute care, she adds.

“At the beginning, part one of the complications was the profound lack of testing,” Popejoy says. “The only way to get a test was to go to a hospital and once they come back to the hospital, they have to be cohorted in an infection control/ COVID-19 unit, and it creates a lot of complications.

“Now that testing has become readily available, they can be tested within the facilities, so that impetus to actually transfer has been tamped down a little bit unless they are heavily symptomatic.”

Mental Toll on Residents?

The potential for asymptomatic patients and healthcare workers complicates control measures considerably, but at least nursing homes now know what pathogen they are dealing with.

“If you go back to the first facility in Washington, they probably thought they had a flu outbreak,” Popejoy said. “They were managing it as the flu and they were probably confused about why things were evolving so quickly — and at that point, you will recall there was very little COVID-19 in the United States.”

The chronic shortages of personal protective equipment hit nursing homes hard, as they were not initially viewed as a priority to receive masks, face shields, and the like.

“I reached out to the emergency management system in the county and asked them if they were talking to nursing homes, saying ‘If you don’t involve them now, there are going to be huge problems later,’” she says.

As the pandemic set in, traditional transfers between hospitals and nursing homes became more difficult, as the movement of patients and residents between facilities was slowed by coronavirus concerns.

Another part of the new normal is that a resident may be isolated in their room to contain transmission, able to see relatives and visitors only through smart phones and other devices. This threatens physical and mental health, since nursing homes emphasize mobility and socialization.

“The normal nursing home environment is to socialize,” Popejoy

says. “You bring residents out of their rooms and they dine together and do activities together. All of that lets them be more mobile, they eat better, and they are less likely to become depressed or anxious and have behavior issues.

“Now that we have them isolated, we will start seeing more of these types of things.” ■

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2. McMichael TM, Clark S, Pogojans S, et al. COVID-19 in a long-term care facility – King County, Washington, February 27-March 9, 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:339-342.
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Clock Starts Ticking When COVID-19 Enters Nursing Home

Look for any early signs and symptoms

Given the high risk of spread after COVID-19 enters a nursing home, facilities must act immediately to protect residents, families, and staff from serious illness and death, the Centers for Disease Control and Prevention (CDC) emphasizes.

Subtle signs and changes in nursing home residents may signal the early onset of COVID-19 infections, said **Kara Jacobs Slifka**, MD, a member of the CDC COVID-19 response team.

“You know your residents best,” she said in a CDC training video. “Noting even small changes in their appearance and behavior may indicate a new COVID-19 infection. Alerting staff and a supervisor may prevent many others from infection.”

New symptoms of dizziness, headaches, diarrhea — any changes could be a sign of an infection, the CDC advises.

With asymptomatic transmission and environmental contamination, it may be possible to get COVID-19 by touching surfaces or objects that the virus is on, “such as the resident’s bed or bedside table or

things like doorknobs or blood pressure machines, and then touch your mouth, nose, and eyes,” Slifka said. “The earlier you can recognize sick residents, the faster you can prevent COVID-19 from spreading throughout the building.”

The most likely mode of entry of the coronavirus is through healthcare personnel and other staff, “some of which may not have symptoms,” she said. “It is for this reason that you wear your surgical mask at all times and not work when sick.”

The resident’s temperature should be taken every day, and even more often if you are concerned about an outbreak.

“A temp of equal or more than 100 [degrees Fahrenheit], or multiple temps of 99 should trigger a warning that this resident may have COVID-19,” Slifka said.

Since sick residents can rapidly progress to severe illness, they should have vital signs monitored three times a day, including use of a blood oxygen oximeter.

Ask them to tell you if they feel ill and monitor for symptoms, such as new and different coughs

and sore throat, she said. CDC recommendations to prevent COVID-19 spread in nursing homes include the following:¹

Keep COVID-19 from entering your facility:

