# Nursing homes embrace robotic technologies to tackle employee turnover and enhance patient care



In light of rising employee turnover rates and an increasingly ageing population, nursing homes have begun to incorporate robotic technologies to assist with various care tasks. A new study led by Yong Suk Lee, an associate professor at the University of Notre Dame's Keough School of Global Affairs, sheds light on the implications of this robotic adoption, highlighting its effects on both employee retention and patient care quality. The research was featured in the journal *Labour Economics* and marks a significant shift from the traditional focus on robots in manufacturing to their application in the long-term care sector.

The impetus for this research stems from Japan's experience as a "super-aging society," which serves as a precursor for potential future trends in other countries, including the United States. In the past year, over 57 million residents aged 65 and older were recorded in the U.S., with projections suggesting this figure could rise to 88.5 million by 2050, as indicated by the Census Bureau. Given the growing demographic of senior citizens, Lee noted the necessity for societies to adapt to the realities of declining populations and diminishing numbers of working-age individuals.

The study primarily examined three distinct types of robots implemented in assisted living facilities:

1. **Transfer Robots** - Utilised by nurses to assist in lifting and moving patients safely.
2. **Mobility Robots** - Designed for patient use, these robots aid in movement and personal hygiene.
3. **Monitoring and Communication Robots** - These include advanced technologies capable of tracking patient data and alerting care providers.

Lee's research demonstrates that the integration of robots correlates positively with employee retention rates within nursing homes, an area of particular concern given the physically demanding nature of the work, which often leads to high turnover. "We found that robot adoption complements care workers by reducing quit rates," Lee said. Furthermore, while the overall employment figures in nursing homes increased with robotic assistance, the impact varied among workers, showing a heightened demand for part-time and less experienced staff, in contrast to more seasoned workers.

In terms of patient care, nursing homes employing robotic technologies reported significant improvements. The study noted a reduction in both the use of patient restraints and the incidence of pressure ulcers (commonly referred to as bedsores), two critical metrics of patient wellbeing in long-term care environments. By alleviating the physical burdens typically shouldered by caregiving staff, robots afford workers the opportunity to devote more time to tasks that necessitate human interaction and emotional engagement. "Robots can improve productivity by shifting the tasks performed by care workers to those involving human touch, empathy and dexterity," Lee articulated. This transition is expected to enhance the overall quality of patient care delivered in these facilities.

Funding for this comprehensive research was provided by various institutions, including Stanford University's Shorenstein Asia-Pacific Research Center and the Japan Society for the Promotion of Science, among others. Alongside Lee, the study was co-authored by Toshiaki Iizuka from the University of Tokyo and Karen Eggleston from Stanford University.

The findings from this study are integral to ongoing discussions about the intersection of technology, employee dynamics and the future of work. As societies grapple with an ageing population, Lee's research aims to inform the long-term care industry, offering insights into how technology can reshape caregiving practices while examining its broader implications for labour and workplace structure. "This research provides critical insights into how societies can successfully navigate the challenges of caring for ageing populations," Lee stated.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://keough.nd.edu/news-and-events/news/using-robots-in-nursing-homes-linked-to-higher-employee-retention-better-patient-care/> - Corroborates the study led by Yong Suk Lee on the implications of robotic adoption in nursing homes, including its effects on employee retention and patient care quality.
2. <https://keough.nd.edu/news-and-events/news/using-robots-in-nursing-homes-linked-to-higher-employee-retention-better-patient-care/> - Details the three types of robots used in assisted living facilities: Transfer Robots, Mobility Robots, and Monitoring and Communication Robots.
3. <https://www.nber.org/papers/w33116> - Supports the findings that robot adoption is associated with increased employment and retention, particularly for non-regular care workers, and improved quality of care.
4. <https://www.nber.org/papers/w33116> - Confirms the positive correlation between robot adoption and productivity, as well as the reduction in patient restraints and pressure ulcers.
5. <https://itif.org/publications/2024/11/11/robot-adoption-in-nursing-homes-is-positively-correlated-with-productivity-revenue-and-quality-of-care/> - Provides data on the positive impact of robot adoption on productivity, revenue, and quality of care in nursing homes, including specific reductions in pressure ulcers and falls.
6. <https://keough.nd.edu/news-and-events/news/using-robots-in-nursing-homes-linked-to-higher-employee-retention-better-patient-care/> - Explains how robots alleviate physical burdens on care workers, allowing them to focus on tasks requiring human interaction and emotional engagement.
7. <https://itif.org/publications/2024/11/11/robot-adoption-in-nursing-homes-is-positively-correlated-with-productivity-revenue-and-quality-of-care/> - Discusses the overall employment increase in nursing homes with robotic assistance, including the varied impact on different types of workers.
8. <https://www.nber.org/papers/w33116> - Mentions the co-authors of the study, including Toshiaki Iizuka and Karen Eggleston, and the funding institutions such as Stanford University's Shorenstein Asia-Pacific Research Center.
9. <https://keough.nd.edu/news-and-events/news/using-robots-in-nursing-homes-linked-to-higher-employee-retention-better-patient-care/> - Highlights the significance of the study in informing the long-term care industry and its broader implications for labor and workplace structure.
10. <https://itif.org/publications/2024/11/11/robot-adoption-in-nursing-homes-is-positively-correlated-with-productivity-revenue-and-quality-of-care/> - Supports the notion that Japan's experience as a 'super-aging society' serves as a precursor for potential future trends in other countries, including the United States.
11. <https://keough.nd.edu/news-and-events/news/using-robots-in-nursing-homes-linked-to-higher-employee-retention-better-patient-care/> - Emphasizes the importance of adapting to the realities of declining populations and diminishing numbers of working-age individuals in the context of an ageing population.
12. <https://www.sciencedaily.com/releases/2025/01/250108173155.htm> - Please view link - unable to able to access data