The Short- and Long-term Effects of the COVID-19 Pandemic on Nursing Home Use, Quality, and Older Adults' Health

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Background- The direct health impacts of the COVID-19 cases at U.S. nursing homes have been well-documented. COVID-19 has been responsible for the death of more than 133,000 residents and nearly 2,000 staff members. Much less is understood about the broader impacts of this generational event on nursing homes, including its effects on staffing, the type and quality of care delivered to existing residents, older adults' access to nursing home services (including long-term personal care and skilled post-acute rehabilitation), and the financial health and performance of facilities. Furthermore, the long-run consequences of the pandemic along these dimensions have the potential to fundamentally alter the way long-term care services are provided to frail older adults and substantially worsen long-standing disparities in this sector. This proposal will examine the short- and long-term effects of COVID-19 on nursing home use and patient outcomes to fill this critical knowledge gap.

Objective- To examine both the short-term shocks and long-run shifts in nursing home utilization resulting from the pandemic. This includes changes in occupancy, changes in the composition of patients (e.g., share of short and long-stay residents), and changes in the composition and amount of care provided (e.g., rehab and long-term skilled nursing care). We will study how these affect quality and access to care—with a particular focus on the care of socially and economically vulnerable older adults—and corresponding patient health outcomes. Finally, we will study the impact on the financial health and stability of both nursing homes and related substitutes (e.g., home health).

Approach- This proposal will combine multiple data sources, including nursing home assessments (MDS), Medicare claims (inpatient, outpatient, and home health and enrollment files), home health care assessments (OASIS), and nursing home health inspection surveys and cost reports. Our study team also has unique access to Payroll Based Journal data detailing the daily shifts worked by each individual nursing home staff member throughout the pandemic. Multiple publicly available data sources will be used to ascertain COVID-19 burden both within nursing homes and their surrounding communities.

Our analyses will proceed in two stages. First, we will perform a descriptive analysis of shocks to utilization, staffing, and quality that occurred during the pandemic to understand the magnitudes of these shocks, whether their burden was borne disproportionately by certain groups (e.g., along race/ethnicity, geographic region, Medicaid status, income, education, etc.), and to what degree they have attenuated with the widespread availability of vaccines.

Second, we will examine the impact of pandemic-related changes in nursing homes access and quality on individual-level health outcomes. Analyses will be performed on the full sample of Medicare beneficiaries and a sample of beneficiaries with a likely need for nursing-home-level care (as identified by observable characteristics including age, hospital use, disability status, and claims history consistent with functional or cognitive impairments). We will exploit variation in the degree to which beneficiaries' nearby local nursing homes were affected by the pandemic. (Formally, this could be implemented using a differential-distance instrument.) Importantly, in addition to studying the care received by patients who were discharged to or residing in nursing homes before, during, and after the pandemic, we will also study Medicare-enrollees who went without care or pursued alternative forms of care—such as home care— to understand the health impacts of such substitution.

Expected outcomes- Results from our proposal will provide policymakers with empirical evidence about nursing homes' recovery from the pandemic and the implications for older adults' health outcomes. They will inform public funding decisions, including what nursing homes to target with public spending and the need to increase the availability of home and community-based services to meet consumer demand.

Study Team- Our team has expertise in research on the delivery of care in U.S. nursing homes. Importantly, we have also led a number of studies examining the impact of the COVID-19 pandemic on nursing homes, including examinations of the facility characteristics that predict COVID-19 outbreaks, the role of staff in COVID-19 spread, the availability of critical resources like personal protective equipment and rapid COVID-19 testing, and the impact of outbreaks on nursing home staffing patterns. We have published 6 peer-reviewed papers focused on COVID-19 in nursing homes with 6 more working papers in production or under review. We have worked on 4 of these papers together. We have extensive experience working together and using the datasets and methods proposed here.