

Reducing Hospital Length of Stay Through Innovation



Hospitals and healthcare systems worldwide are facing increasing pressure to optimise resources while maintaining high standards of patient care. One of the most critical factors in this equation is the length of stay (LOS), which refers to the duration a patient spends in the hospital from admission to discharge. A prolonged LOS not only places financial strain on healthcare facilities but can also negatively impact patient outcomes and hospital capacity. In contrast, a reduced LOS can lead to improved efficiency, cost savings and better patient experiences.

Healthcare providers are increasingly turning to innovative strategies, such as digital health solutions, data analytics and improved care coordination, to address LOS challenges. Allina Health, a Minnesota-based health system, has successfully demonstrated how technology and a structured approach to patient care can lead to significant reductions in LOS. Through a partnership with Navvis, Allina Health has focused on improving care pathways, enabling patients to transition more smoothly to appropriate care settings outside the hospital. This approach has yielded tangible benefits, including better patient outcomes, reduced inpatient costs and greater capacity to treat new patients requiring hospitalisation.

Leveraging Technology for Smarter Patient Management

One of the most significant advancements in managing LOS comes from the use of technology. Digital health solutions, including remote patient monitoring (RPM) and telehealth, allow healthcare providers to extend their reach beyond hospital walls, ensuring that patients continue to receive the necessary care even after discharge. This approach is particularly beneficial for patients who would otherwise remain hospitalised due to a lack of suitable post-acute care options. By integrating these technologies into the patient care journey, hospitals can provide a level of oversight that reduces the risk of complications while still enabling early discharge.

Artificial intelligence and data analytics also play a crucial role in identifying the best pathways for patient care. By analysing real-time data, hospitals can predict patient needs, streamline discharge processes and allocate resources more effectively. AI-driven models can assess factors such as a patient's condition, response to treatment and availability of post-acute care facilities, ensuring that discharge decisions are both timely and appropriate. This structured, data-driven approach allows hospitals to minimise unnecessary inpatient stays while maintaining high-quality care.

At Allina Health, these strategies have been instrumental in achieving double-digit reductions in average LOS across its network of 12 hospitals and care sites. By collecting and analysing patient data, the health system has been able to make more informed decisions about discharge planning. This, in turn, has led to more effective use of alternative care settings, such as skilled nursing facilities (SNFs), rehabilitation centres and home health programmes. As a result, hospital beds are being freed up more efficiently, allowing Allina Health to treat more patients who require inpatient care.

Enhancing Care Coordination Across Facilities

Reducing LOS is not solely about technology; effective care coordination is equally essential. Hospitals must work closely with post-acute care providers to ensure that patients transition smoothly to the next stage of their recovery. Without proper coordination, patients may experience delays in discharge, leading to unnecessary hospital stays that strain resources and limit hospital capacity.

Allina Health's approach involves a comprehensive strategy that goes beyond traditional clinical care discussions. Instead of focusing solely on a patient's immediate medical needs, care teams now engage in holistic conversations that take into account the patient's personal preferences, rehabilitation requirements and available support systems. These discussions involve not only doctors and nurses but also social workers, care managers and even family members, ensuring that discharge plans align with the patient's best interests.

This level of coordination has led to measurable improvements in patient throughput. Within the first year of its partnership with Navvis, Allina Health successfully reduced the average LOS for patients discharged to SNFs by 1.61 days, while patients transitioning to home health programmes saw an average reduction of 0.89 days. These seemingly small reductions translate into significant operational benefits, with the

health system freeing up 25,000 bed-days—equivalent to an additional 5,000 patients receiving the inpatient care they need.

By establishing strong partnerships with rehabilitation centres, hospice care providers and home health agencies, Allina Health has created a more seamless and efficient care pathway for its patients. The ability to discharge patients earlier while ensuring they continue to receive high-quality care elsewhere ultimately leads to better patient satisfaction and reduced hospital readmissions.

The Financial and Operational Impact

The financial implications of reducing LOS are substantial. Keeping patients in the hospital longer than necessary not only increases costs for healthcare providers but also limits the number of patients who can be treated. By reducing LOS through better care coordination and digital health solutions, hospitals can operate more efficiently and allocate resources more effectively.

During the COVID-19 pandemic, hospitals faced unprecedented challenges related to capacity constraints. Many patients were medically ready for discharge but remained hospitalised due to delays in finding appropriate care settings. This situation highlighted the urgent need for improved patient throughput strategies. Allina Health responded by implementing a more structured discharge process, ensuring that bottlenecks were minimised and hospital beds were used optimally.

Shorter LOS also aligns with value-based care models, which focus on improving patient outcomes while controlling costs. By leveraging innovative care strategies, hospitals can reduce inpatient expenses while maintaining high-quality treatment. Patients benefit as well, as shorter hospital stays reduce the risk of hospital-acquired infections and promote faster recovery in a more comfortable environment.

Innovation is playing a critical role in reshaping how hospitals manage length of stay. By integrating technology, improving care coordination and making data-driven decisions, healthcare providers can reduce unnecessary inpatient stays while maintaining high standards of care. Allina Health's success in this area highlights the potential of strategic partnerships and digital health solutions in optimising patient throughput.

In the future, reducing LOS will remain a priority, not only for operational efficiency but also for enhancing patient experience and clinical outcomes. The healthcare landscape is shifting towards a model that emphasises timely and appropriate care transitions, ensuring that patients receive the right level of care in the most suitable setting. By embracing these innovative strategies, healthcare systems can create a more sustainable, efficient and patient-centred approach to hospital management.

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