SHP
STRATEGIC HEALTHCARE PROGRAMS

CASE STUDY

Decreasing readmissions through hospitalization risk factor data and a robust remote patient monitoring system

GOAL

Achieve hospitalization rates that do not exceed 12% as well as single digit rehospitalization rates, while simultaneously increasing patient satisfaction scores.

Starting hospitalization rate

22.83%

Starting 30-day readmission rate

14.54%

Trinity Health At Home

Trinity Health At Home (THAH) is a national nonprofit home care and hospice organization committed to providing exceptional, patient-oriented home care, palliative care, and hospice care where patients are most comfortable: at home. THAH is a member of Trinity Health, one of the largest Catholic health systems in the country. THAH serves patients in communities in 13 states, with a daily home care census of more than 5,400 clients. Their mission is to serve together in the spirit of the Gospel as a compassionate and transforming healing presence within their communities. With a forward-thinking care model, advanced technology, and visionary leaders, THAH are shaping the future of healthcare.

Baseline Challenge for the Project

As a member of a large health system, THAH participates in various Bundled Payment Care Initiatives (BPCI), both as an Episode Initiator and a downstream preferred provider. The emphasis regarding these BPCIs has been to decrease hospitalizations and improve patient outcomes. Such an emphasis parallels THAH's strategic goal to meet and exceed the "Triple Aim" of enhancing the patient experience as well as providing better care and outcomes at a reduced cost. To meet this ongoing challenge, we embarked on a journey to revolutionize our care delivery, with a strong emphasis on the utilization of data. One of our partners on this journey is Strategic Healthcare Programs (SHP). As we became more experienced with caring for bundled patients, we soon realized that the greatest key to success was to reduce hospitalizations, both as an episode initiator and as a downstream provider.

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We identified several major challenges focused on reducing readmissions and hospitalizations, as well as increasing patient satisfaction to successfully achieve the "Triple Aim" and serve as a valuable partner to our health system hospitals. When we began focusing our efforts on bundled payment models, our data review indicated that our current hospitalization rate was 22.09%. (SHP data, Dec, 2015)

Upon reviewing data of all patient and financial outcomes, as well as examining future trends in home care and technology, the THAH Senior Leadership team realized that our current care delivery system of providing non-standardized intermittent skilled care would not allow us to achieve the "Triple AIM." Our initial focus grew broader than simply keeping patients a to the hospital. All aspects of our home care delivery system were reviewed and analyzed. The complexities and difficulties in achieving lower hospitalization rates became evident. We realized that we needed a fully integrated case management care delivery system for our Medicare patients. Otherwise, success would not be attainable and we would not be a preferred home care provider for our health system and the communities in which we serve.

Our Care Revolution began with the designing of new clinical roles that would include Office Based Care Managers, as well as OASIS RNs. Our Office Based Care Managers oversee and coordinate the care to a team of geographically based patients, ensuring that

their plan of care and goals specific to patients are achieved. Our OASIS RNs increase the efficiency and accuracy of OASIS due to their specialized skill and knowledge of OASIS. They establish the individualized patient plan of care in coordination with the Office Based Care Manager. Additional analysis of our data indicated that certain classifications of patients were accounting for a disparate percentage of hospitalizations. By utilizing our SHP data, these patients were proactively identified from our OASIS data. From the OASIS data review, SHP was able to calculate the patient's risk of hospitalization, which could then be used to plan care and deliver increasingly intense services to those at the highest risk of hospitalization. This initiated our focused utilization of SHP data to drive our rehospitalization rates to single digits, as well as our hospitalization rates to under 12%.

Measure of Success

Review of our data indicated that 25% of our patients were at moderate risk of hospitalization and accounted for 29.0% of the actual hospitalizations. We discovered that 8.0% of our patients were at high risk of hospitalization and accounted for 46.0% of our actual hospitalizations. (Table 1, data from 2016).

It became clear that our readmission and hospitalization rates would decline if we concentrated on this subset of patients, providing care individualized to those at high risk for returning to the hospital.

Our goal is ultimately to achieve single digit rehospitalization rates, as well as hospitalization rates that do not exceed 12%. We aim to achieve these objectives while simultaneously increasing our patient satisfaction scores.

