U.S. House of Representatives Select Subcommittee on the Coronavirus Crisis "The Devastating Impact of Coronavirus Impact in America's Nursing Homes"

June 11, 2020 Statement of David C. Grabowski, PhD Professor, Department of Health Care Policy Harvard Medical School, Boston, MA

Chairman Clyburn, Ranking Member Scalise, and distinguished members of the House Select Subcommittee on the Coronavirus Crisis: thank you for convening this important conversation to address the impact of the coronavirus on nursing homes.

I want to emphasize a simple point at the outset: It didn't have to be this way.

What do I mean? Much of the negative impact of COVID in nursing homes could have been avoided with increased federal leadership, resources, and attention. Rather than prioritizing the safety of the 1.3 million individuals that live in nursing homes and the staff that care for them, the federal government chose to push the logistics and cost off to the states and the nursing homes. By failing to invest in testing, personal protective equipment and the workforce, the federal government allowed a problem that could have been contained to grow into a national crisis. Now that we are here, it is time for the federal government to make the necessary investment to mitigate the spread of COVID across all US nursing homes. We owe it to our parents and grandparents and the individuals that care for them.

The Crisis

COVID has completely devastated nursing homes in the US.¹ Over half of the 15,000 nursing homes nationwide have reported over 200,000 confirmed and suspected COVID cases among their residents and their staff.² At least 40,000 Americans are reported to have died from COVID in nursing homes and other long-term facilities.³ Just 0.4 percent of the entire population represents nearly half of our country's COVID fatalities. These fatalities can be concentrated in particular facilities. In Massachusetts where I live, roughly 80 nursing homes (20% of facilities statewide) have had 20 or more deaths due to COVID.⁴

Efforts to stem this plague are taking a huge toll. Nursing homes are in all-out lockdown. Visitors are banned. Family members are unable to see their loved ones. Communal dining and activities at the facilities are canceled. Residents are suffering from loneliness and isolation. Many staff and family members have reported increased confusion, depression and anxiety among residents who have been largely isolated in their rooms going on three months.

Staff are frightened given the lack of COVID testing and personal protective equipment (or PPE). And for good reason, new federal COVID data suggest over 600 staff nationally have died from COVID.² We hear a lot about the heroes working in hospitals, but these individuals working in nursing homes, who are making close to minimum wage and risking their health, are heroes too.

Facilities are experiencing severe staff shortages as many individuals are unable or unwilling to work in these conditions. Nursing homes already face notoriously high staff turnover rates and have difficulties attracting staff given low salaries and a demanding work environment. When caregivers themselves get sick, which is difficult to avoid in a nursing home outbreak, they have to stay home for a full quarantine period even in the best-case scenario. How do facilities fill these vacancies as communities cope with the collective impact of COVID? Nursing homes can hire temporary contract staff from an agency, but this is expensive and may prove impossible to sustain. It is extremely difficult to attract workers to a nursing home with an ongoing outbreak.

Why are nursing homes so vulnerable to COVID? Nursing home residents are typically older adults with high levels of chronic illness and impairment. As such, they are particularly susceptible to severe complications and mortality from COVID. Unlike a hospital, a nursing home is someone's home. Often, residents live in close quarters with one another sharing rooms and bathrooms, so it can be quite challenging to move or quarantine residents once they are sick. Moreover, caregivers move from room-to-room providing high-touch care to residents, thus providing a further challenge towards limiting the spread of infections. Some staff also work across multiple nursing homes, leading to the spread of infections from facility to facility.

