Written Testimony of Susan Feng Lu,

Gerald Lyles Rising Star Professor of Management

Mitchell E. Daniels, Jr. School of Business & Regenstrief Center for Healthcare Engineering

Purdue University

Residents at Risk: The Strained Nursing Home Inspection System and the Need to Improve Oversight, Transparency, and Accountability

United States Senate Special Committee on Aging

May 18, 2023

Thank you, Chairman Casey, Ranking Member Braun, and esteemed members of the Committee, for granting me the invaluable opportunity to testify on the regulations and operations of nursing homes, specifically in relation to older adults and people with disabilities.

My name is Susan F. Lu, and as the only child in my family, I have long contemplated how I could best provide exceptional care for my parents as they age. In my pursuit of this goal, I was reminded of an old saying from my cultural background, emphasizing the importance of honoring the elderly as we would our own parents and extending our care to others' children as if they were our own. It was clear to me that the challenges surrounding aging would be of utmost significance for numerous countries, including the United States, China, Japan, and beyond. As the baby boomer generation in the U.S. rapidly approaches the age of 65 and older, the demand for comprehensive elderly care services is set to escalate. Thus, I embarked on a journey that led me to choose nursing home quality disclosure as the focal point of my dissertation, dedicating nearly two decades to researching various facets of this industry. Over time, assisting the elderly to get high-quality care has become the very mission of my life.

As a researcher trained in economics and operations management, my overarching objectives have consistently revolved around minimizing costs, maximizing social welfare, and efficiently and effectively allocating resources. The management of operational efficiency within healthcare delivery presents a formidable challenge for many countries grappling with aging populations and insufficient healthcare resources. Leveraging the tools of game theory, econometrics, and optimization methodologies, I have delved into the drivers of healthcare delivery performance. My aim has been to comprehend the effects of public policies and technological innovations on the operational and managerial aspects of elderly care.

Today, I stand before you as an expert in nursing homes, ready to offer insights into potential strategies that could incentivize improvements in the quality of care provided by these facilities. Furthermore, I seek to facilitate easy access to nursing home care for older adults and people with disabilities. In pursuit of these goals, I am pleased to provide expert research support from three distinct angles: quality disclosure, staffing, and ownership.

Quality Disclosure

Ensuring information transparency between medical providers and consumers is vital for delivering quality care. The inherent challenge lies in the fact that older adults often struggle to accurately determine the quality of care before receiving it, and even evaluating it retrospectively can be problematic. Publicly disclosing quality information about individual nursing homes can effectively mitigate this information asymmetry, facilitating consumer identification of high-quality providers, reducing search costs, and enhancing firms' responsiveness to quality through increased demand elasticity.

Nevertheless, it is essential to acknowledge that quality disclosure does not guarantee immediate quality improvement. Two major concerns arise when making quality information transparent. Firstly, medical providers may selectively choose patients to bolster their scores on report cards, a phenomenon known as "cherry picking" (Dranove et al., 2003). Secondly, providers may focus solely on excelling along the disclosed quality dimensions, neglecting the undisclosed ones—a practice referred to as "teaching to the test" (Lu, 2012).

The Center for Medicare and Medicaid Services (CMS) has made commendable efforts in collecting quality information from nursing homes through state inspection teams. In 2008, the CMS introduced the five-star quality rating system (FSQRS), which heavily relies on deficiency citations identified by state inspectors. Existing literature, including my own research, provides compelling evidence that quality disclosure significantly influences consumer demand, thereby motivating nursing homes to improve their quality of care. Werner, Konetzka, and Polsky (2016) discovered that one-star facilities experienced a decline in market share, while five-star facilities gained traction. Zhao (2016) demonstrated that the FSQRS encourages nursing homes in competitive markets to enhance their quality standards. Moreover, my research with Brickley and Wedig (2020) illustrated that the FSQRS prompted a strategic shift in nursing homes, as they began competing to attain higher ratings, thereby impacting senior management retention decisions.

In a surprising turn of events, our recent research revealed that social media platforms, particularly Yelp, exert a dominant influence over government report cards in shaping nursing home demand (Li, Lu, and Lu, 2023). Notably, this dominance of Yelp ratings over government ratings was observed primarily in markets with high Yelp penetration or markets characterized by low to moderate levels of consumer education. While higher Yelp ratings correlated with increased net incomes for nursing homes, we found limited evidence indicating that these ratings motivated quality improvements among the facilities.

In light of these findings, we respectfully propose that the CMS recognizes social media platforms as valuable sources of information and collaborates with reputable platforms like Yelp to promote

public awareness of government report cards, such as Nursing Home Compare. Similar endeavors have yielded positive outcomes in the restaurant industry, where displaying government hygiene scores on Yelp resulted in a significant decrease in consumers' willingness to patronize restaurants with low hygiene scores (Dai and Luca, 2020). By embracing the potential of social media platforms, we can leverage their influence to drive informed decision-making and positively shape the choices individuals make regarding nursing home care.

