

Zoom[®] Motorized Drive Enhances Efficiency of Patient Transport

Medical

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Situation

Never has there been a time where efficiency in the hospital has been so crucial. The nationwide nursing shortage,¹ government-mandated healthcare reform and a heavier patient population have left caregivers overworked. Inversely, hospitals are now under increasing pressure to improve efficiency and capitalize on cost- and time-saving activities.

One component to improving hospital efficiency is patient flow. Clinically and operationally, patient flow means the progression in patient health and the movement of patients through a set of locations in the hospital. Ensuring patients move efficiently throughout the hospital can make the difference between happy or agitated nurses, occupied or empty beds, satisfied or disgruntled patients and ultimately profitable or unprofitable patient stays. With this emphasized focus on patient flow, organizations such as the Institute for Healthcare Improvement and the Joint Commission have encouraged hospital leaders to take measures toward patient flow improvements.²

Rationale

Taking into account the need for healthcare organizations to improve patient flow, Stryker set about to provide a mobility solution that would increase efficiencies by minimizing transport duration. Applying advanced engineering practices alongside biomechanical science, Stryker developed the Zoom[®] Motorized Drive System. Zoom is designed to virtually eliminate the strenuous pushing and pulling during the transport of heavy patients, which can often increase patient transport times or require additional caregiver support.

Methodology

To fully analyze how mobility design impacts patient flow, independent ergonomic experts compared Stryker's Zoom Motorized Drive System and the standard fifth wheel design used throughout healthcare facilities. Participants were timed pushing each stretcher with a 300 lb. load along a straight 48 meter corridor before navigating a 90-degree turn.³

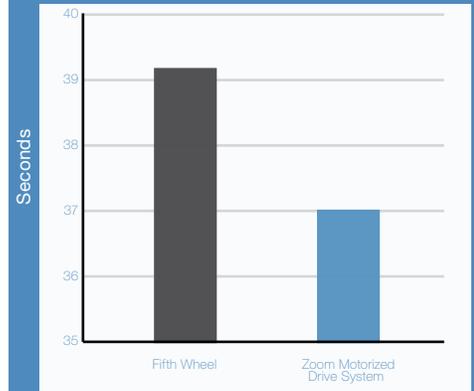
Results

When compared to the standard fifth wheel design, Stryker's Zoom Motorized Drive System was shown to be faster by more than two seconds at the end of the task. When scaled to a transport distance of 250 meters, Zoom could save an average of 12 seconds per transport and thus countless annual working hours when all transports are taken into account.

Conclusion

The efficient flow of patients in a hospital can be affected by the innovation of the facility's stretcher. Implementing Stryker's Zoom Motorized Drive System reduces patient transport time and may contribute to streamlining patient flow and realizing hospital-wide efficiencies.

Task Duration While Transporting 300 lbs.



Stryker Zoom Motorized Drive Stretcher

References

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3. Butt, Steven E., Fredericks, Tycho K., Cure, Laila N., Burns, James D., Harms, Kimberly S. "Effects of transport stretcher mobility related design features on healthcare workers." 2012