BIG STRIDES IN EXCEPTIONAL PATIENT CARE

UPMC's model setting standards for quality, timely care.

NEW OPPORTUNITIES ABROAD

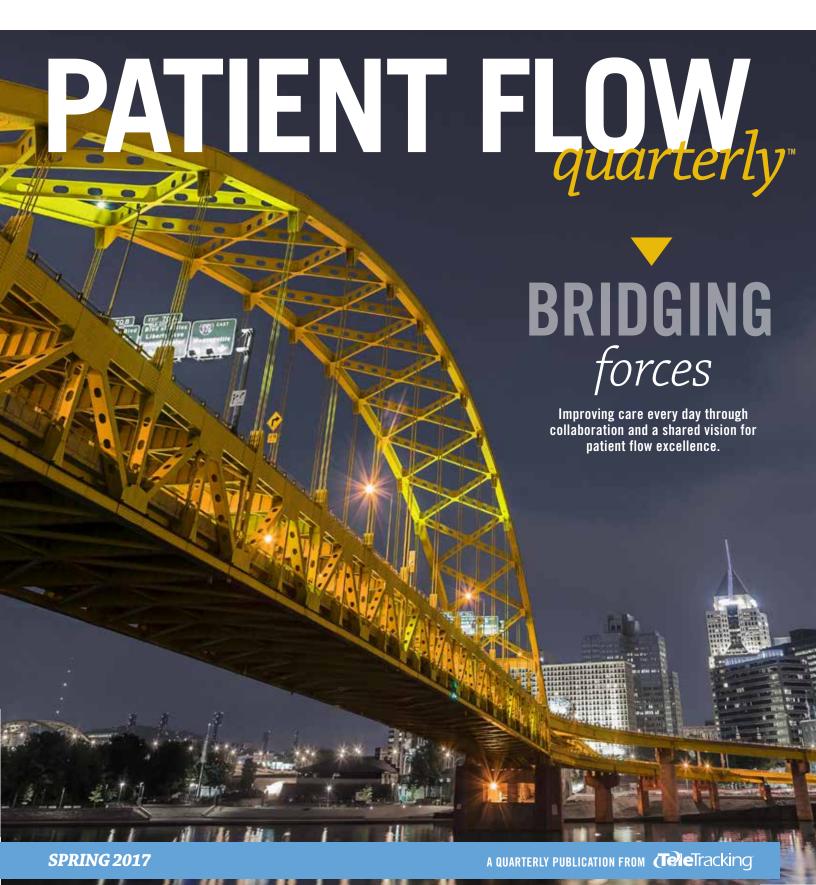
Crossing the pond to help the NHS provide better care to all.

COLLABORATION BEHIND OPERATIONAL WINS

Advisory Services helps Baptist Memorial Health Care bring patient flow together.

2017 PATIENT FLOW TARGETS IN FOCUS

Strategic thinking, big ideas and new considerations for winning the game.







Did you know that Pittsburgh is the city of bridges?

With approximately 446 - it is the city with the most bridges in the world.

TeleTracking is proud to call

Pittsburgh home, and we're just as proud to be building bridges with our clients from Vancouver, to the United Kingdom, to health systems across the United States.



BUILDING BRIDGES

In February, I attended the HIMSS17 Conference & Exhibition. If you've previously attended, you know it can be an overwhelming experience, fueled by information overload. In fact, out of the 40,000 people in attendance, only 2% of attendees were actual clinicians. Meanwhile, vendors. consultants and bankers could be found in the thousands. While there are a lot of organizations doing great work to improve patient care, it is a stark reminder that healthcare equals big business. So big, in fact, that healthcare IT spending alone tops \$40 billion in the United States each year.

While not exactly a revelation, it got me thinking...how much of what's happening is truly tied to a mission greater than the business itself? How much is focused on building bridges and facilitating meaningful collaboration? At TeleTracking, we operate with a simple and focused mission—to ensure that no patient waits for the care they need. Period and full stop. These 11 powerful words are the foundation for everything we do, as well as the catalyst for how we build bridges between caregivers, IT, patients and their families—with an end goal of delivering the best care possible. This was the same mission behind our testimony to Congress last

September when we appeared before the House Ways & Means Subcommittee on Health¹. Because we know that the longer a patient waits to receive care, the more likely they are to face objectively worse outcomes².

