



University of Louisville Hospital's U Care Program Redefines the Post- Discharge Journey for Stroke Patients



Over 35 million patients are released from U.S. hospitals every year, yet the post-discharge journey for patients and their caregivers is riddled with challenges and complexities that relate to acute and post-acute treatment facilities, as well as to the patient's individual aftercare needs. Studies indicate that almost 20% of discharged patients experience an adverse medical event within the first three weeks of release and that nearly 13% of Medicare beneficiaries discharged from hospitals experienced three or more provider transfers during a thirty-day period. This further impedes the patient recovery process and drives the costs of unplanned readmissions to roughly \$15-20 billion dollars on an annual basis.

While some readmissions are unpreventable, research shows that approximately 75% of these medical events could potentially have been mitigated or averted entirely. Certain situational factors such as procedural complications, existing health conditions and facility-prompted contagions can increase a patient's readmission risk. However, some of the leading contributors to potential readmissions, such as a thorough understanding of medication reconciliation, are avoidable. A recent study published in *JAMA Internal Medicine* found that several periphery factors such as communication gaps, overlooked follow-up care protocol and inadequate access to post-discharge resources can all play a pivotal role in a patient's future readmission. Additionally, almost 40% of hospital patients are discharged before all pending test results are completed, exponentially increasing outpatient risk without a thorough and timely follow-up appointment with required specialists and PCP.

THE CHALLENGE

The University of Louisville Hospital's primary challenge: redefine the post-acute care process to enhance treatment cohesion and prevent avoidable readmissions for patients discharged from the University of Louisville Hospital Comprehensive Stroke Center, ultimately improving patients' overall quality of life as well as minimizing financial impact across the organization.

As an innovator in stroke treatment, the University of Louisville Hospital's award-winning Stroke Center has received several prestigious awards and national recognition including the Target Stroke Honor Roll Award (2012-2016) as well as the Target Stroke Elite Plus Award (2015-2018). Most notably, the University of Louisville Hospital Stroke Center has achieved pinnacle practice recognition by receiving the Get with the Guidelines Stroke Gold Plus Award every year since 2007. Awarded by the American Heart Association/American Stroke Association, the AHA Gold Plus designation honors facilities for meeting outlined performance guidelines for the treatment and management of stroke patients from initial hospital admission to discharge.

THE INITIATIVE

University of Louisville Hospital recognized that, while their world-class stroke treatment department could expertly care for and manage patients from admission to discharge, they often had no influence over or direct knowledge of post-acute patient care. Ken Marshall, University of Louisville's Chief Operating Officer, wanted to change that. "Superior patient care is always University of Louisville Hospital's top priority," Marshall said. "We recognized the need to support our post-discharge patients, whether transitioning home or to another facility setting, such as in an inpatient rehabilitation or skilled nursing facility. Our goal was to enhance communication levels with patients and their caregivers, keeping them engaged throughout the next critical recovery phase to reduce readmissions and optimize the entire care experience."

University of Louisville Hospital partnered with Lacuna Health, a wholly-owned subsidiary of Kindred Healthcare that specializes in bridging the communication and information gap between patients and healthcare facilities, both immediately after discharge as well as throughout the recuperation process. Lacuna's innovative Clinical AfterCare Services provide RN-led telephonic communication to drive patient engagement, minimize missed treatment opportunities and reduce readmission risk throughout the post-discharge journey.

Brian Holzer, MD, Lacuna Health's Chief Executive Officer, believes that the company's model of providing 24/7 access to highly trained and experienced Registered Nurses after a hospitalization is what ultimately drives positive outcomes, in some cases lowering readmissions by as much as 47%. "At Lacuna Health, we focus on patient and provider connectivity across every level of service," Holzer said. "We partner with forward-thinking healthcare organizations like the University of Louisville Hospital to develop patient-centric and cost efficient solutions that enhance care quality, drive service excellence, and help our medical partners remain competitive in today's turbulent, ever-changing marketplace."

THE PROGRAM

University of Louisville Hospital and Lacuna Health collaborated to create a customized post-discharge stroke program for patients leaving the facility's Stroke Center. The newly branded University of Louisville Hospital initiative called "U Care" was explicitly designed to provide telephonic support to both patients and their caregivers after discharge. Launched in June 2018, the pilot program was initially designed to follow 250-stroke patients, both at home or at rehabilitation and skilled nursing facilities, for the first 45 days after their hospital discharge. After completion of the 250 stroke patient pilot, University of Louisville Hospital opted to continue the program, which has recently eclipsed the six-month mark.

