Accelerating Patient Throughout with Transportation Technology

Lindsay Tamchin & Ellen Williams
Roundtrip & St. Luke's University Health Network

ABSTRACT

In the last decade, St. Luke's University Health Network has undergone remarkable expansion, inaugurating new campuses and engaging in mergers and acquisitions. This growth strain has heightened demand for patient transportation, with about 30% of in-patients requiring assistance, burdening hospital staff. However, by integrating Roundtrip's digital solution to optimize workflows for ordering patient transportation, St. Luke's streamlined its transportation process, achieving notable enhancements in efficiency, cost savings, and overall satisfaction for both staff and patients.

CHALLENGE

The St. Luke's Emergency Transportation Services department has twenty-four full-time employees responsible for securing transportation for patients with additional responsibilities such as managing diversion statuses and security operations. The original workflow was not sustainable. Given that 30% of in-patients staying at St. Luke's hospitals required some form of transportation assistance, St. Luke's recognized the need for a comprehensive technological solution to centralize communications and reduce manual efforts.

10,000 hours on the phone per month: Each ride request consumed 20-30 minutes of time.

Strain on staff members: Staff members were grappling with chaos during work hours, affecting both professional and personal well-being.

Inefficient transportation workflow: 40% of rideshare bookings required communication center employees call care coordinators on the floor to troubleshoot.

Delayed patient discharges: Each additional overnight stay incurred expenses of $400-$500 per bed per night.

OBJECTIVES

The organization set out to identify a cutting-edge software solution that could streamline the ride booking and management process, optimize efficiency, and ensure prompt and reliable patient transportation. The solution needed to seamlessly integrate with St. Luke's existing systems, including the Epic electronic health record (EHR) system, ZOLL RescueNet Dispatch software, and TigerConnect communication platform for secure medical texting. Additionally, it needed to offer the ability to track performance and metrics on the performance of St. Luke's contracted external transportation providers, while delivering an overall impact on key objectives:

Reduce staff time on task: Minimize time spent by staff on troubleshooting ride requests and and contacting transportation vendors.

Reduce inpatient length of stay: Expedite the discharge process for patients who faced delays due to transportation.

Improve employee satisfaction: All staff to operate at the top of their license, including emergency operations and patient care.

SOLUTION

In July of 2022, St. Luke's hospital network made the decision to implement Roundtrip, a software solution with wraparound services, across the entire organization's 14 campuses, as well as its communication center. This implementation aimed to streamline and optimize the process of arranging transportation for patients in need of non-emergency medical services.

St. Luke's Transportation Workflow with Roundtrip Integrated into Existing Systems

Ride status continuously updated on Roundtrip dashboard & via TigerConnect

Automated Ride Distribution: Roundtrip Community Logic

The Roundtrip platform employs an automated process that allows external transportation partners to view and accept the ride. Each hospital within St. Luke's network has its own customized workflow, known as "Community Logic," which includes a select group of regional transportation partners.

Under this workflow, rides that the internal fleet cannot accommodate are automatically sent to a pre-determined list of preferred transportation vendors. These preferred vendors can access the ride request through Roundtrip's transportation portal and submit their best ETA.

The transportation vendor with the closest ETA to the requested pick-up time is selected to provide the transportation service. In cases where multiple vendors submit the same ETA, the ride is awarded to the vendor who submitted their ETA earliest. If the preferred vendor fails to respond within a specified time window, the ride request is then made available to a broader pool of transportation vendors known as the "general community." In this stage, additional transportation companies within the network also can view and place an ETA on the ride request, ensuring that alternative options are considered.

By employing automated Community Logic, rides are distributed across multiple vendors in a strategic way, that optimizes for patient discharge ETAs.

Ride Distribution by Transportation Provider & Campus

IMPACT

Within the first 180-days of implementation, the communication center reported an **86% reduction in call volume**, contributing to greater staff satisfaction and organizational cost-savings. Additionally, data from the first year of the partnership showed a noteworthy 58% reduction in the average estimated time of arrival (ETA) deviation of transportation providers, contributing to a **25% improvement in patient throughput.**

Data comparisons between August 2022 to July 2023 indicated a 67% reduction in the number of overnight hospital stays attributed to delays in securing transportation for patients. This equated to a projected **savings of $720,000 annually**.

Combined with the savings stemming from the avoidance of hiring six additional communication center staff members, **St. Luke's has achieved a financial gain exceeding $1 million annually**.

86% Reduction in call volume

$720k Annual cost savings through reduced overnight stays

25% Improvement in patient throughput

67% Reduction in overnight stays attributed to transportation

58% Reduction in transportation ETA deviation

16 Point Increase in staff satisfaction