The Project: What We Did, Who Was Involved, How We Did It

The initial efforts of our project were to redesign our way of providing skilled intermittent home care to our Medicare patients, while bearing in mind our health system's strategic initiates, such as BPCI. We soon realized that focus lization, could not be the only initiative that we undertook to change our care.

As previously mentioned, we revised our clinical field staff roles, created new positions that would focus on comprehensive care coordination and case management services, and identified those clinicians who were strong in assessment and care planning. Such clinicians included OASIS RNs and Lead Assessment Therapists, who would complete the majority of the OASIS

SHP Risk of Hospitalization Alert

Risk for Hospitalization: Patients that triggered the SHP Risk of Hospitalizations Alert	**You**			
	Alert Triggered		**Alert Triggered & Hospitalized**	
	#	**%**	**#**	**%**
Moderate Risk	**8,134**	**25.0%**	**2,362**	**29.0%**
High Risk	**2,601**	**8.0%**	**1,197**	**46.0%**
All at Risk	**10,735**	**33.0%**	**3,559**	**33.2%**

time points. Research also indicated that to achieve top decile outcomes, care provided needed to be standardized and based on evidence and best practices. To achieve this, evidence-based care path guidelines were established, along with corresponding/matching patient education materials. These educational resources supported our disease management focus of providing patients with the knowledge of how to partner with their healthcare providers to manage their chronic diseases, improve their quality of life, and achieve their health goals.

Our People-Centered Home Care Model

Our care path guidelines were designed to assist clinicians in providing the intensity of services based on the patients' risk of hospitalization. By identifying these risk factors in the early stages and the risk of hospitalization, focused standardized interventions and tools could be utilized to mitigate the patients' risks, thus keeping patients home and out of the hospital.

While these changes were substantial, we identified by the slow decline in our hospitalization rates that continued change was still needed. The next step that we undertook was the creation of a 24/7 Virtual Care Center. The creation of our Virtual Care Center enabled us to provide the standardized after-hours triage services that would impact our hospitalization rates, as well as allow us to provide 24/7 remote patient monitoring and rapid early intervention when clinical changes were identified in our patients. The goal was that 75% of our traditional Medicare patients would be placed on our remote monitoring program, Home Care Connect™, thus further strengthening our efforts to keep patients home.

Home Care Connect: 24-7 Integrated Virtual Care Program

Our remote patient monitoring system and 24/7 Virtual Care Center are proving to be the foundational safety net and support to help us meet our goals.

This innovative change was developed and led by our Senior Executive Team, our agency's local leadership and management teams, our new office-based care managers, as well as by our new clinical roles and the manager and nurses of our Virtual Care Center. There were few clinical roles unaffected by these changes.

Table 2 (SHP data, Dec, 2016) Rehospitalization and hospitalization rates prior to our major care model changes:

Rehospitalizations Within 30 Days

		You		SHP Multistate	SHP National
Within 30 Days of SOC (Hospital DC in the five dats prior to M0030)	Count: Cases:	202 1,389	14.54%	12.34%	12.40%

Hospitalizations Trended by Month

All Acute Care Hospitalizations

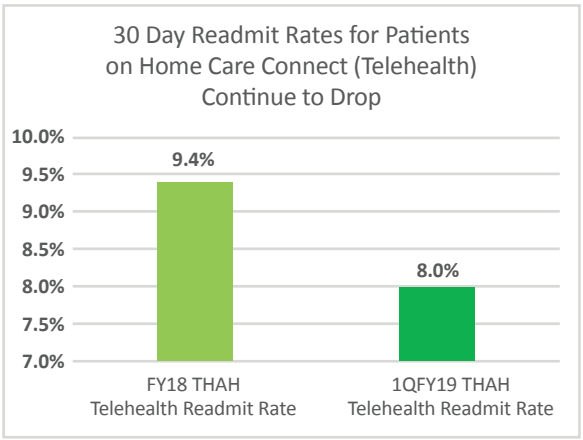
Date Range	Count	Cases	Observed
December 2016	433	1,897	22.83%
12 Months	4,648	22,052	21.08%

Project Timeline

Initially, our goal was to have readmissions in the single digits within 12 months. However, while making great improvements, we discovered difficulty in assuring that all our operational and clinical processes were well-grounded. A change of this magnitude is complex and requires ongoing effort.