COVID has also exposed longstanding issues in how nursing home services are structured and financed.⁵ Nursing homes predominantly care for two groups: post-acute Medicare patients and long-stay Medicaid residents. Medicare is a generous payer, while Medicaid often pays below the cost of caring for these frail and medically complex individuals. Thus, the economics of nursing home care hinges on admitting enough short-stay Medicare patients to cross-subsidize the care of long-stay residents paid by Medicaid. Nursing homes that are predominantly dependent upon Medicaid are poorly resourced, have lower staffing levels, are located in the poorest neighborhoods, have the most quality problems and are most likely to close.⁶

Few nursing homes are admitting Medicare patients now. Hospitals are not performing elective procedures like joint replacements so these post-acute patients are not being referred to nursing homes. Indeed, in many locales, hospitals are looking to discharge COVID patients, but many nursing homes are unable to admit them due to an inability to care safely for these patients. The recent Federal nursing home COVID data suggest national occupancy has declined by 10%—or nearly 100,000 residents—since January 1st of this year. Some facilities are already facing bankruptcy due to decreased revenue and the increased costs of managing COVID patients. This issue is exacerbated in many chain-owned nursing homes where ownership and operations are separated. The owner has control of the facility's most valuable financial asset (the real estate), while the operator has a very stringent lease agreement and must continue to make payments in the context of increasing costs and declining revenues.

The Crisis on Top of a Crisis

The U.S. nursing home market has a series of features that lead to persistent low quality. These features were present prior to the pandemic and they have exacerbated the pandemic. As one colleague suggested, COVID is basically a "crisis on top of a crisis." Nursing homes were not operating from a position of strength prior to COVID. The way in which we regulate and oversee

care quality, how we pay for nursing home services, and the inability of many residents to oversee and monitor their care all have contributed to the longstanding crisis in nursing homes.

Payments are Low

When it comes to nursing home care, as the old saying goes, we often get what we pay for. Due in part to the exclusion of long-stay nursing home services from the Medicare benefit, Medicaid is the dominant payer of nursing home services, accounting for 50% of revenues and 70% of bed-days. Medicaid payment rates are typically 70-80% of private-pay prices. In many states, the average "margins" for Medicaid residents are negative, suggesting the cost of treating Medicaid residents exceeds the amount that Medicaid reimburses for their care.⁹

The nearly 15 percent of U.S. nonhospital-based nursing homes that serve predominantly Medicaid residents have fewer nurses, lower occupancy rates, and more health-related deficiencies. ¹⁰ They are more likely to be terminated from the Medicaid/Medicare program, are disproportionately located in the poorest counties, and are more likely to serve African-American residents than are other facilities. Low or negative margins for a substantial portion of a nursing home's population strongly incentivizes facilities to prioritize the labor-saving care delivery approaches described previously in an effort to lower the costs of care. Moreover, a high-Medicaid census is likely to lead to nursing home closures, which can also put seniors at risk. A *New York Times* article last year suggested 440 rural nursing homes have merged or closed over the past decade. ¹¹ The article noted many rural facilities were "losing money as their occupancy rates fall and more of their patients' long-term care is covered by Medicaid, which in many states does not pay enough to keep the lights on."

Quality Regulations are Extensive but Inconsistent

To date, the primary approach to addressing low quality has been regulation. Regulations are extensive and the sanctions, when enforced, can be severe, ranging from fines to probation to closure. In particular, OBRA '87 has shaped oversight for the past 30+ years. OBRA '87 spurred many improvements in that it reduced physical restraints, catheter use, psychotropic medication use, and pressure ulcers. It also increased discussions between residents and care providers about care plans, end-of-life, etc., while increasing staffing levels overall. However, cracks are very clearly evident in the current quality assurance framework. Recent investigative reports have documented substantial lapses in oversight processes across multiple states. ¹²⁻¹⁴

The Trump Administration has scaled back oversight and enforcement of nursing home rules as part of a broader movement to reduce bureaucracy, regulation and government intervention in business. In particular, new guidelines discouraged regulators from levying fines in some situations, such as if an incident were a "one-time" event rather than evidence of a broader problem. The new guidelines also likely resulted in lower fines for many facilities. The administration had also proposed relaxing rules around emergency preparedness. ¹⁶

Infection control is a good example of some of the shortcomings of current facility oversight and enforcement. To ensure adequate infection control, the nursing home survey and certification process includes oversight of facility practices. To participate in Medicare and Medicaid, nursing

homes are (re)certified through a survey process every 12 to 15 months. If a facility does not meet certain health standards set by the federal government, surveyors issue a deficiency citation, categorized into different areas, or F-tags. In the recent survey cycle, the most common citation was infection control (F-tag 880), constituting 5% of all citations.

