

Diligent Robotics:

Moxi Case Study

Shannon Health

Shannon Health's mission is to provide their patients with the most compassionate and efficient service while ensuring the highest quality care. The system has been caring for West Texans for more than 85 years and is proud to be the largest locally based healthcare provider for the Concho Valley and surrounding region. Shannon Medical Center is licensed for 600+ beds and provides a variety of clinical services, including nationally recognized cardiac and stroke programs with the AirMed air ambulance, a designated Level III Trauma Facility, and a designated Women's & Children's Hospital certified as a Level II neonatal facility. Together with Shannon Clinic, Shannon provides access to more than 350 providers in 40 medical specialties across 25 locations.

The Challenge

Shannon Health was hit especially hard throughout the COVID-19 pandemic. As a large hospital in a small, rural area, hospital leadership experienced numerous challenges in retaining staff in the small, tight-knit community of San Angelo, Texas. Shannon's nurses and support staff, including pharmacy and lab technicians, were heavily recruited to hospitals in bigger, neighboring cities. Nursing leadership understood the critical need for innovative solutions for problems that were present across the country: nurses were stressed, overworked, and steadily on their way to burnout.

When Shannon Health first learned about Moxi, a robot developed by Austin-based company Diligent Robotics, the Vice President of Innovation in collaboration with Nursing and Operations leadership led the initiative to identify how innovation in automation could help ease the daily burden of their nursing and clinical teams, who spent nearly 30% of their time on non-patient-focused tasks. With no infrastructure upgrades needed for the integration, leaders foresaw the investment in Moxi as a win-win solution for the hospital and its workforce.

Leadership at Shannon Health worked closely with bedside nurses to identify the tasks with which Moxi could assist, including:

- Delivering lab samples that are normally hand-delivered
- Fetching items from central supply that aren't normally stocked on patient care units
- Distributing PPE and lightweight equipment in a just-in-time fashion so that the hospital is able to make efficient use of these limited resources
- Delivering medications that would normally be personally couriered.

▼▼ What started out as an innovative project for us, and something that we hoped would save a little time, has turned into a necessity. Moxi has been an incredible benefit to our nursing staff and has allowed them more time to focus on caring for their patients—the reason they went into this profession in the first place. ▼▼

Becky Fuentes
Chief Nursing Officer,
Shannon Medical Center

By The Numbers: Moxi's Impact at Shannon Health

- Moxi has completed over **27,500 deliveries** and has returned more than **12,700 hours** back to staff.
- **50%** of all Moxi deliveries have originated out of the pharmacy. The average time for each pharmacy delivery is **21 minutes**, with over **80%** of those deliveries arriving within a **30-minute** target window.
- **22% of all deliveries** had originated out of central supply.
 - **4.5%** of deliveries have been received from the OR, with the rest coming from various departments and units.



Timeframe: December 2021 – April 2023

The Impact

The clinical staff at Shannon Health greatly benefits from the assistance and regularly reiterates how Moxi has allowed them to spend more time at the bedside focusing on patient care. Moxi navigates the hospital with ease, traveling in and out of patient units and even floors. While Moxi makes deliveries hospital-wide, it is most commonly used for tasks related to the pharmacy, central supply and the lab. Moxi has several locked bins, so sensitive items can be safely and securely transferred from one area of the hospital to another without risk of contamination or loss. Moxi helps support a wide spectrum of clinical jobs across multiple departments—allowing nurses and staff to work at the top of their licenses and roles.

The Future

Shannon Health will continue to partner with Diligent Robotics to measure Moxi's impact and add future workflows that will further support their nurses and clinical staff. Through regular monitoring and feedback, Diligent Robotics is continually making Moxi more efficient and effective as the robots work side-by-side with staff to allow them more time to do their jobs. At Shannon Health, nurses see Moxi as a critical member of the team, and they enjoy giving the robots high-fives, waving at them from across the hallway, and even stopping for the occasional selfie. Thanks to Moxi, nurses are back to doing what they love, and Shannon Health sees a future where automation plays an integral role in supporting clinical units across the system.

Although many people think of robots in the workplace as a thing of the future, Shannon Health understands the future is now.