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A National Tragedy: COVID-19 in the Nation's Nursing Homes

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Chairman Wyden, Ranking Member Crapo, and distinguished members of the Committee, thank you for the opportunity to testify today on the topic of COVID-19 in nursing homes.

My name is Tamara Konetzka. I am a professor of health economics and health services research at the University of Chicago. I have been conducting research on long-term and post-acute care for more than 25 years. I have led numerous studies that examine the quality of nursing home care and how public policy might improve it, how Medicare and Medicaid policy influence care access and quality, and how increasing provision of services in home- and community-based settings impacts health. I serve on the technical expert panel that advises the Centers for Medicare and Medicaid Services on the Nursing Home Compare 5-star rating system that publicly reports nursing home quality.

Almost 40% of all COVID-19 deaths in the United States have been linked to long-term care facilities.[1] The scope of this problem became apparent early in the pandemic, generating widespread media attention and public alarm. Almost a year ago, a *New York Times* article referred to nursing homes as "death pits,"[2] due to seemingly uncontrollable COVID-19 spread within these facilities. This devastation continued during subsequent surges.[3]

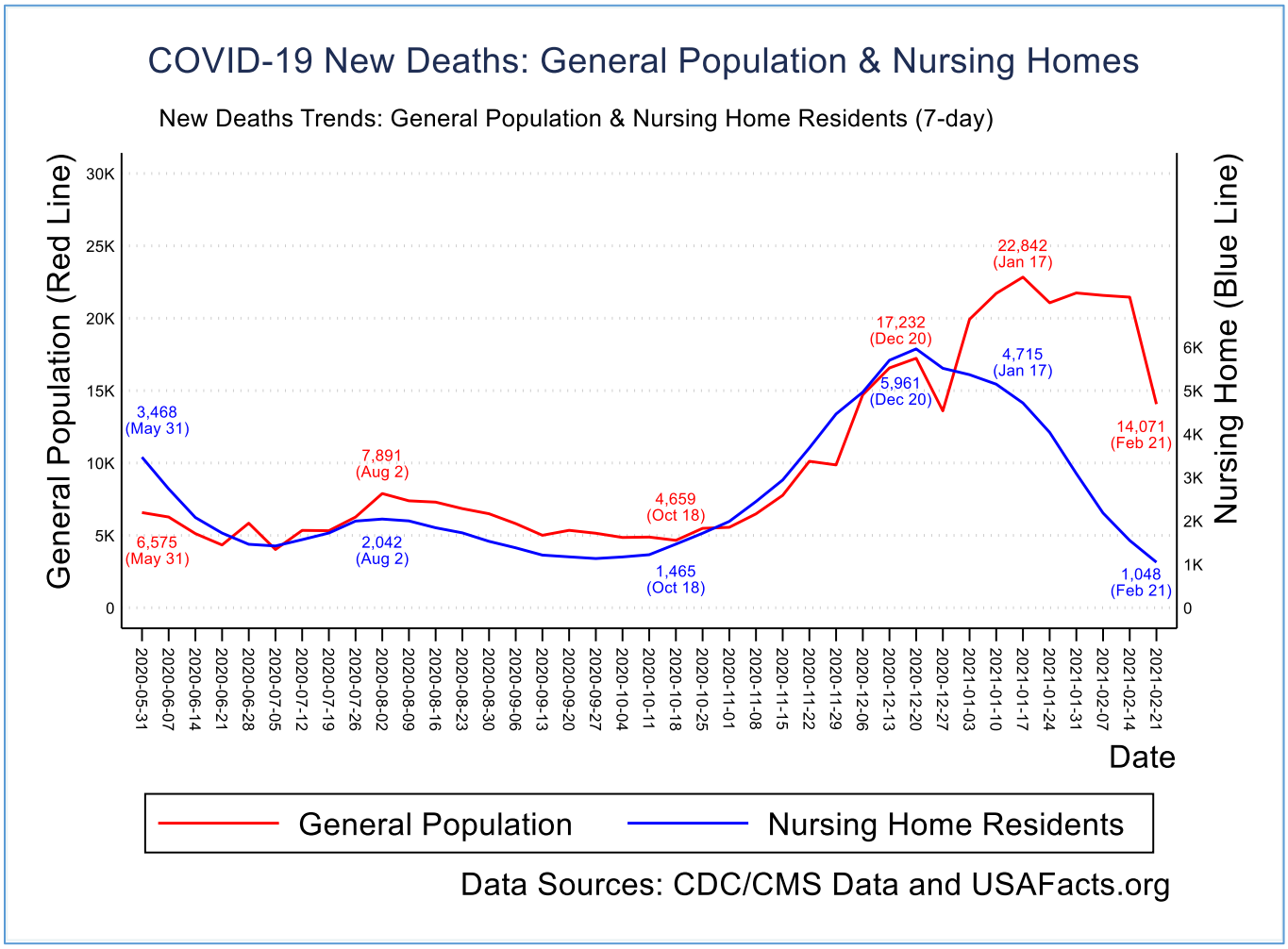
The circumstances that led to this tragedy, often referred to as a "perfect storm"[4], start with the attributes of the novel coronavirus itself. The coronavirus that causes COVID-19 is airborne, can be spread asymptomatically, and is particularly dangerous for older adults with underlying health conditions. It is therefore no surprise that nursing home residents, with their demographic and clinical profile, suffered disproportionately high rates of cases, hospitalizations, and deaths.