Paula Gisler, Administrative Director of the University of Louisville Hospital Stroke Center, worked directly with Lacuna Health staff members to develop a systematic, structured but unscripted program specifically tailored to meet the needs of each individual patient. "At University of Louisville Hospital, we wanted to give patients access to Lacuna Health's highly trained clinical resources after discharge that we believed would optimize recovery and sustainability of long-term treatment and healing," Gisler said. "We collaborated with Lacuna Health to create a communication

protocol that thoroughly answers questions and very clearly outlines next steps such as set reminders for follow-up examinations with their primary care physician and specialists including their neurologist, both of which can have a significant impact on future readmissions."

With U Care, Lacuna Health's Registered Nurse-led care teams serve as a direct extension of the Stroke Center's staff, directly connecting with patients, family members and approved caregivers to offer a multitude of recovery-critical services such as:

- Reinforce and educate on physician treatment plans
- Assess health status and for early signs of declining condition
- Provide medication education and help with pharmacy attainment
- Classify care gaps
- Outline and promote follow-up appointment protocol (primary care appointment within seven days, neurology follow-up appointment within four to six weeks)
- Conduct depression screenings and assess for falls risk
- Identify patients at high risk for readmission

The standardized program includes outbound contacts approximately 2, 7, 21, and 45 days after initial discharge. With every post-discharge connection, U Care nurses can quickly access patients' health records to familiarize themselves with individual care needs and ask relevant check-in questions to evaluate current health condition status, provide treatment details and pinpoint any pending unmet patient care needs. Additionally, every Registered Nurse

contact provides an opportunity to gauge patient satisfaction levels with the care experience they received from University of Louisville Hospital, as well as any other post-acute care provider.

PROGRAM DIFFERENTIATORS

University of Louisville Hospital's U Care Program delivers several significant differentiators both to patients and to practitioners, including:

Cross-Facility Connection

Hospital-led post-discharge initiatives are not commonplace, and when deployed often fall short in terms of patient reach and/or frequency of contact, which can leave significant intelligence gaps in the aftercare needs and recovery status of patients. The problem is magnified as complex patients often receive post-discharge care



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Paula Gisler, Administrative Director of the University of Louisville Hospital Stroke Center

across multiple facility and home-based settings and services. U Care bridges those gaps by reaching out to all post-discharge stroke patients as they receive care and transition from various facility settings to the home.

Centralized Point of Contact

U Care delivers a centralized clinical point of contact for patients who have suffered a traumatic medical event that may cause significant, and often prolonged, cognitive disruption. The University of Louisville Hospital post-discharge process eliminates the need to manage multiple facility contacts. Instead, patients, caregivers and care teams can funnel all inquiries to a single point of contact and connect with a trained professional who has instant access to a patient's file and specific case needs.

Dedicated and Trained Contact Team

Some hospitals and large medical facilities do rely on internal staff such as nurses, physicians and back office resources to also initiate post-release contact with patients, often with sporadic results. Many clinicians and administrators are often over-tasked, making consistent post-discharge communication challenging within an already demanding work environment. Additionally, many clinical staff members simply are not highly motivated to maintain follow-up contact. A 2018 study published in *Nursing Administration Quarterly* found that almost half of medical professionals surveyed (46.67%) voice displeasure about managing post-release calls, with a full 23% admitting they would prefer any other task to conducting assigned outpatient calls.

The U Care model eliminates the need to utilize internal clinical staff to address post-acute contact with stroke patients. Lacuna Health dedicates a team of fully-trained nurses to oversee the Stroke Center schedule of assigned daily calls. Outsourcing to the Lacuna Health clinically-led contact center instantly delivers a multitude of significant patient and practitioner advantages such as:

- Reduces internal staff workload, allowing clinicians to focus on primary in-patient responsibilities
- Supports scalability with expanding patient and physician needs

- Lowers risk for unanswered patient calls
- Facilitates initial contact attempt with all post-acute patients
- Decreases missed patient communication opportunities
- Sustains industry compliance mandates
- Helps facility achieve corporation-wide patient contact goals

Additionally, implementing a comprehensive post-discharge communication plan from a third-party provider grants patients direct access to knowledgeable medical professionals prepared to address concerns, outline scheduled follow-up appointments and keep the recovery process moving forward.