In a review of infection control of infection control violations over the past three years prior to COVID, 38% of surveys resulted in an infection citation, of which 52% were isolated, 35% were pattern, and 13% were widespread. Based on these data, CMS is spending more time identifying minor issues than focusing on the bigger issues around good infection control. Our nursing home regulatory system often has a "check-box" feel in that the surveyor is simply going through a predetermined list which often feels disconnected from what residents and their advocates want from nursing homes. And, once a violation is identified, the surveyor is not allowed by statute to work with the nursing home to improve care. These activities are left to the Quality Improvement Organizations (QIOs). A large literature suggests fines (or rewards) are ineffective if they are not coupled with education and guidance. We need to tie nursing home regulation to quality improvement, or we will not see an increase in performance.

Lack of Transparency

Although nursing home care is fairly non-technical in nature, monitoring of care can often be difficult for residents and their families. Given the high prevalence of dementia in the nursing home population, the resident is often neither the decision-maker nor able to easily evaluate quality or communicate concerns to family members and staff. Furthermore, the elderly who seek nursing home care are disproportionately the ones with no family support to help them with the decision process. When residents did not have a family member visit during the first month of care, one study found a greater likelihood of dehydration and urinary tract infection in forprofit nursing homes. 18

The Centers for Medicare and Medicaid Services produces the Nursing Home Compare tools on the Medicare.gov website to facilitate better consumer choice by providing data and summary rankings on the quality of care delivered by all eligible providers. ¹⁹ Although Nursing Home Compare was designed to facilitate easy comparisons across facilities on meaningful characteristics, evidence suggests that it is coming up short.

The Nursing Home Compare tool lacks information on many of the provider features that may be of the greatest importance to residents and their families. For example, the website gives no information about the amenities provided by a facility, the physical setting where care is delivered and a patient resides, the culture and care philosophy of the nursing home, the ability of the facility to coordinate with acute and primary care providers, and the availability of physicians and nurse practitioners on site. Accessing these "data" likely requires an in-person visit to a facility, a time-consuming endeavor that requires a proactive family support system, or a word-of-mouth recommendation from a trusted source without competing incentives, which may not exist.

One important aspect of transparency involves ownership of nursing homes. Nearly two-thirds of nursing homes nationally are part of a chain. Historically, these chains were owned and operated

by a single entity. However, in more recent years, ownership has become very complicated with the separation of ownership (real estate) and operations. Typically, the operator has a lease agreement with the owner. Early research did not suggest big quality changes following private investment in nursing homes, ²⁰ but more recent research has suggested quality problems under these ownership arrangements. ²¹

What predicts a nursing home having a COVID outbreak?

The primary goal of federal policy should be to prevent and mitigate COVID outbreaks at nursing homes to save the lives of residents and staff. As such, we need to target government resources to the source of the spread of COVID in nursing homes. If the underlying issue is poor infection control on the part of some "bad apples," one potential policy response might be increased regulation and oversight for these worst performing facilities. But, if the presence of COVID in nursing homes is due to the spread in the surrounding community, this calls for a systemwide government response focused on identifying outbreaks and getting resources to facilities that urgently need them.

In order to determine whether COVID is predominantly concentrated in poor nursing homes or whether it is related to other factors, we recently published a paper on the characteristics of nursing homes with documented COVID cases in 30 states reporting individual facilities affected.²²

What did we find? Location, size of the facility, and having greater percentage of African American residents were the factors most strongly related to having a COVID case. Interestingly, traditional quality metrics such as star rating and having a prior infection control citation were unrelated to having a case. Our finding that facilities with a high percentage of African American residents are more likely to have COVID cases echoes disparities in the pandemic at large and indicates a critical health disparity to be addressed in the response to COVID nursing home outbreaks.