The nursing home setting exacerbates this risk. Many facilities house, in close quarters, dozens or sometimes hundreds of residents who require hours of hands-on care on a daily basis. Many residents share rooms with others. Physical distancing is extremely difficult given the realities of congregate care settings. Finally, asymptomatic spread means that residents and staff can cause an outbreak without knowing it. This was especially lethal early in the pandemic when there was less known about asymptomatic transmission and less widespread testing of asymptomatic individuals.

At long last, there is cause for optimism. Overall COVID-19 cases and deaths have declined nationwide in recent months.

The sharpest declines are occurring in nursing homes. The weekly number of new COVID-19 cases and deaths in nursing homes are at their lowest since national data collection began last May. Reported deaths among nursing home residents have declined by more than 80 percent since the new year. It is still difficult at this early date, and without the necessary data, to rigorously assess the causes of the decline.

We do know that the vast majority of nursing home residents have been vaccinated. This has almost certainly played a large role. Trends in nursing home cases and deaths, after closely matching trends in community cases and deaths throughout the pandemic, started to diverge mid-January, when a much higher percent of nursing home residents had been vaccinated than community residents.



Increased vaccination and declining COVID-19 deaths have brought other physical and emotional benefits for nursing home residents. These made possible new CDC/CMS recommendations that nursing homes fully open to visitors, a hugely important development for residents and their families.

Despite this welcome progress, there remains need for caution, and particularly the need to resist complacency. First, not all residents and staff are vaccinated. Whereas most nursing home residents were eager to be vaccinated, take-up has been much lower among staff, by some reports 37%.[5] Second, many facilities face high staff and resident turnover. This dynamic will produce declining vaccination rates in many facilities over time without ongoing efforts. Third, COVID-19 infection is still possible after vaccination, a risk that may increase with new coronavirus variants. If the US experiences a new surge in cases this spring as public health measures are relaxed, it will provide a real test of the effectiveness of vaccination efforts in nursing homes in avoiding the new surge.

Even if vaccination proves to be wildly successful, there is still much to be learned from this pandemic to help prepare for the next one.

Evidence on Predictors of Nursing Home Cases and Deaths

Policymakers and researchers alike have examined attributes of nursing homes associated with better and worse outcomes from the pandemic, looking for clues as to organizational best practices, opportunities for intervention, and where to assess blame. The results are clear and consistent, and not what many expected. A large body of evidence, some produced by our team at the University of Chicago[1] and some by others, shows that the two strongest and most consistent predictors of worse COVID-19 outcomes are *nursing home size*, with larger facilities being more at risk, and *COVID-19 prevalence in the surrounding community*. Given an outbreak, nursing homes in the highest quintile of community prevalence averaged five more deaths per facility than similar nursing homes in the lowest quintile.

Related studies examined the role of staff in inadvertently bringing the virus into nursing homes. One analysis used cell phone data to track staff movements in and out of facilities[6] and another examined the ZIP codes where nursing home staff live[7]; they found that staff traffic between facilities and in and out of areas with high virus prevalence was associated with more cases and deaths in the nursing homes where they worked. Nursing assistants in nursing homes usually work for minimum wage, few or no benefits, and no sick leave. To make ends meet, they often work multiple jobs in multiple facilities.[8,9] Without sick leave, staff may have felt compelled to work even when symptomatic or after a COVID-19 exposure. These conditions likely exacerbated the risk of outbreaks.