- Restrict all visitors except for compassionate care situations (e.g., end-of-life).
 - Restrict all volunteers and nonessential healthcare personnel (HCP), including consultant services (e.g., barber, hairdresser).
 - Implement universal use of source control [i.e., masking] for everyone in the facility.
 - Actively screen anyone entering the building (HCP, ancillary staff, vendors, consultants) for fever and symptoms of COVID-19 before starting each shift; send ill personnel home. Sick leave policies should be flexible and nonpunitive.
- Prevent spread of COVID-19:
- Cancel all group activities and communal dining.
 - Enforce social distancing among residents.
 - Ensure all residents wear a cloth face covering for source control whenever they leave their room

or are around others, including whenever they leave the facility for essential medical appointments. Ensure all HCP wear a facemask or cloth face covering for source control while in the facility. Cloth face coverings are not considered personal protective equipment (PPE) because their capability to protect HCP is unknown. Cloth face coverings should NOT be worn instead of a respirator or facemask if more than source control is required. This includes an N95 or higher-level respirator (or facemask if a respirator is not available), eye protection, gloves, and gown. HCP should

be trained on PPE use, including putting it on and taking it off.

• If COVID-19 is identified in the facility, restrict all residents to their rooms and have HCP wear all recommended PPE for care of all residents (regardless of symptoms) on the affected unit (or facility-wide, depending on the situation). This approach is recommended because of the high risk of unrecognized infection among residents. Recent experience suggests that a substantial proportion of residents could have COVID-19 without reporting symptoms or before symptoms develop.

• When a case is identified, public health can help inform decisions about testing asymptomatic residents on the unit or in the facility. Designate a location to care for residents with suspected or confirmed COVID-19, separate from other residents. ■

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Regional Collaboration May Improve the Ethical Response to Pandemic

Doing the right thing

The COVID-19 pandemic is raising profound ethical questions, including whether different socioeconomic groups and rural facilities are receiving equitable care and resources as their better-positioned counterparts.

Providing guidance in this area is the Hasting Center, a bioethics institute in Garrison, NY. The ethics think tank has issued some recommendations calling for healthcare facilities in the same region to work together to ensure ethical care.

“Ethical challenges arise when there is uncertainty about how to ‘do the right thing’ when duties or values conflict,” the authors of the recommendation note. “These challenges affect the healthcare workforce, healthcare operations, and a healthcare institution’s communication with the public. Planning to meet the needs of patients with severe COVID-19

illness includes explicit attention to critical care, palliative care, and institutional ethics services and resources.”

“Healthcare leaders have a duty to guide healthcare workers experiencing demanding work conditions, ethical uncertainty, and moral distress during a public health emergency,” the guidelines state. “The devastating nature of severe COVID-19 illness and the operational demands of caring for large numbers of COVID-19 patients add tremendous stress to clinical work.”

No healthcare system is an island in such times, since ethical duties apply across healthcare institutions regionally as well as within institutions.

“Regional collaboration can support the duty to plan by clarifying regional challenges, sharing resources, identifying consensus, and reducing duplication and unilateral

approaches in the development of policies and processes, including triage protocols,” the authors note. “Regional collaboration can support the duty to safeguard workers and vulnerable populations by facilitating personal protective equipment (PPE) allocation across institutions and care settings.”

Hospitals serving the same region should confer with each other concerning policies, processes, and practices to come to some agreement on the following issues:

- coordinated efforts to promote equity in PPE allocation across COVID-19 care settings, e.g., inpatient and outpatient clinical settings, residential care facilities, hospice programs, and home health agencies, including non-COVID-19 hospital settings where healthcare workers and hospitalized patients are at risk of COVID-19 exposure;
- creation of a resource allocation system for hospital and intensive care

beds that can be activated when one healthcare system within the region is nearing capacity;

- communications with patients, families, and the public about care limitations during a public health emergency and about foreseeable medical decisions arising for critically ill COVID-19 patients;
- agreement concerning whether healthcare settings responding to COVID-19 should adopt the do-not-resuscitate (DNR) code status for critically ill patients in view of benefits to patients/survivability, risks to workers, resource constraints, and equity across institutions.

Hospital Infection Control & Prevention (HIC) sought more information on this regional approach to ethics in the following interview with lead author **Nancy Berlinger**, PhD, a research scholar at the Hastings Center.

HIC: Is one of the key ideas that hospitals and healthcare facilities in a region can elevate the ethical response to this pandemic by working together?