Importantly, our result is supported by separate research projects being conducted by colleagues at Brown University and the University of Chicago using different data and methods.²³ Similarly, more recent work looking at the federal nursing home COVID data suggests that cases are relatively equally distributed across star ratings.²⁴

Why is location of a facility more important than facility quality in predicting COVID outbreaks? The virus often spreads without symptoms. Visitors have not been allowed in most facilities since March, but staff unknowingly bring the virus from the community into the facility. Thus, if COVID is in the community where staff live, COVID is soon to be in the nursing home where they work.

Although infection control procedures are important and many nursing homes have room for improvement in this area, the expectation that good nursing homes can stop transmission while poor nursing homes cannot is unwarranted. Many top-rated nursing homes have been overwhelmed and a lot of poorly rated ones are free of COVID largely because the areas where their staff live have low rates of infection.

Eventually, as we learn more about how to control this virus, differences in quality may emerge such that better nursing homes will be more equipped to adapt to new circumstances and requirements. The evidence does not support this approach yet. This is still a time of crisis when all nursing homes are scrambling to keep ahead of the virus. Regulatory approaches that blame "bad apples" are at best premature and at worst will cause more suffering by misdirecting resources. This is a time to support all our nursing homes.

Potential Policy Solutions

The federal government has not been coordinated in its response to the COVID pandemic in terms of testing, PPE, family visits, support of the workforce, creation of specialized COVID nursing home settings, and data. By pushing the logistics and cost out to states and nursing homes, the federal government has failed the older adults who live in nursing homes and the staff who care for them.

Universal Testing of All Nursing Home Residents and Staff

The secret weapon behind COVID is that it spreads in the absence of any symptoms, even among older nursing home residents.²⁵ We studied a nursing home in Massachusetts that tested 97 residents without any symptoms in early April and 52 tested positive for COVID.²⁶ This is why, if we don't immediately begin universal testing of nursing home staff and residents immediately, COVID will eventually be in nearly every nursing home in the country where COVID is present in the surrounding community. By the time any staff member or resident develops symptoms, it is too late.

Several states have begun implementing universal testing of staff and residents.²⁷ This is a step in the right direction, but we need federal leadership. This excerpt from a New York Times article earlier this week sums up the challenges nursing homes have faced in terms of COVID testing with "the lack of federal coordination and a patchwork of state policies."²⁸

Like so many aspects of the U.S. response to the pandemic, the effort has been stymied by a lack of federal coordination and a patchwork of state policies. In California, nursing homes <u>have been given conflicting instructions</u> from local and state governments. Some states, like Ohio, are <u>sending in the National Guard</u> to help administer tests. Others, <u>like New Jersey</u>, require testing but have pushed the logistics and costs onto the nursing homes. Still other states, <u>like Alabama</u>, have not issued any requirements for testing.

Even at the federal level, different agencies are offering conflicting advice. C.M.S., the oversight agency, <u>wants nursing homes to test workers weekly</u>, but has not made it a requirement. The Centers for Disease Control and Prevention, however, has said that facilities <u>can adjust how often they test workers</u> based on the local prevalence of coronavirus.

Rather than pushing the "logistics and costs" on to states or the nursing homes, the federal government should own this issue. The federal government should set consistent policies across all US nursing homes. The federal government should implement and cover universal testing of

staff and residents in all US nursing homes. And this can't be a one-off. We need a surveillance program that regularly tests staff and residents in order to identify new cases as they emerge.

In the absence of testing, nursing home staff are in a very fragile state. They have no idea what they are facing when they come to work each day. To complement testing, the federal government can take further steps to support nursing home staff struggling to keep themselves and their patients safe.