Clearly Defined Escalation System

Beyond streamlining communication to resolve treatment and recovery issues, the program also utilizes a clearly defined, systematic escalation plan based on patient need and urgency. U Care nurses can code calls using an E1, E2, or E3 designation:

E1 Calls

Coded E1 engagements track information or feedback outside the parameters of recovery and treatment. E1 calls could contain positive data such as compliments to University of Louisville Hospital staff regarding stay and experience, or constructive feedback on various departments such as food services or billing. These comments, while not critical, should still be relayed to relevant hospital staff.

E2 Calls

Calls coded with an E2 require a response from appropriate hospital personnel. Medication questions, signs of depression or fall risk, and treatment inquiries beyond the scope of the U Care nurse advocate may be labeled as an E2 call.

E3 Calls

E3 calls indicate patients who are showing signs of significant decline or an urgent medical need and are at the highest risk for readmission.

24/7 access to highly-trained and experienced Registered Nurses after a hospitalization is what ultimately drives positive outcomes, in some cases lowering readmissions by as much as 47%

U CARE RESULTS

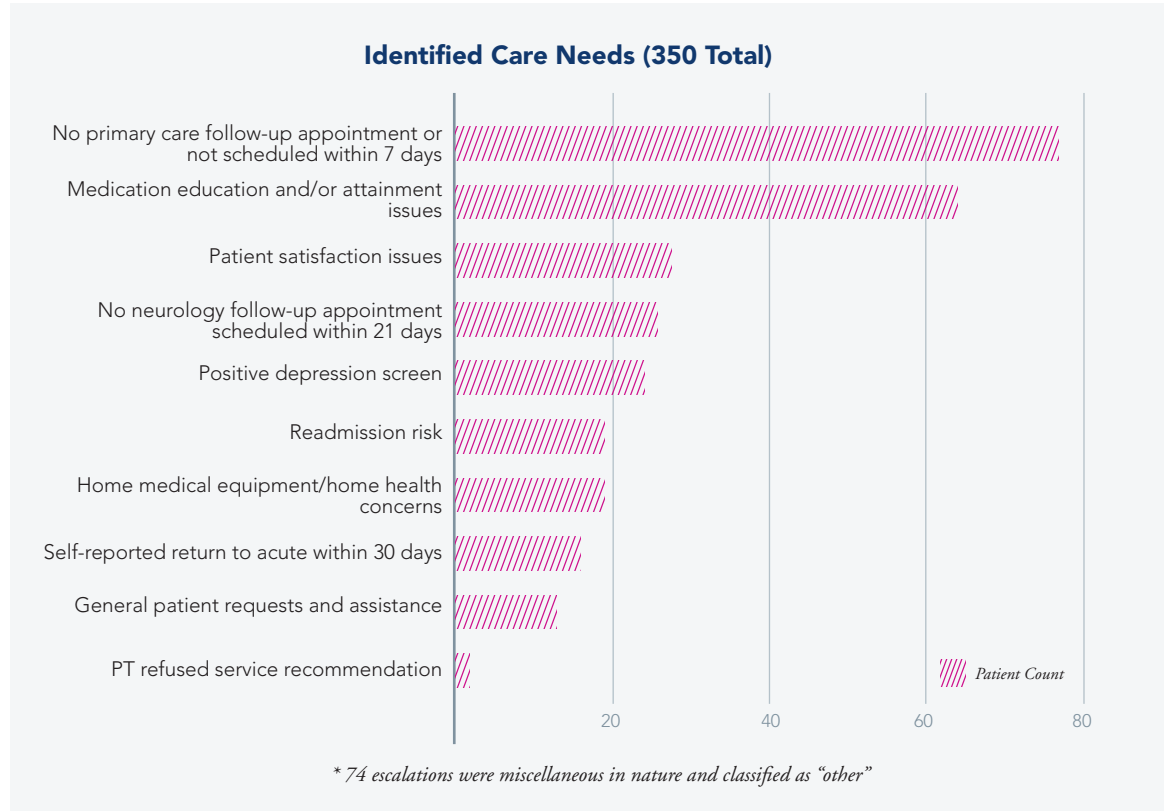
Both the University of Louisville Hospital Stroke Center and Lacuna Health tracked and analyzed relevant data sets to develop preliminary benchmarks and gauge available program results to date.