In this issue of Patient Flow Quarterly, we're highlighting some incredible health systems that are building bridges at their organizations and doing everything they can to ensure their patients are receiving the right care at the right time. From UPMC, right here in our home town of Pittsburgh, PA, to across the Atlantic where the United Kingdom's National Health Service is embarking on

bold plans of their own. Thank you to each and every one of our clients for investing in work that helps us all work towards a mission of delivering excellent patient care. You are on the front lines everyday making a difference and building your own bridges to meaningful patient experiences.

Sincerely,

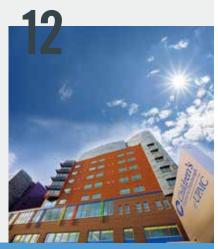
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KRIS KANETA
Managing Editor & VP Marketing
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SPRING 2017

A QUARTERLY PUBLICATION FROM (TeleTracking

An effective access and throughput strategy builds bridges between departments, among health systems and across communities. We help keep those bridges strong by operating with a simple mission—to ensure that no patient waits for the care they need. And when those patients receive timely care, they are more likely to have a positive experience that results in positive outcomes.

FEATURE STORY

Advisory Services Drives Change at **Baptist Memorial Health Care :: PAGE 6**

TeleTracking's highly experienced Advisory Services team—with an average of 25 years of experience in healthcare—helps our clients successfully combine people, process and technology. When Baptist Memorial Health Care decided to centralize their operations across 17 hospitals, Advisory Services took on their biggest project to date.

LEADERSHIP

Market Pulse - Focus, Strategy, Adaptability :: PAGE 10

Tim Chapman, Executive Healthcare Advisor and Board Member, writes about how now, more than ever, it's important to stay focused on the five key imperatives that drove successful results in 2016. In particular, process excellence is critical to being successful in areas such as pricing in a risk-based world.

FEATURE STORY

The Right Care at the Right Time :: PAGE 12

Regionally, nationally and globally, UPMC is committed to an exceptional patient care model. Learn what they're doing corporately, as well as at their UPMC McKeesport and Children's Hospital of Pittsburgh of UPMC locations.

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THE CAREGIVER & DATA DIVA OF STAMFORD HEALTH :: PAGE 24

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WHAT'S HAPPENING

A quick look at what's driving our industry and our work together going forward.

- TeleTracking was named to Becker's Hospital Review Great Places to Work in Healthcare!
- The successful Patient Placement Operations Centers at New York-Presbyterian's Columbia University Medical Center and Weill Cornell Medical Center campuses were featured in the February issue of Health Data

Management's – "Is this the Future of Healthcare?"

University of Colorado Health was featured in Healthcare Purchasing News - "Assessing & Scheduling with Surgical Precision" – following the implementation of TeleTracking's Clinical Workflow™ Suite solution with RTLS technology in their Heart & Vascular Clinic.

- "The beginning of a journey how University of New Mexico Hospital's CMO cut ER wait times in half" was featured in Becker's Hospital Review.
- Hospitals & Health Networks featured Sharp Chula Vista Medical Center's real-time patient tracking program, which has decreased bed turnaround time by more than 3 hours.
- Diane Watson, TeleTracking's COO, was named as a 06. 2016 Smart 50 Award honoree. She was also a featured columnist in the February issue of Smart Business - "Be Inspired and Motivated by those around You." [http://www. sbnonline.com/article/inspired-motivated-around]

Join TeleTracking at one of these upcoming events and learn about our KLAS category-leading patient flow solutions while sharing ideas with other healthcare professionals.