Equally important are nursing home attributes that are *not* linked with COVID-19 outcomes. Multiple rigorous studies have found no meaningful association between COVID-19 outcomes and standard nursing home quality metrics--usually measured by the Nursing Home Compare star ratings.[10-13] (Studies that did find an association often failed to control for community virus prevalence or had very small samples.) Beyond the star ratings, several studies examined specific and salient aspects of quality such as prior infection control citations. Perhaps surprisingly, these were also not associated with poor COVID-19 outcomes.[10,14]

Such results do not imply that we should ignore traditional nursing home quality and infection control measures. Rather, they suggest that high quality and good infection control are not enough. The reality is that staff enter and leave daily. When COVID-19 is prevalent in surrounding communities, even nursing homes that are of high quality and that implement recommended infection control procedures remain at risk.

The numbers bear this out. At this point, more than 99% of nursing homes in the nation have had at least one COVID-19 case among residents or staff. More than 80% have had at least one COVID-19 death. This is not a "bad apples" problem, and no subset of nursing homes has found a magic bullet to keep the virus out. Despite the emergence of best practices and regulatory inspections for infection control, nursing home cases and deaths closely matched trends in community cases and deaths not only in spring but throughout the summer and fall surges.

This reality underscores a key oversight and lesson of the past year. Many of us have been asking: *What should nursing homes be doing differently? How can they do better?* Alongside these questions, we must ask with equal urgency: *What should our entire communities be doing?* Put differently: *The single most important thing we could have done as a nation to reduce the tragedy in nursing homes over the past year was to use public health measures to control the spread of the virus in the general population.* That will be true this coming year, as well.

[1] Rebecca J. Gorges was my collaborator on this research. I also thank Xiaoxuan (Stephen) Yang for research assistance.

Racial Disparities in Nursing Home Cases and Deaths

It is now well-known that the pandemic has disproportionately harmed communities of color. Disparities in COVID-19 cases and deaths are also clear in the nursing home sector. We recently examined these differences in nursing homes nationwide, in a study published in *JAMA Network Open*.[15] Because we lacked individual-level data, we focused on the racial distribution of residents in each facility, categorizing nursing homes by the percent of residents who are white. The differences are striking: Nursing homes serving more (>40%) non-white residents experienced more than three times as many COVID-19 cases and deaths as those serving primarily white residents.

In unpacking the reasons for such disparities, we found that race was correlated with two strong predictors of COVID-19 outcomes, nursing home size and COVID-19 prevalence in the surrounding community. Non-white residents are more likely to live in larger facilities in neighborhoods where COVID-19 is prevalent. They face correspondingly greater risk of becoming infected or dying from COVID-19. Of note, although non-white residents tend to be in lower-quality nursing homes, these quality differences do not appear to explain disparities in COVID-19 outcomes, consistent with the broader research I described above. And although our measures of facility case-mix were limited, facility differences in residents' prior underlying health do not appear to explain COVID disparities, either.

As we consider ways to reduce risk and improve outcomes for COVID-19 and for future public health threats, reducing these disparities by race should be a prominent goal.

The Importance of Staffing

The key predictors of nursing home cases and deaths – size and location – leave little room for immediate and direct intervention by nursing homes themselves. Our team took a nuanced look at the role of staffing using national data, in the hope of identifying factors that might be more under the control of nursing homes and more amenable to policy changes. Other researchers have found complementary results in smaller studies.[16,17]

In the often-contentious world of nursing home policy, it is difficult to find things that everyone agrees on – researchers, policymakers, advocates, and nursing homes themselves. Here's one thing everyone agrees on: On average, nursing homes lack sufficient numbers of staff to provide the quality care we would all want to receive. Having enough staff is arguably the single most important element in delivering high-quality care. Providing hands-on assistance to residents is at the heart of what nursing homes do. A large body of research confirms the importance of staffing to nursing home outcomes.

It became clear during the pandemic that having enough staff was critical to implementation of best practices in preventing or containing COVID-19 outbreaks. These staffing-intensive practices include: testing of all residents, the physical separation of COVID-positive and COVID-negative residents, and the assignment of dedicated staff to each group to avoid traffic between the two. At the same time, the ability of nursing homes to attract and retain sufficient staffing has been exacerbated by the pandemic: Staff were getting sick with COVID. Others were afraid of becoming infected, or of bringing the virus home to families, especially in the absence of adequate PPE. Some staff members had to stay home with children who were suddenly learning online. And it was difficult to find new staff to hire, for these same reasons and due to competition with hospitals for additional health care personnel. In the week ending February 21, almost 17% of nursing homes reported a shortage of staffing.