Executive Summary (6/21/18-12/31/18)

From 6/21/18 through 12/31/18, a total of 512 discharged patients were presented to Lacuna nurses for follow-up contact. Of the 512 patients:

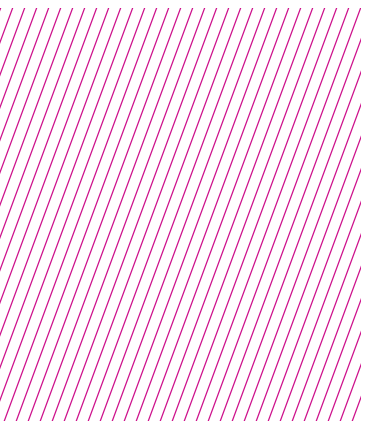
- All 512 patients (100%) received at least one contact attempt by a U Care nurse
- 295 patients (57.6%) of the 512 patients were reached
- 73.0% of patients discharged home were reached
- 41.7% of patients discharged to a facility were reached
- 264 patients (89.4%) of the 512 patients had E1, E2, or E3 escalations with 350 total identified care needs

Of particular significance, the most commonly identified care gap was the lack of a primary care follow-up appointment. In a 2015 study published in *Annals of Family Medicine*, a sample including 44,473 unique Medicaid recipients with 65,085 qualifying discharges across 114 hospitals was used to study the correlation between follow-up physician visits and 30-day readmission rates. For higher risk patients whose readmission risk exceeds 20%, the study demonstrated that one readmission may be prevented for every five patients who receive outpatient follow-up within 14 days. Further, only 51% of patients in high-risk categories in the study received follow-up within 14 days.

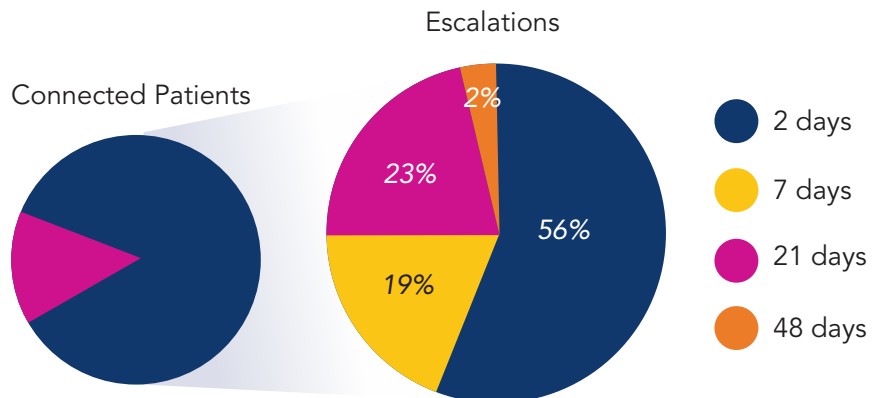


Additionally, careful analysis of the timing of escalations by call stage was first initiated for the U Care program in November and captured for two months thus far.

The report shows that over half of all November and December escalations were logged during the initial U Care contact (two days post-discharge), demonstrating the urgency and necessity of immediate follow-up to stroke patients as they acclimate to their post-acute environment. Additionally, having 23% of all November and December escalations tracked 21 days after discharge outlines the urgency and necessity of consistent, continuous contact right up through patients' follow-up assessment with their neurologist three weeks after discharge.



Escalation Breakdown by Call Stage



CONCLUSION

Since U Care's launch in June 2018 through December 2018, a total of 512 patients have matriculated into the program. According to University of Louisville Hospital clinicians, the U Care program has helped the stroke department identify several goals as well as implement new post-discharge components to improve aftercare success, increase successful physician follow-up and expand patient satisfaction levels across every phase of recovery.

Hospital Escalation Response

U Care's protocol has equipped hospital staff and clinicians with the information needed to respond to most every escalation that requires attention. University of Louisville Hospital has continued this routine in order to gain critical care insights regarding E1 escalations and provide necessary feedback, as well as close the loop on all E2 and E3 calls.

Actionable Reporting

As the initiative continues to grow and evolve, both University of Louisville Hospital and Lacuna Health will continue to generate actionable reporting from stored data that outlines key benchmark statistics and program results such as:

- Number of patients contacted compared to those reached
- Total number of escalations
- Breakdown of escalations by category
- Total number of follow-up physician appointments completed
- Total readmissions with 45-day time frame

Expand U Care Model

University of Louisville Hospital COO Ken Marshall acknowledges the success of U Care within the facility's Stroke Center and discussions are underway to potentially expand the business model across other departments, including the hospital's trauma center and oncology department.

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