Staffing

Staffing decisions in healthcare facilities hold immense significance, as they directly impact both costs and patient outcomes. However, due to a variety of factors—regulatory, behavioral, and technological—making the right staffing choices can often be a complex undertaking.

For instance, the healthcare sector has witnessed widespread reports of nurse burnout resulting from excessive overtime usage. In response, several states have implemented mandatory overtime laws. However, in Lu and Lu's (2017) research, we discovered that despite the good intentions behind such policies, they inadvertently led to a decline in the quality of care provided by nursing homes. The imposition of caps on mandatory overtime hours prompted nursing homes to make unfavorable staffing adjustments, such as substituting full-time nurses' overtime hours with those offered by contract nurses to compensate for the lost overtime hours and reducing the hiring of full-time nurses to control costs. Regrettably, these changes ultimately resulted in a severe deterioration of care quality in nursing homes. Thus, when enforcing staffing regulations, it becomes crucial to consider both the *systemic* effects (e.g., healthcare facility responses) and *individual* effects (e.g., nurse responses) to ensure comprehensive and effective outcomes.

Taking an alternative perspective on staffing, Lu, Rui, and Seidmann (2018) discovered that, unlike in many other industries, the adoption of automated technology in healthcare systems may not lead to a direct substitution of staffing resources. Our findings indicated that nurse staffing levels decreased in high-end nursing homes but increased in low-end ones after the implementation of automation technology. This study sheds light on the interplay of two competing effects of automation: the substitution of technology for labor and the leveraging of complementarity between technology and labor. Moreover, it offers practitioners two distinct strategies to consider upon adopting automation technology: a revenue expansion strategy involving increased staffing and a cost reduction strategy involving decreased staffing. The optimal approach depends on a firm's vertical position within the local market.

While my research primarily focuses on the allocation of nurse resources and maximizing nurse utilization within a nursing home budget, it is important to address the challenges stemming from nurse shortages in the labor market.

Currently, two widely accepted approaches exist to tackle this issue. The first approach aims to enhance the appeal of the nursing profession. Measures include increasing wages and benefits, offering flexible work schedules, and improving working conditions, among others. These regulations may undoubtedly enhance the attractiveness of choosing nursing as a career from an *individual* perspective. However, from a *systemic* viewpoint, they can significantly escalate

operating costs for nursing homes, potentially forcing them out of the market due to an inability to break even. Consequently, this may exacerbate the issue of excess demand within nursing homes and lead to longer waiting times for elderly individuals with Medicaid insurance to access nursing home care (Ching, Hayashi, and Wang, 2015). The second approach involves encouraging immigration of nurses. Nursing homes can explore the recruitment of qualified nurses from other countries. However, this necessitates careful consideration of visa regulations and cultural differences.

Given the urgent need to tackle nurse shortages, it is essential to explore innovative ideas and have access to comprehensive data on individual nurses to evaluate and address these challenges effectively. Access to diverse dimensions of individual nurse data, including working conditions, factors influencing work-life balance, employment history, demographics, education, and geographic distribution, is crucial. Such data provides us with valuable insights into the dynamics of the nurse workforce, empowering evidence-based decision-making and enabling the development of targeted strategies. By leveraging this data, we can proactively address the challenges faced by nurses, optimize the delivery of high-quality healthcare services, and create an environment that fosters nurse well-being and satisfaction.

Ownership

- Ownership Conversion

In recent times, there has been growing concern regarding the potential drawbacks associated with ownership conversions from non-profits to for-profits and those facilities acquired by private equity firms. However, this area of research remains relatively underexplored. Nevertheless, my research team is keenly aware of the mergers and acquisitions issue and has conducted relevant investigations.

Specifically, we have examined the impact of nonprofit ownership conversion on nursing homes and have found that those facing higher levels of financial distress are more likely to undergo non-profit (NP) to for-profit (FP) conversions (Lu and Lu, 2021). This study highlights the need for policymakers to enhance oversight over NP to FP conversions, particularly in nursing homes that exhibit significant financial distress prior to the conversion. Moreover, our findings suggest that managers should avoid the pitfall of reducing registered nurse staffing levels and instead focus on streamlining overhead operations. This approach allows for increased operational efficiency without compromising the quality of care provided.

By acknowledging the potential risks associated with ownership conversions and implementing targeted oversight, policymakers can safeguard the interests of residents in nursing homes. I am confident that with continued research and concerted efforts from both policymakers and industry professionals, we can effectively address the challenges and complexities associated with ownership changes in nursing homes.