Berlinger: Exactly. When you think about healthcare ethics, it usually — but not always — has to do with treatment decisions made in a hospital context. I live in New York City. Fortunately, we are past our peak, but the focus has been very much on hospitals and the first responders. Now, looking at different parts of the country, which will experience different surges at different times, we need to be thinking of the broader community. We have more data now on who is most vulnerable to COVID-19 — older people, those with preexisting conditions, and people who are exposed via work. There are a lot of different people on the front lines who keep our society going and need to be protected.

Now, we ponder the long recovery from this terrible crisis, [knowing] there isn't going to be a vaccine for quite some time. As we are thinking about whether it is safe to open certain parts of society, we have to remember that some people get this as a life-threatening illness, and hospitals can be overwhelmed. We have to start to think about the whole community.

HIC: What kind of discussions led up to these guidelines?

Berlinger: Some of the things that healthcare ethicists have been talking about throughout the country are where there are the cases and situations where protecting people from COVID-19 infection goes beyond my institution. Where should we be having conversations? One of the issues is who is a healthcare worker and who needs PPE. If we think of this only as the employees of a hospital or frontline workers, we are overlooking a lot of people who could potentially be at risk of infection, could be vectors of transmission between people. We have to think beyond the hospital to nursing homes, homecare, hospice programs, and outpatient clinics. All of the places where people are cared for within a community. But these groups are not all part of the same organizations — they have different professional ties and may even be competitors with each other. This is a time when we need to emphasize this is a community-wide challenge. We don't want a situation where one facility got to a supplier faster and says, 'Well, I'm OK.' The community is not OK if only one institution is OK. We have to learn to think more broadly, and I think infection control and PPE is a clear-cut example of that.

HIC: There has been a lot of controversy about PPE or the lack

thereof. When does a lack of PPE become unethical? Is that a question that can be answered?

Berlinger: That is such an important question. I think that this goes directly to when we think about what we owe to the public and what we owe to the workforce. It really goes down to the fact in terms of, in public health and ethics, this is a disease that travels between people. There is a social connection. We have to be thinking about harms that can occur between people. What are all of the ways that we need to protect each other? It is not sufficient to say I'm going to protect myself. If I am wearing a mask, and that is mandatory in my city, it is not to protect me. It is to protect another person from me. The other [masked] person is protecting me. In ethics, it is called reciprocity. So, when we imagine that safety is only available to the highest bidder, we are not acting in an ethical way. If we say, if you don't have the means or political muscle to get something you are out of luck in terms of your health — that is not fair. You can also see that in terms of a richer medical academic center and a poor community hospital, a rural hospital, or a homecare agency. In public health ethics, we are always thinking about benefits and risks being distributed fairly. The concept of equity — that's what it means. We are treating people as morally equal to one another.

HIC: Why is it important that a regional collaboration of facilities agrees on the approaches to, for example, DNR orders?

Berlinger: One of the things that comes up in formal and informal discussions is that it is desirable to not work in isolation from each other, nor to have slightly different approaches at various places that

are very close together. And also, certainly not to have wildly different approaches. It would be strange, for example, if hospitals have very different policies about DNR. It is better to have a shared position and that may provide strength in numbers — if you can say

everyone in the region has reached consensus, that this will be done in the same way. We can explain why we are undertaking this effort and [emphasize] that we are going to continue studying this. The same approach, rather than having differences that might be confusing

to the public, who may think you “have a better chance” at one place or another. If you can reach agreement, it is better to say that all of the hospitals in the area have [a given policy].” ■

One COVID-19 Patient, More than 40 Healthcare Workers Exposed

More than 9,000 medical staff have contracted the coronavirus

An unsuspected case of COVID-19 — hospitalized as the pandemic was beginning in the United States — exposed 43 healthcare workers (HCWs) and caused what are thought to be the first occupational infections with the virus, the Centers for Disease Control and Prevention (CDC) reports.¹

On Feb. 26, 2020, the first U.S. case of community-acquired COVID-19 was confirmed in a patient at “hospital B” in Solano County, CA. The patient initially had been evaluated at a different facility, “hospital A,” the CDC says.

“At that time, COVID-19 was not suspected, as the patient denied travel or contact with symptomatic persons,” the CDC reports. “During a four-day hospitalization, the patient was managed with standard precautions and underwent multiple aerosol-generating procedures, including nebulizer treatments, bilevel positive airway pressure ventilation, endotracheal intubation, and bronchoscopy.”