TRANSFORMING PATIENT ACCESS THROUGH CENTRAL COMMAND

May 4 & 5, 2017 Grand Hyatt Atlanta in Buckhead, Atlanta, GA More Info: http://go.teletracking.com/atl

UNLEASHING CAPACITY THROUGH DISCHARGE REDESIGN & READINESS

May 23, 2017 Public Chicago, Chicago, IL More Info: http://go.teletracking.com/chi

TRANSFORMING PATIENT ACCESS THROUGH CENTRAL COMMAND

June 8, 2017 The Lumen Hotel, Dallas, TX More Info: http://go.teletracking.com/dal

TELETRACKING ANNUAL CLIENT CONFERENCE

October 22-25, 2017

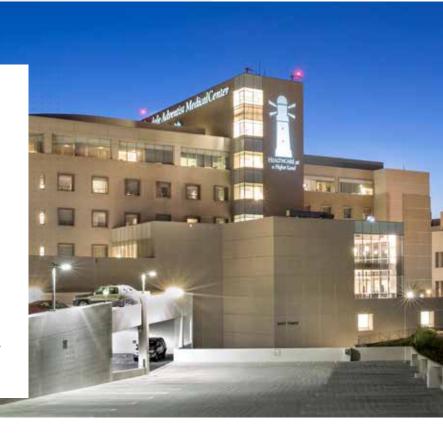
Sheraton Grand at Wild Horse Pass, Chandler, AZ More Info:

https://telecon17.eventbrite.com

Join us and hundreds of your peers from around the globe to network, share best practices and success stories, and learn about the latest product developments.

Adventist Health Glendale

EXPERIENCING DIRECT ADMIT SURGE WITH NEW TRANSFER CENTER



Adventist Health Glendale [AHG] is an established healthcare provider in California's San Fernando Valley. For more than a century, they have been the go-to provider for holistic health and wellness, and have continued to grow and expand their service offerings. Today, they are the largest provider in the San Fernando Valley—with 515-beds, 800 physicians, 2,400 associates and 1,100 volunteers.

Kevin Roberts, CEO, leads the Glendale Adventist executive leadership team, which is focused on providing patient-centered care. He knew that by providing additional services, AHG would continue capturing market share, while supporting the organization's mission and values. And the implementation of a Transfer Center would streamline operations and allow AHG to care for more patients.

KEY OBJECTIVES AHG LEADERS WANTED TO ACHIEVE INCLUDED:

 A way to communicate seamlessly with, and provide access to hospital services, for referring providers. The end goal would be expeditious patient transfers / direct admits—and better patient outcomes.

- A convenient one-step process for physicians and healthcare professionals to transfer patients to AHG, using a single toll-free number that would be staffed 24/7.
- Increased loyalty with referring physicians once they realized AHG could provide easy access to hospital services and seamless, well-coordinated, service excellence interactions.
- Improved coordination of the bed turnover process for the entire hospital, which would result in timelier admissions for waiting patients.
- And finally, by increasing inpatient admissions, AHG would experience positive growth and patient volumes.

"After establishing those requirements,

our executive team knew that a Command Center-style patient placement and transfer center was the solution—and that we wanted to partner with TeleTracking to build it," said Marina Chakhalyan, Nursing Operations Data Analyst and a member of the project team.

Once the decision to move forward was made, the first step was to identify a project manager and a cross-departmental project team—to both manage the details of the project and encourage staff to adapt to the new process. Cynthia Norman-Bey, Director of the Customer Experience, took on the project management responsibilities and built a team that included an executive champion — Jinhee Nguyen-AVP Nursing Operations, the Director of IT – Marc See and a System Administrator to Manage TeleTracking – Marina Chakhalyan. The other stakeholders included the house supervisors—which was the group with the most clinical expertise to drive the facilitation of patient transfers and direct admits and also reports directly to the AVP of Nursing Operations, Jinhee Nguyen. The patient registration team, all of the hospital inpatient nursing units, the neuroscience stroke coordinators, and the physician team were also engaged.

"Getting the main technology piece in place was a milestone for us," said Cynthia Norman-Bey. "And we assembled a great team, who went above and beyond to solve some of the challenges that emerged along the way."

THAT TEAM SUCCESSFULLY ADDRESSED THE FOLLOWING:

- The initial go-live date was set for October 2016—but after key stake holders held a meeting in late September, there were still some outstanding questions about how roles would be defined. The decision was made to shift the go-live to December 2016, in order to provide additional time to create the proper alignment between key stakeholders and the AHG project management team.
- However, while moving the go-live date helped the different departments



at AHG, it created some alignment challenges for the TeleTracking team since they had other project implementations scheduled. Committed to the success of the project, TeleTracking found a way to appropriately schedule resources to meet the new go-live date of December 15, 2016. Even though AHG had been a TeleTracking client for 16 years, they were not on the latest version of the solution that would provide the greatest functionality and integration with the Transfer Center™ solution.