Personal Protective Equipment

Nursing home staff need access to PPE like gowns, gloves and masks. Even in nursing homes with PPE, it is often inadequate in that nursing homes are reusing supplies across residents and many nursing homes do not have access to N95 masks and left using lower-grade masks. It is a national disgrace that staff are assisting residents with tasks like eating and using the bathroom without adequate protection.²⁹

The recent COVID relief bill passed by the Senate includes a \$75 billion investment in PPE, although it is unclear what share will go to nursing homes. The Federal government also announced that it will provide one or two weeks of PPE to every nursing home in the country. This is a good start, but nursing homes will require PPE for many more weeks over the course of this crisis. Rather than have nursing homes bid against hospitals and other providers to acquire PPE, the federal government should provide PPE directly to nursing homes. Similar to testing, we should not depend on states or nursing homes to acquire PPE.

Family Visitation with PPE and Testing

Nursing homes function better when family are involved in the care of their loved ones. Our research has supported the idea that care improves when a family member visits. ³¹ Indeed, a family member is often less a visitor and more a member of the care team. Family members can assist with care tasks like feeding and dressing. They also know their loved ones better than anyone and can indicate to staff when something seems off. Finally, they are another set of eyes on the quality of care that being delivered. A large share of overall complaints with care are filed by family members. ³²

Because of the lack of PPE and testing, most US nursing homes have been closed to family since March. Massachusetts is the first state that I am aware of to begin to allow outdoor visits with family members in a supervised format that meets a set of criteria. As nursing homes obtain greater access to PPE and testing, we need to reintroduce family members into facilities. There is no reason that family cannot be tested and trained in PPE the same way that as staff. Indeed, I recently heard of an older gentleman who could not visit his wife who was in a nursing home, but his neighbor who volunteers at the facility was able to check-in on her. The idea that a facility can train volunteers in safe practices but not family does not make sense. With testing and PPE are in place, it is time to open up our nursing homes again while maintaining safety and strong infection control.

Workforce Support

Staff shortages are also a key problem.³⁴ They have long been an issue for nursing homes,³⁵ but the problem has been magnified with staff getting COVID or otherwise being unable to work.³⁶ Supporting and growing the direct care workforce is essential. There are three core components here: 1) we need to match all the out-of-work individuals to job openings in nursing homes; 2) we need to get them all trained; and 3) we need to incentivize new workers and retain existing ones.

Nursing homes need higher reimbursement for COVID cases to prevent layoffs and maintain staffing levels. Staff also deserve a wage that is commensurate with the risks they are taking.³⁷ The federal government needs to put dollars in place that directly flow to workers in terms of hazard pay and other benefits. Many nursing homes are owned by real estate companies and other entities. We need to make sure federal dollars are going into the pockets of our workers and not these real estate investment companies.

Nursing homes have a large number of vacancies right now due to COVID. At the same time, we have a level of unemployment that is unprecedented in modern history. Thus, a key part of the battle against COVID is to match and train workers to take the needed positions in SNFs. COVID is not likely to disappear from nursing homes over the next few months even though states may reopen for business, but rather they may be grappling with the virus for at least the couple of years. As such, we need a robust strategy to quickly match unemployed workers to these jobs and to continue to develop a pipeline of trained workers.

Specialized COVID-Only Settings for Post-Hospital Patients

The federal government also needs to support the establishment of specialized nursing homes to care for COVID patients who are discharged from the hospital and cannot receive care at existing facilities while still potentially contagious. Some nursing homes are well-equipped to care safely for recovering COVID patients, but some markets will have a shortage of these facilities. In these instances, specialized environments could potentially take several forms. One approach would be to dedicate certain nursing homes in each market to be "centers of excellence" specializing in—and exclusively assuming—the care of patients recovering from COVID. Because these organizations would only care for these patients, the risk of infecting other patients could be minimized. Staff would need to receive appropriate safety equipment and training to provide this care safely.