Several days later, the patient tested positive for SARS-CoV-2, the pandemic virus that causes COVID-19.

“Among 121 hospital A healthcare personnel (HCP) who were exposed to the patient, 43 (35.5%) developed symptoms during the 14 days after exposure and were tested for SARS-CoV-2,” the CDC notes. “Three had positive test results and were among the first known cases of probable occupational transmission of SARS-CoV-2 to HCP in the United States.”

Other HCWs could have been infected with the virus but were not picked up in the testing, the CDC acknowledged. Serologic testing was not done, with the workers tested through nasopharyngeal and oropharyngeal specimens. Likewise, additional infections might have occurred among asymptomatic exposed HCP who were not tested.

“It is possible that additional infections may have occurred among the 40 symptomatic healthcare personnel who tested negative, due to potential limitations in test sensitivity and timing,” says lead author **Amy Heinzerling**, MD, an officer in the CDC Epidemic Intelligence Service. “It is also possible that their symptoms were caused by other respiratory infections or by noninfectious causes, such

as seasonal allergies. Most of these 40 healthcare personnel had mild symptoms and none required hospitalization.”

The three infected staff members performed more physical examinations of the patient and had longer exposures during nebulizer treatments without wearing personal protective equipment (PPE).

“Because transmission-based precautions were not in use, no HCP wore personal protective equipment recommended for COVID-19 patient care during contact with the index patient,” the CDC concludes. “Healthcare facilities should emphasize early recognition and isolation of patients with possible COVID-19 and use of recommended PPE to minimize unprotected, high-risk HCP exposures and protect the healthcare workforce.”

In what is considered an underestimate, the CDC recently reported that more than 9,000 HCWs in the United States have been infected with novel coronavirus and 27 have died.

Despite the severity of a spectrum of cases, 90% of the HCWs recovered without hospitalization. In

addition to overcoming fear to treat patients, the healthcare work force is proving resilient in the face of the COVID-19 pandemic.

“We always knew that healthcare workers would be essential to combatting pandemics, but I think you can see with this one, it is more true than many of us had anticipated,” **Robert Redfield**, MD, director of the CDC, said at recent meeting. “This virus is clearly one of the most infectious respiratory viruses that we have ever had to deal with.”

In CDC surveillance data from Feb. 12 to April 9, 2020, 9,282 (19%) of 49,370 COVID-19 case reports with occupational information were HCP.¹ The information was gathered from CDC surveillance forms, and the numbers and percentages vary depending on the detail provided in individual reports.

“This [report] is likely an underestimation because HCP status was available for only 16% of reported cases nationwide,” the CDC stated. “HCP with mild or asymptomatic infections might also have been less likely to be tested, thus less likely to be reported. The total number of COVID-19 cases among HCP is expected to rise as more U.S. communities experience widespread transmission.”

Although only 6% of the infected workers were at least 65 years of age, 10 (37%) of the deaths occurred in this older age group. In addition, 38% of those infected had underlying risk factors, including asthma, chronic obstructive pulmonary disease, diabetes, cardiovascular disease, and immune compromised condition.

“Older HCP or those with underlying health conditions should consider consulting with

their healthcare provider and employee health program to better understand and manage their risks regarding COVID-19,” the CDC recommended. “The increased prevalence of severe outcomes in older HCP should be considered when mobilizing retired HCP to increase surge capacity, especially in the face of limited PPE availability.”

One approach is to assign these workers to lower-risk duties, such as administrative tasks, the CDC noted.

Almost Half in Community Exposed

Breaking down the cases reveals that 55% of medical workers reported healthcare exposures, with the remainder citing household (27%), community (13%), or exposures in multiple settings (5%). The data reflect the “potential for exposure in multiple settings, especially as community transmission increases. Further, transmission might come from unrecognized sources, including presymptomatic or asymptomatic persons,” the CDC reported.

As the boundaries blur, it will be more challenging to make the distinction between community and occupational transmission to healthcare staff. More benign strains of coronavirus cause colds of unknown origin, but the severity of this infection raises issues of occupational health and workers’ compensation.