 Once the upgrade was complete, the TeleTracking and AHG teams worked hard to ensure that the technological environment of the new transfer center—which is located off-site—mirrored the AHG technological environment.

WITH THE TECHNICAL ASPECTS
OF THE TRANSFER CENTER IN
PLACE, COMMUNICATING THE
CHANGES AND ENGAGING THE
STAFF WAS THE NEXT CRITICAL
STEP. THE PLAN INCLUDED:

- A presentation to the physicians of the AHG Medical Executive team.
- A presentation to the executives, directors and managers at AHG.
- Regular stories about the status of the implementation in the hospital's daily newsletter.
- Flyers promoting the new transfer center were distributed to physicians, clinics, and other providers about the services that AHG was now providing.

"I'm proud to say we went live on December 15, explains Norman-Bey. "The events leading up to the launch, as well as the current process changes, have been very successful. The AHG Executive Champion was highly engaged, supported the project and helped with any process where a decision had to be made at the senior leadership level—this kept the project deliverables on track. In addition." she continues, "the AHG Executive team, led by the CEO, committed to ensuring that all patient transfers and direct admits are accepted by AHG—and that any patient declined, would be reviewed by the administration before making that decision."

OTHER PROJECT HIGHLIGHTS INCLUDE:

- TeleTracking's partnership provided amazing project management and project implementation skills—keeping all the technical project deliverables on track. In addition, TeleTracking exceeded every request for specific reports related to EMTALA [Emergency Medical Treatment & Labor Act, which ensures public access to emergency services regardless of ability to pay], and were a wealth of knowledge about the transfer center services in general.
- AHG had on average 30 Direct
 Admissions per month in 2016—the
 most Direct Admits in one month was
 44 and the least six. In the first 17
 days of implementing the
 TeleTracking's TransferCenter®
 solution, AHG had 66 Direct
 Admissions. And, in January 2017,
 those numbers increased to 141 calls
 and 100 accepted admissions.



MARINA CHAKHALYAN
Nursing Operations
Data Analyst
Adventist Health Glendale

Marina has worked in healthcare analytics for 12 years. Her projects have focused on analysis for nursing operations/labor analytics and patient experience quality. Marina holds a Master's Degree in Healthcare Management from University of Phoenix and Bachelor's Degree in Biological Sciences, from California State University, Los Angeles. She believes that people empowered with data have the ability to profoundly impact their communities.



CYNTHIA NORMAN-BEYDirector of the
Customer Experience
Adventist Health Glendale

Cynthia Norman-Bey is Director for the main hospital call center, the Director of the Customer Experience, and the liaison for the Adventist Health Glendale newly implemented Transfer Center. She has worked in healthcare call center services for 20 years. She enjoys the challenge of project management, and more specifically, call center implementations. When asked why she enjoys call center implementation, she responded "I love all aspects of surprising and delighting callers with a great service experience."



TeleTracking Advisory Services Partners with **Baptist Memorial** Health Care to Drive Change

The implementation of a successful patient flow strategy brings together top-notch technology, well-trained, engaged people and efficient, well thought-out processes. TeleTracking's highly experienced Advisory Services team brings these three prongs together for our clients every day. Led by Vice President, Nanne Finis, this six-member team of seasoned nurses and hospital

administrators has an average of 25 years (each) of experience in healthcare.

"Our team uses Lean Six Sigma tactics, process redesign and workflow automation to help clients maximize their use of TeleTracking solutions," explains Finis. "Specifically, we give health systems the tools, methods, and systematic process to be successful. Then we guide them on



the ideal ways to monitor their results and establish dashboards that give them actionable data. The end result for clients is a journey of optimization that drives outcomes."

Baptist Memorial Health Care in Memphis, TN is one client who decided in 2015 to embark on a patient flow journey, and is now experiencing significant benefits. When they decided to centralize their operations in 12 hospitals, across three states, TeleTracking's Advisory Services team took on their biggest project to date.