Certain types of facilities such as hospital-based nursing homes may be well-suited to adopt this specialized role initially because of their existing infrastructure for infection control and their generally higher capacity to care for complex patients. In other local markets, temporary capacity will need to be built due to potential shortages. Rural hospitals, many of which have occupancy rates less than 50% and some of which have nursing home "swing bed" capacity, could be important sites to provide post-hospital care. Closed nursing homes and hospitals could be retrofit, as was done recently in Connecticut, to serve as temporary nursing homes.

Data Transparency

One major failure by the federal government was the slowness and incompleteness with which it put together data on which facilities had COVID cases and fatalities. This information is essential from a public health perspective if we are going to mitigate the spread of COVID. Early on during the pandemic, the policymakers were basically flying blind as to the scale of the problem in nursing homes. It wasn't until we could piece together data from a subset of states that were reporting this information that we began to learn about the virus in nursing homes. However, a number of states never reported information and others reported very limited data.

In May, the federal government finally released the national data on COVID in nursing homes. However, the reporting of cases and fatalities is optional prior to May 8th. As a result, we will not have a universal record of all cases and fatalities in nursing homes. The federal data currently has a number of missing records (~20% of facilities) and observers have identified inaccuracies in the data.^{7,40} The investment in complete and accurate COVID data is essential if we are going to understand how to target resources and attention. If a large share of the COVID-related fatalities is occurring in nursing homes, then they merit a large share of federal attention and spending.

Summary

All of the policy measures outlined above are going to take Federal resources. Much of the impact of COVID on nursing homes could have been avoided if we had begun this investment at the start of the pandemic. We cannot delay any longer. Every nursing home in the country needs access to quick and accurate testing, adequate PPE, and a strong workforce. We need to continue to invest in specialized nursing home settings for post-hospital patients. We need to get families back into nursing homes with their loved ones as soon as is safely possible. Finally, we need to continue to improve the data infrastructure around tracking of COVID cases and fatalities.

Thank you.

References

- 1. Barnett ML, Grabowski DC. Nursing Homes Are Ground Zero for COVID-19 Pandemic. *JAMA Health Forum.* 2020.
- 2. Centers for Medicare & Medicaid Services. COVID-19 Nursing Home Data. 2020; https://data.cms.gov/browse?category=Special%20Programs%2FInitiatives%20-%20COVID-19%20Nursing%20Home%20Data. Accessed June 10, 2020.
- 3. Chidambaram P. State Reporting of Cases and Deaths Due to COVID-19 in Long-Term Care Facilities. *Kaiser Family Foundation Issue Brief* 2020; https://www.kff.org/medicaid/issue-brief/state-reporting-of-cases-and-deaths-due-to-covid-19-in-long-term-care-facilities/. Accessed June 9, 2020.
- 4. Weisman R, Ostriker R. For the first time, state divulges death toll by nursing home, and more than 80 have 20 or more COVID-19 deaths *Boston Globe* 2020; https://www.bostonglobe.com/2020/05/27/metro/first-time-state-divulges-death-toll-by-nursing-home-more-than-80-have-20-or-more-covid-19-deaths/. Accessed June 10, 2020.
- 5. Grabowski DC, Mor V. Nursing Home Care in Crisis in the Wake of COVID-19. *JAMA*. 2020.
- 6. Mor V, Zinn J, Angelelli J, Teno JM, Miller SC. Driven to tiers: socioeconomic and racial disparities in the quality of nursing home care. *Milbank Q.* 2004;82(2):227-256.
- 7. Weaver C, Mathews AW, Kamp J. U.S. Nursing Home Population Shrank Roughly 10% This Year *Wall Street Journal* 2020; https://www.wsj.com/articles/u-s-nursing-home-population-shrank-roughly-10-this-year-11591315220. Accessed June 10, 2020.
- 8. Israelsen-Hartley S. Will long-term care be the same after COVID-19? *Deseret News* 2020; https://www.deseret.com/indepth/2020/6/7/21258676/coronavirus-utah-nursing-homes-long-term-care-pandemic-covid-19-assisted-living-death-cna-nurses. Accessed June 10, 2020.
- 9. Medicare Payment Advisory Commission. *Report to the Congress: Medicare Payment Policy*. Washington, DC March 2018.
- 10. Mor V, Zinn J, Angelelli J, Teno JM, Miller SC. Driven to tiers: socioeconomic and racial disparities in the quality of nursing home care. *Milbank Q.* 2004;82(2):227-256.
- 11. Healy J. Nursing Homes Are Closing Across Rural America, Scattering Residents. *New York Times*. March 4, 2019.
- 12. Office of Inspector General. Early Alert: The Centers for Medicare & Medicaid Services Has Inadequate Procedures To Ensure That Incidents of Potential Abuse or Neglect at Skilled Nursing Facilities Are Identified and Reported in Accordance With Applicable Requirements (A-01-17-00504) 2017; https://oig.hhs.gov/oas/reports/region1/11700504.pdf. Accessed March 4, 2019.
- 13. US. Government Accountability Office. *Nursing Home Quality: Continued Improvements Needed in CMS's Data and Oversight.* Washington, DC2018.
- 14. Rau J. 'It's Almost Like a Ghost Town.' Most Nursing Homes Overstated Staffing for Years. *The New York Times* 2018.
- 15. Rau J. Trump Administration Eases Nursing Home Fines in Victory for Industry. *New York Times*. December 24, 2017.
- 16. Centers for Medicare & Medicaid Services. Fact sheet: Medicare and Medicaid Programs; Proposed Regulatory Provisions to Promote Program Efficiency, Transparency, and Burden Reduction 2018; https://www.cms.gov/newsroom/fact-