Before and After Measures of Success

As previously indicated, our primary emphasis has been on reducing the rates of patients returning to the hospital within 30 days of hospital discharge and all hospitalizations. When we first began in 2016, our 30-day hospitalization rates were 14.54% and 22.83%, respectively. Our current rates for our Medicare patients receiving telemonitoring stand as follows:



While the results are impressive, we realized that we could achieve greater success by continuing to refine our utilization of focused high intensity care for patients at a high risk of hospitalization. Through SHP, we were able to efficiently identify who these high-risk patients were. We then placed an "alert" in our EMR, indicating that the specified patient was at a higher risk of hospitalization. Now, all the members of the patient care team are informed of each patient's risk of hospitalization, and thus able to provide care specifically tailored to reduce the patient's risk. Furthermore, they can also encourage the patients to learn about their health condition and to accurately identify symptoms that require quick action to "Call Us First." Our "Call Us First" approach compliments our remote patient monitoring and telemonitoring initiatives, since our telemonitoring devices are equipped with the capability to facilitate video calls with our Virtual Care Nurses. Patients who are provided with our telemonitoring devices simply have to press a button requesting a video visit or call. Within 15 minutes, patients can be speaking with a Virtual Care Nurse.

Our multifaceted approach to care allows us to more efficiently align our resources with patient needs. Patients at high risk of hospitalization remain those most likely to be hospitalized. The SHP data analytics software provides us with the data showing which signs and symptoms characterize our patients as high to moderate risk. This depth of data has assisted us in targeting our focus of care, individualizing the plan of care to provide support and education in specific interventions. Coordinating this information with our Virtual Care Nurses allows them to provide the targeted education that will facilitate early interventions in order for patients to remain at home. As these high- risk patients grow to understand the variety and depth of resources that are being used to meet their healthcare needs, they increase their care engagement and "Call Us First."

Unexpected Outcomes Occurred Related to This Project

The project's unexpected outcomes were in regards to the realization that all clinical roles needed to be changed. This change was disruptive to the "normal" everyday

functioning of our agencies, where we unexpectedly witnessed an increase in our clinical turnover rates. This increase was influenced by various factors: we had recently switched EMR vendors, the change to the clinicians' daily lives was underestimated, and we learned the difficulties of managing the people-side of change. This increase in clinical turnover rates was also influenced by the fact that changing an organization's culture is more difficult than changing processes, structure, and even technology. Furthermore, we lost key leadership positions at the local level, which has slowed down the achievement of our strategic initiatives.

Schedulers were an integral part of this change, and we frequently overlooked the gap that existed within our care model and the need for increased scheduler training, education on the new care model, and the critical role that Schedulers played. More recently, daily huddles have been incorporated to strengthen the focus on managing by data and increasing communication at all levels of the organization.

Data also revealed that our referral patterns were stable over time, and that we could use the data that showed rehospitalizations by the number of days that the patient had been on home care service, to focus our staffing and impact on patient outcomes. This provided schedulers and managers with the ability to decrease overtime, improve scheduling, utilize per diem clinicians, and to focus continued efforts on care consistency and the strengthening of office care manager partnerships.

Although we have not yet reached our desired goals, we are building strong processes and continue to redefine clinical roles to focus on clinicians working at the top of their license, as well as incorporating evidence and best practice into our care expectations. We have implemented a cutting-edge care model, with currently more than 1,400 patients on daily remote patient monitoring. We will continue to analyze, utilize data and incorporate the continuous quality improvement process into our daily clinical care as we move towards achieving the" Triple Aim."

Learn more about Trinity Health At Home at TrinityHealthAtHome.org and connect on social for news: Facebook, Twitter and LinkedIn.

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To learn more about how leading home health agencies are using SHP to drive daily decisions contact us.

805.963.9446
Solutions@SHPdata.com