"By taking a geographic approach across three states, we were able to assign individual consultants to each region on a monthly basis, and account for the diverse geography and organizational climates of each hospital," says Susan Whitehurst, Managing Director of Advisory Services. "It was an important part of the methodology to meet each organization at their location. By visiting each facility on a monthly basis, we were able to standardize best practices while tailoring our approach to the unique differences at each site."

Baptist is the largest non-profit health care system in the mid-south, with over 15,000 employees, and will soon have 17 hospitals and more than 2,300 beds. Each year, these facilities handle at least 87,000 discharges, 375,000 emergency department visits, and 50,000 surgical procedures. In addition, Baptist is a 9-star user of Epic—one of only three in the country rated that highly, as evaluated by Epic.

The Journey Begins

The patient flow journey for Baptist began in July 2014, when their leadership team knew they needed to do something to improve patient flow and overall operations. Specifically, while their discharge rate remained steady, they wanted to find a way to increase the rate of discharges that occurred earlier in the day, in order to bring in and treat more patients across their expansive service area.

The executive team debriefed and took a hard look at their current processes. They came to the realization that there were patient flow and capacity management barriers that were leading to a "Just Say No Culture" at Baptist. Things like ED and PACU holds, high length of stay and left without being seen rates were leading to lost referrals and significant leakage. The team outlined a set of key strategic initiatives for patient access:

- Efficient management of hospital throughput
- Providing patients with quick, easy access to the right care
- Growing market share by decreasing leakage in the metro and regional hospitals

The team determined one way to achieve these goals was by focusing on timely patient discharges, precision patient placement, a culture of "Just Say Yes", and physician engagement—which ideally would lead to increased inpatient and ED volumes in order to grow revenue.

Patient Care and Safety in Focus

Another benefit to this sweeping patient flow initiative was the fact that patient flow is inextricably linked to patient safety. The systematic set of processes involved in an effective patient flow strategy also helps minimize the delays in care, chaotic systems, poor visibility and communication across care teams that can ultimately result in patient harm. For example, ED boarding is directly related to patient harm—and delays in appropriate care after admission through the ED are significantly correlated to increased mortality rates and extended lengths of stay. When patients stack up in one area of the hospital, overcrowding is likely to occur in other areas. Patients may be placed in sub-optimal units as a stopgap measure, taxing already constrained resources. For example, one study shows that early discharge from an ICU to address overcrowding significantly increases ICU readmission risk.1

"With the strategic—and safety priorities in place, the Advisory Services team facilitated enterprise-wide rapid cycle events with leadership and staff from every hospital in the system. With each organization, the team reviewed the current state of their discharge processes and the barriers and factors that were driving delays. As part of this planning stage, each hospital studied best practice principles specific to patient flow and built specific action plans to address patient discharges at their facilities," says Whitehurst. "We then incorporated change management strategies and iointly implemented a 24-hour discharge prediction process. Detailed actions for each organization were executed and the organization's leadership successfully fostered attention and action on systemwide patient flow in a very tangible way."

Best Practices at Work

A corporate "umbrella" led by Jason Little, CEO, Derick Ziegler, Vice President of Regional Operations, Katie Morrissette, Administrator for TeleHealth, and Susan Ferguson, Chief Nurse Executive was put in place. The system-wide Patient Flow Council, designed by Ferguson, is comprised of C-Suite leaders across the enterprise that come together for monthly meetings where they interact, share best practices and monitor dashboard results. Key to Baptist's success was their ability to celebrate their continuous improvement, recognize unique and individual hospital excellence and promote enterprise sharing for continued growth and sustainability success.

"In addition to establishing an operational framework, this team also worked closely to build and align a budget based on both target and challenge goals. The group worked together to refine our process measures and determine the best way to monitor outcomes," says Susan Ferguson, Chief Nurse Executive.

With a framework and goals in place, the next step was expanding stakeholder engagement, further defining strategic priorities, integrating their EMR, getting physician buy-in, and developing an internal communications approach to roll out the new processes. The project team for this phase included the clinical project owner, information system project owner, clinical operations, hospital staff, super users, and the entire TeleTracking team.

Divide and Conquer

Whitehurst described how the team held monitoring visits to coach, counsel and mentor best practices across the project's timeline while working closely with staff, care management and leadership at each organization. Sustained focus on discharge readiness and redesign, precision patient placement, placement from the emergency department to the ICU, and role redesign for house supervisors were key actions.