- <u>sheets/medicare-and-medicaid-programs-proposed-regulatory-provisions-promote-program-efficiency-0</u>. Accessed March 4, 2019.
- 17. Norton EC. Long-Term Care. In: Culyer AJ, Newhouse JP, eds. *Handbook of health Economics*. Amsterdam: Elsevier Science, North-Holland.; 2000:955-994.
- 18. Chou SY. Asymmetric information, ownership and quality of care: an empirical analysis of nursing homes. *J Health Econ.* 2002;21(2):293-311.
- 19. McGarry BE, Grabowski DC. Helping Patients Make More Informed Postacute Care Choices. *Health Affairs Blog* 2017.
- 20. Stevenson DG, Grabowski DC. Private equity investment and nursing home care: is it a big deal? *Health Affairs (Millwood)*. 2008;27(5):1399-1408.
- 21. Gupta A, Howell S, Yannelis C, Gupta A. *Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes.* 2020.
- 22. Abrams HR, Loomer L, Gandhi A, Grabowski DC. Characteristics of U.S. Nursing Homes with COVID-19 Cases. *J Am Geriatr Soc.* 2020.
- 23. Gleckman H. Two Strong Signals That A Nursing Home Is Likely To Have Covid-19: Its Location And The Race Of Its Residents. *Forbes* 2020; <a href="https://www.forbes.com/sites/howardgleckman/2020/06/01/two-strong-signals-that-a-nursing-home-is-likely-to-have-covid-19-its-location-and-the-race-of-its-residents/#39dd467a2707. Accessed June 10, 2020.
- 24. Christ G. CMS Star Ratings Don't Indicate COVID-19 Cases, Deaths, Data Show. *Modern Healthcare* 2020; https://www.modernhealthcare.com/safety-quality/cms-star-ratings-dont-indicate-covid-19-cases-deaths-data-show. Accessed June 10, 2020.
- 25. Gandhi M, Yokoe DS, Havlir DV. Asymptomatic Transmission, the Achilles' Heel of Current Strategies to Control Covid-19. *N Engl J Med.* 2020;382(22):2158-2160.
- 26. Goldberg SA, Pu CT, Thompson RW, Mark E, Sequist TD, Grabowski DC. Asymptomatic Spread of COVID-19 in 97 Patients at a Skilled Nursing Facility. *Journal of the American Medical Directors Association*. 2020.
- Condon B, Sedensky M, Musain J. 11,000 deaths: Ravaged nursing homes plead for more testing. *Associated Press* 2020; https://apnews.com/e34b42d996968cf9fa0ef85697418b01. Accessed June 10, 2020.
- 28. Thomas K. Testing Nursing Home Workers Can Help Stop Coronavirus. But Who Should Pay? *New York Times* 2020; https://www.nytimes.com/2020/06/09/health/testing-coronavirus-nursing-homes-workers.html?smid=tw-share. Accessed June 10, 2020.
- 29. Khimm S, Strickler L. Nursing homes overwhelmed by coronavirus: 'It is impossible for us to stop the spread'. *NBC News* 2020; https://www.nbcnews.com/news/us-news/nursing-homes-overwhelmed-coronavirus-it-impossible-us-stop-spread-n1174171. Accessed June 10, 2020.
- 30. Bowers LA, Bonnvisuto K. \$484 billion COVID-19 relief bill contains \$75 billion for PPE, but will senior living see any of it? . *McKnight's Senior Living* 2020; https://www.mcknightsseniorliving.com/home/news/484-billion-covid-19-relief-bill-contains-75-billion-for-ppe-but-will-senior-living-see-any-of-it/. Accessed June 10, 2020.
- 31. Grabowski DC, Mitchell SL. Family oversight and the quality of nursing home care for residents with advanced dementia. *Med Care*. 2009;47(5):568-574.
- 32. Stevenson DG. Nursing home consumer complaints and their potential role in assessing quality of care. *Med Care*. 2005;43(2):102-111.