Among those who reported contact with a confirmed COVID-19 patient in a healthcare setting, details of the exposure and whether the worker was wearing PPE could not be determined. Among HCP patients with data available,

the median age was 42 years. Among HCP patients with data available on age and health outcomes, 6,760 (90%) were not hospitalized. However, 723 (8% to 10%) were hospitalized, and 184 (2% to 5%) were admitted to an intensive care unit.

Although 92% of the HCWs reported having at least one symptom among fever, cough, or shortness of breath, the remaining 8% did not report any of these symptoms. Preventing asymptomatic transmission was one of the justifications for the recent CDC recommendation for all HCWs to wear surgical masks while on duty. Given the shift to community spread, contact tracing after occupational exposures is likely to be fruitless.

“Additional measures that will likely reduce the risk for infected HCP transmitting the virus to colleagues and patients include screening all HCP for fever and respiratory symptoms at the beginning of their shifts, prioritizing HCP for testing, and ensuring options to discourage working while ill, such as flexible and nonpunitive medical leave policies,” the CDC concluded. ■

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Fauci Taps the Brakes on Widespread Reopening

'Cautiously optimistic' on successful vaccine

Warning of the risk of opening up the economy too quickly, infectious disease expert **Anthony Fauci**, MD, said the United States could see a painful resurgence of COVID-19.

“If you do not have an adequate response, we will have the deleterious consequence of more infections and more deaths,” said Fauci, director of the National Institutes of Health’s (NIH) National Institute of Allergy and Infectious Diseases (NIAID). “If we do not respond in an adequate way when the fall comes — given that, without a doubt, there will be infections that will be in the community — then we run the risk of having a resurgence. I would hope by that point in time in the fall that we have more than enough to respond adequately. But if we don’t, there will be problems.”

Speaking at a recent Congressional hearing on the pandemic, Fauci said the guidelines for ending social mitigation have checkpoints such as a two-week decline in reported cases.

“My word has been — and I’ve been very consistent in this — that I get concerned if you have a situation where the dynamics of an outbreak in an area are such that you are not seeing that gradual over 14-day decrease that would allow you to go to phase one,” he said.

Areas that “jump over” the mitigation checkpoints, particularly if they are not geared up for a surge, could see spikes in coronavirus cases and outbreaks, he said.

“There is no doubt, even under the best of circumstances, when you pull back on mitigation, you

will see some cases appear,” he said. “It’s the ability and the capability of responding to those cases with good identification, isolation, and contact tracing that will determine whether you can continue to go forward as you try to reopen America. It’s not only doing it at the appropriate time with the appropriate constraints

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but having in place the capability of responding when the inevitable return of infections occurs.”

The Second Wave

Saying it is “entirely conceivable and possible” that a second wave could hit in the fall, Fauci said now is the time to stock up on supplies and equipment that were lacking when the first wave of COVID-19 hit.

“Between now and then — given the capability of doing the testing, the ability to stock up on personal protective equipment, and the workforce that the [Centers for Disease Control and Prevention] will be putting forth to be able to identify, isolate, and contact trace — I hope that if we do have a second wave, we will be able to deal with it very effectively,” he said.

NIAID is proceeding with a four-fold plan to defeat the virus, he said. “One, to improve the fundamental knowledge of the virus and the disease it causes,” Fauci said. “Next, to develop new point-of-care diagnostics. Next, to characterize and test therapeutics. And finally, to develop safe and effective vaccines.”

The NIH has developed a rapid acceleration diagnostics program, earmarking up to half a billion dollars to support the development of COVID-19 tests.

“It is a national call for innovative technologies that will be evaluated in a ‘Shark Tank’-like process, to get to either success or failure rapidly,” he said.

In terms of antiviral therapies, remdesivir is showing some success, but Fauci emphasized that there are a number of broad-spectrum antivirals that are in various stages of testing. A remdesivir placebo-controlled, randomized trial was done internationally with a power of more than 1,000 individuals in sites throughout the world. It was in hospitalized patients with lung disease, with the primary endpoint time to recovery.

“The result was statistically significant, but really modest,”

Fauci said. “The results showed that the drug had a 31% faster time to recovery. We hope to build on this modest success with combinations of drugs and better drugs.”

In addition, researchers are looking at convalescent plasma from those who have recovered from COVID-19 to see if it has implications for prevention or treatment.