- Ownership Disclosure

In the second half of the 1990s, states with plaintiff-friendly tort environments experienced a sharp increase in lawsuits alleging patient neglect or abuse. This concerning trend prompted our

research (Brickley, Lu, and Wedig, 2017) to examine the asset-shielding practices that emerged between 1998 and 2004 in these states. Our research highlighted two notable trends: (1) large chains selling homes to smaller, more judgment-proof owners, and (2) a reduced inclination to brand chain-owned units with names directly linking them to the central corporation or sister units.

The disclosure of ownership to the public serves as a powerful mechanism to address these asset-shielding behaviors among large chains and enforce accountability at the unit level. By making ownership information transparent, the negative reputation and consequences of inadequate care within a single unit can spill over to the broader ownership entity. This spillover effect significantly magnifies the impact of negative reputational events and provides a strong incentive for large chains to actively monitor the quality of care across all their units.

Further, it is imperative to recognize the significance of ongoing research and analysis surrounding nursing home acquisition by private equity firms (PEs), which heavily relies on the availability of ownership information. By actively staying informed about the latest developments in ownership changes, we can gain valuable insights into the post-acquisition behavior of PEs and take collective action towards enhancing the quality of care and ensuring the overall well-being of nursing home residents. Through a comprehensive understanding of these dynamics, we can foster an environment of accountability, transparency, and continuous improvement within the nursing home industry.

Conclusion

Thank you for granting me the opportunity to discuss my extensive research on nursing homes and the critical factors of quality, cost, and access in elderly care. The implementation of quality disclosure has undeniably proven to be effective in ensuring that nursing homes consistently meet and surpass minimum quality standards. However, the persistent issue of nurse shortage remains a pressing challenge affecting nursing homes. Furthermore, we must remain cautious of potential risks associated with ownership conversions from non-profits to for-profits and the increasing acquisition of nursing homes by PEs. These developments necessitate a collective exploration of creative ideas and innovative approaches to support and revitalize the nursing home industry.

I sincerely appreciate your leadership and commitment to addressing the needs of older adults and people with disabilities. In conclusion, I express my utmost gratitude for the opportunity to address this esteemed committee, and I hope that through collaborative efforts and thoughtful policies, we can create an environment where nursing homes thrive as compassionate and reliable sources of care for our aging population. Thank you.

References:

Brickley, J. A., S. F. Lu and G. J. Wedig. 2017. "Malpractice Laws and Incentives to Shield Assets: Evidence from Nursing Homes." Journal of Empirical Legal Studies, 14(2), 301-32.

Brickley, J. A., Lu, S. F., and Wedig, G. J. "Five-Star Ratings and Managerial Turnover: Evidence from the Nursing Home Industry", 2021, Journal of Law, Economics, and Organization, 37(2), 278-313.

Ching, A. T., Hayashi, F., & Wang, H. "Quantifying the impacts of limited supply: The case of nursing homes", 2015, International Economic Review, 56(4), 1291-1322.

Dai, W., and Luca, M., "Digitizing disclosure: The case of restaurant hygiene scores", 2020, American Economic Journal: Microeconomics, 12(2), 41-59.

Dranove D, Kessler D, McClellan M, Satterthwaite M, "Is more information better? The effects of "report cards" on health care providers", 2003, Journal of Political Economics, 111(3):555–588.

Li, Y., Lu, L. X., & Lu, S. F. "Does Social Media Dominate Government Report Cards in Influencing Nursing Home Demand?", 2023, Manufacturing & Service Operations Management, forthcoming

Lu, S.F. "Multitasking, Information Disclosure, and Product Quality: Evidence from Nursing Homes.", 2012, Journal of Economics & Management Strategy, 21(3), 673-705.

Lu, S.F. and L.X. Lu. "Do Mandatory Overtime Laws Improve Quality? Staffing and Operational Flexibility in Nursing Homes", 2017, Management Science, 63(11), 3566–3585.

Lu, S.F., H. Rui and A. Seidmann. "Does Technology Substitute for Nurses? Staffing Decisions in Nursing Homes", 2018, Management Science, 64(4), 1842-1859

Lu, L. X., and Lu, S. F. "Does nonprofit ownership matter for firm performance? Financial distress and ownership conversion of nursing homes", 2022, Management Science, 68(7), 5127-5145.

Werner RM, Norton EC, Konetzka RT, Polsky D "Do consumers respond to publicly reported quality information? Evidence from nursing homes", 2012, Journal of Health Economics. 31(1):50–61.

Zhao, X. "Competition, information, and quality: Evidence from nursing homes", 2016, Journal of health economics, 49, 136-152.