The Rollout

"We established alignment with the chief nurses from all hospitals. Each one was able to maintain the uniqueness and

high-quality standards of their individual facilities, while at the same time meeting system-wide goals," explains Finis. "They were responsible for engaging physicians at their facilities, as well as being the point people throughout installation, training, optimization and process redesign. After each one of the technology go-lives, the Advisory Services team conducted assessments which provided additional fine-tuning and really showed the power of integration and automation."

From the perspective of an enterprise wide initiative, there were continued operational process/workflow refinements — which are still occurring to this day.

A Cultural Shift

The "Just Say No" culture evolved into a "Just Say Yes" culture. The TeleTracking dashboards make it possible to see and respond to challenges, while the real-time data and reporting that is available also provides system-wide transparency.

Other results include:

TRANSPARENCY OF DATA

- Key performance metrics, both system-wide and per facility
- A daily declination and cancellation report of patient transfers is used to investigate / resolve issues
- Daily custom reports were developed to include pending discharge compliance vs. pending discharge accuracy, and discharges by 11am, 2pm and 6pm

ACCOMPLISHMENTS THROUGH 2016

- The Patient Placement Center averages 20,000 calls per month
- Overall improvements in bed availability and patient throughput
- System ED volume has increased 15%, while at the same time, ED hold hours have decreased by 52% at the flagship hospital
- Patients from the ED now receive bed assignments within 14 minutes - 83% of the time
- 14% of system patients are discharged by 11am; 48% of system patients are

- discharged by 2pm
- Patient transfer volume has increased by 15% with an acceptance rate of 92.6%
- Physician acceptance of a transferred patient averages 12 minutes
- Declination rate is currently 2.4% with a cancellation rate of 5%

CHALLENGE GOALS

- 9 of 13 hospitals have met their challenge length of stay goal for 2016
- System ED LWBS is 1.40%

Advisory Services continues to play an active role with the team from Baptist, attending their monthly meetings. Their impact can be quantified by looking at the Patient Flow Maturity Model², which the team has adopted to describe organizational attributes in process. structure, leadership and the resulting outcomes that "mature & improve" along a five stage model from Unpredictable to Mature. Twenty-four months ago, all the Baptist sites were at stage 2, also known as the Reactive phase. Currently all organizations have self-assessed themselves at greater than stage 3, with eight or nine organizations at stage 5 or "fully mature."

"We are thankful for the support and guidance we received from Advisory Services throughout our patient flow journey. From process redesign to onsite meetings, they were with us every step of the way," concludes Ferguson. "And we are proud of the successful growth in volume that we're seeing at our hospitals. Through February 2017 we are on target to achieve an almost 4% increase in hospital discharges and a 1% increase in hospital outpatient registrations by the end of our fiscal year [September 2017]."

1. D. R. Baker, P. J. Pronovost, L. L. Morlock et al., "Patient Flow Variability and Unplanned Readmissions to an Intensive Care Unit," Critical Care Medicine, Nov. 2009 37(11):2882–87.

2. The Patient Flow Maturity Model is based on the Capability Maturity Model Integration (CMMI) development process. CMMI and Capability Maturity Model are registered trademarks of Carnegie Mellon University. With the strategic and safety priorities in place, the Advisory Services team facilitated enterprise-wide rapid cycle events with leadership and staff from every hospital in the system.





Last year I wrote a piece for Patient Flow Quarterly where I stated that there was one guarantee for hospital leadership teams—that today will be different than yesterday, and tomorrow will be different than today. This was proven—and continues to be—true, and why focus, strategy and adaptability also continue to be as important as ever.

Let's take a brief step back. 2016 was a good year for the health systems that remained focused on achieving their strategic objectives and staying true to their core competencies. The health systems that succeeded also remained focused on the five key imperatives discussed last year:

- 1. Grow clinically and non-clinically
- 2. Become more productive
- 3. Improve safety and quality
- 4. Reimagine cost structure
- **5.** Win the war on talent

However, it was disappointing for the ones who did not stay focused on those objectives and also made big bets on acquisitions outside of core acute care operations.