We specifically examined whether nursing homes that had higher staffing ratios just prior to the pandemic had better COVID-19 outcomes. Having more staff did not reduce the probability of an initial outbreak. However, *higher baseline staffing ratios were helpful in stemming an outbreak once it started: Nursing homes with the*

highest staff hours per resident-day experienced fewer cases and deaths than those at the bottom of the distribution. I should note that the effects of staffing are dwarfed by the effects of community spread,[13] but increasing staffing represents a clear intervention that could improve care and can save lives, during the pandemic and beyond.

Recommendations

My research and the experiences in which I have been immersed for the past year suggest several policy recommendations moving forward:

1. First, CMS policies implemented during the past year that aim to "incentivize" nursing homes to handle the pandemic well (rewarding facilities that have few deaths and/or fining those that have many) are misguided. Some of these policies are valuable long-term strategies to encourage quality improvement. These are not appropriate in the midst of a crisis, particularly given the loose connection between nursing home actions and COVID-19 deaths. At the time of an outbreak, what is needed is not incentives or blame but rather assistance, especially to those facilities that are struggling with outbreaks and may be experiencing shortages of PPE, lack of access to rapid testing, or insufficient staffing. I therefore strongly support the allocation of American Rescue Plan funds to states for "strike teams" to rapidly fill these gaps during an outbreak.

2. Second, we must provide greater assistance to large facilities in communities of color. Such facilities do not typically earn performance bonuses. If we are not careful, incentive policies intended to promote best practices will instead exacerbate racial and ethnic disparities by depriving under-resourced facilities—and thus their patients and staff--of critically-needed resources. All policies need to be evaluated in the light of equity concerns.

3. Third, data collection and wide availability are essential to assemble an accurate evidence base, to rapidly mobilize the clinical and policy research community, and to formulate effective policy. We would not have the evidence I discussed today without the data Congress mandated that the CDC and CMS collect and disseminate beginning last spring. Large gaps remain. Researchers cannot access facility-specific data on vaccination dates and rates or COVID-19 cases and deaths by race within nursing homes. This precludes rigorous analyses of the effects of vaccines, for example, or a patient-level analysis by race. Consumers who are considering nursing home care also have a right to know what percent of residents and staff have been vaccinated. These data need to be made available quickly.

4. Fourth, the COVID-19 pandemic underscores both the necessity and the limitations of traditional infection control measures and metrics. The American Rescue Plan puts substantial emphasis and funding into improving nursing home infection control practices. It is clear that these practices have been neglected and must be improved. At the same time, this is a solution to a relatively narrow set of problems, a solution that would not have avoided the tragedy of the past year. This brings me to my final and arguably most-important recommendation.

5. Fifth, direct-care staffing in nursing homes needs to be increased. Even perfect infection control procedures will not improve safety of nursing home residents without the staff to implement them. In addition to low pay and few benefits, the job of direct-care nursing home staff is difficult, often dangerous, and emotionally and physically taxing. Add the risk of a potentially fatal infectious disease, and it's amazing they show up and that they stay. Addressing these challenges requires resources.

Despite broad agreement that nursing home understaffing is a problem, there is less agreement about the root causes, and from where the resources should come. Many argue, and I largely agree, that America's long-term care system is underfunded. Nursing homes that rely on Medicaid cannot afford to increase staffing without

additional reimbursement. At the same time, the dominance of for-profit ownership, the growing role of private equity, cross-subsidization from Medicare, and complex ownership arrangements such as related-party transactions make it difficult to see where taxpayer money is being spent, and what profit margins truly are. Greater transparency about these ownership structures is urgently needed. We only know that under current structures, the problem of understaffing has existed for decades; something is not working.

In the short run, understaffed nursing homes cannot solve their shortages when faced with a COVID-19 outbreak. They need direct help in the form of strike teams. In the long run, resolving and moving beyond the debate about root causes of understaffing to improve these jobs and actually increase staffing is essential. This is, admittedly, a much harder problem to solve, but it is an essential one. We can't forget about this problem when the current pandemic is contained. We will never achieve adequate nursing home quality unless we find a way to attract and support the workforce providing the hands-on care. Addressing this challenge is the best way to honor the memory of more than 1,900 nursing home workers and more than 130,000 nursing home residents who have died from COVID thus far. We can't turn back the clock to prevent the tragedy of the past year. We can at least take steps to learn from it.

Thank you for this opportunity to share my thoughts and expertise on the critical issue of the tragedy of the COVID-19 pandemic in nursing homes.

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