- 33. Murphy S. State issues new guidelines for visits to nursing homes. *Boston Globe* 2020; https://www.bostonglobe.com/2020/06/02/metro/state-issues-new-guidelines-visits-nursing-homes/. Accessed June 10, 2020.
- 34. Spanko A. Nursing Home Staffing Strain Could Hit 'High Point' This Week as COVID-19 Crisis Rages. *Skilled Nursing News* 2020; https://skillednursingnews.com/2020/04/nursing-home-staffing-strain-could-hit-high-point-this-week-as-covid-19-crisis-rages/. Accessed April 27., 2020.
- 35. Geng F, Stevenson DG, Grabowski DC. Daily Nursing Home Staffing Levels Highly Variable, Often Below CMS Expectations. *Health Aff (Millwood)*. 2019;38(7):1095-1100.
- 36. Mossburg C. A California nursing home was evacuated after its staff didn't show up. *CNN* 2020; https://www.cnn.com/2020/04/08/us/california-nursing-home-evacuated/index.html. Accessed June 10, 2020.
- 37. Wood N. Health-care workers deserve hazard pay during covid-19 pandemic. Washington Post 2020; https://www.washingtonpost.com/health/health-care-workers-deserve-hazard-pay-during-covid-19-pandemic/2020/04/03/6d552ea2-742f-11ea-a9bd-9f8b593300d0 story.html. Accessed June 10, 2020.
- 38. Grabowski DC, Joynt Maddox KE. Postacute Care Preparedness for COVID-19: Thinking Ahead. *JAMA*. 2020.
- 39. Tumlinson A, Altman W, Glaudemans J, Gleckman H, Grabowski DC. Post-Acute Care Preparedness in a COVID-19 World. *J Am Geriatr Soc.* 2020.
- 40. Crimaldi L, Murphy S. Months into pandemic, number of deaths of nursing home workers is unclear. *Boston Globe* 2020; https://www.bostonglobe.com/2020/06/09/metro/state-disputes-federal-report-deaths-mass-nursing-home-workers/. Accessed June 10, 2020.