“In addition, [research is underway with] hyperimmune globulin, which can be used as a gamma globulin shot,” Fauci said. “We’ll be looking at repurposed drugs as well as immune-based therapies, host modifiers, and finally, monoclonal antibodies.”

There are at least eight candidate COVID-19 vaccines in clinical development. The NIH has been collaborating with a number of pharmaceutical companies at various stages of development, he said.

“You might recall in this committee that in January of this year, I said that it would take about one year to 18 months if we were to successfully develop a vaccine,” Fauci said.

The NIH has moved very quickly, starting development of one promising vaccine that very month. “Only 62 days later, we are now in phase I clinical trial with the two doses already fully enrolled,” Fauci said. “There will be animal safety

[studies]. Then phase I will directly go into phase II and III in late spring and early summer. If we are successful, we hope to know that in the late fall and early winter.”

Shots on Goal

Researchers are essentially attacking the virus from all directions, using “multiple shots on goal” with the hope that there may be even more than one successful candidate. In addition, vaccine production will be done “at risk,” he said, which means doses will be created before it is even known whether it works.

“I must warn that there’s also the possibility of negative consequences, where certain vaccines can actually enhance the negative effect of the infection,” Fauci said. “The big unknown is efficacy. Will it be present or absent and how durable will it be? I still feel cautiously optimistic that we will have a candidate that will give some degree of efficacy, hopefully a percentage enough that will induce the kind of herd immunity that would give a protection to the population [as a] whole.”

In response to questions from the Senate committee members, Fauci said expecting to have a vaccine or treatments in place to allow children to return to school this coming fall

would likely be “a bridge too far.” However, he said this might vary by region and local spread of the virus, in addition to the availability of testing and other intervention factors. “We’re really not talking necessarily about treating a student who gets ill, but how safe the student will feel going back to school,” he said.

While the vast majority of children have shown few signs of infection, some young people have, and there is a troubling syndrome related to COVID-19 seen in some patients.

“We don’t know everything about this virus, and we really better be very careful, particularly when it comes to children,” Fauci said. “Because the more and more we learn, we’re seeing things about what this virus can do that we didn’t see from the studies in China or in Europe. For example, right now [there are] children presenting with COVID-19 who actually have a very strange inflammatory syndrome, very similar to Kawasaki syndrome.”

Fauci was asked if he agreed with some epidemiologists that the death toll in the United States might be about 50% higher than the daily totals reported. Although doubting the uncounted cases were that high, Fauci said “most of us feel that the number of deaths are likely higher.” ■



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CME/CE OBJECTIVES

Upon completion of this educational activity, participants should be able to:

1. Identify the clinical, legal, or educational issues encountered by infection preventionists and epidemiologists;
2. Describe the effect of infection control and prevention issues on nurses, hospitals, or the healthcare industry in general;
3. Cite solutions to the problems encountered by infection preventionists based on guidelines from the relevant regulatory authorities, and/or independent recommendations from clinicians at individual institutions.

CME/CE QUESTIONS

- 1. According to Morgan Katz, MD, a physician at Johns Hopkins Hospital investigating COVID-19 outbreaks in long-term care, what percentage range of nursing home residents who tested positive were completely asymptomatic?**
 - a. 10% to 15%
 - b. 20% to 30%
 - c. 40% to 50%
 - d. 60% to 70%
- 2. At a minimum, once the Centers for Medicare & Medicaid Services COVID-19 requirements are in place, nursing homes must inform residents and their representatives within 12 hours of the occurrence of:**
 - a. a single case.
 - b. more than one sick healthcare worker.
 - c. a cluster of at least three cases.
 - d. a death.
- 3. Kara Jacobs Slifka, MD, a member of the Centers for Disease Control and Prevention COVID-19 response team, said the likely mode of entry for COVID-19 into a nursing home is:**
 - a. a resident transferred in from a hospital.
 - b. a healthcare worker.
 - c. a visitor.
 - d. a resident from a different nursing home.
- 4. Anthony Fauci, MD, reported that an usual syndrome seen in some children with COVID-19 is similar to:**
 - a. acute flaccid paralysis.
 - b. chicken pox.
 - c. Kawasaki syndrome.
 - d. Guillain-Barre syndrome.