As we move through 2017, many things across the healthcare spectrum remain unknown. With the changes that accompany any new administration, including the discussion centered on the "repeal and replace" of the Affordable Care Act, possibly as soon as 2018, uncertainty is at an all-time high. No one knows for sure what will be included in the new plan, but President Trump and the Republican Congress have been clear that they embrace market-based reforms that are designed to provide transparency for families and patients. These reforms might include:

- A much greater focus on, and rewards for, overall patient and family experience
- Added incentives and rewards linked directly to health system quality and safety performance
- Expanded use of HSAs
- Cross-state insurance sales
- Increased transparency around provider pricing triggering the need for health systems to start managing their cost structure in line with these expected changes in revenue
- Re-importation of medications
- Allowing Medicare to negotiate directly with pharmaceutical companies
- Providing tax credits for consumers who pay for their insurance premiums out-of-pocket

 Possible return of block grants to the states for Medicaid

So what does all of this uncertainty mean for health system boards and their executive teams? It's actually less dramatic than you may think. It most likely means "more of the same" from a day-to-day operating perspective and remaining focused on the five key imperatives that drove successful results in 2016. Specifically, executive teams need to double-down on process excellencewhich will be critical to being successful in areas such as pricing in a risk-based world, medical cost management while delivering superior quality, holistic management of patient access and flow throughout the entire continuum of care, and comprehensive cost management, which encompasses all non-labor costs. At the same time, while process excellence is necessary it is also insufficient when it comes to addressing marketplace uncertainty. And that's where sharp strategic thinking comes into play. The reality is that the stakes grow even higher during periods of uncertainty. And so that means leadership teams will need to:

- Think holistically about healthcare across the continuum—from the acute care setting to home-based care
- Win the access game through process excellence and technology
- Invest capital strategically in order to generate sufficient scale to compete successfully, in addition to tapping non-clinical sources of revenue
- Identify and recruit future talent needs in both clinical and non-clinical areas
- Keep optimistic and don't panic

In the end, if history is a guide, the winners during periods of uncertainty are the institutions that remain purposeful and deliberate in their actions—while also being adaptable and flexible in responding to emerging market forces. The days of five-year strategic plans are gone. Successful healthcare enterprises will find ways to manage their core operations in order to achieve operating leverage (regardless of strategic uncertainty), while defining strategies that adapt quickly to the rapidly changing world in which we live today.



TIM CHAPMAN

Executive Healthcare

Advisor and Board Member

Tim Chapman has more than 30 years of experience in healthcare. He is an advisor and board member for health systems, academic medical centers, and medical device and technology companies. Tim works at the intersection of operations effectiveness and hospital operations, and helps hospitals maintain/ grow their financial stability in an increasingly uncertain environment. Previously, Chapman served as a Director at McKinsey & Company, and as the President of STERIS healthcare group.



Regionally, nationally and globally, UPMC is committed to an exceptional patient care model.

A \$13 billion world-renowned health care provider and insurer, Pittsburgh-based UPMC is inventing new models of patient-centered, cost-effective, accountable care. UPMC provides nearly \$900 million a year in benefits to its communities, including more care to the region's most vulnerable citizens than any other healthcare institution. The largest nongovernmental employer in Pennsylvania, UPMC integrates 65,000 employees, more than 25 hospitals, 600 doctors' offices and outpatient sites, and a more than 3 million-member Insurance Services Division, the largest medical and behavioral health services insurer in western Pennsylvania. Affiliated with the University of Pittsburgh Schools of the Health Sciences, UPMC ranks No. 12 in the prestigious *U.S. News & World Report* annual Honor Roll of "American's Best Hospitals." UPMC Enterprises functions as the innovation and commercialization arm of UPMC while UPMC International provides hands-on health care and management services with partners in 12 countries on four continents. For more information, go to UPMC.com.

Bill Strickland, president-CEO of Manchester Bidwell Corporation, and one of the keynote speakers at TeleTracking's 2016 Client Conference, knows firsthand about the compassionate care that is provided every day at UPMC. In May 2016, Bill underwent a double lung transplant and at one point wasn't sure he was going to make it through the night. A nurse sat with him during this difficult time and said they were going to see the sun come up together because she wasn't leaving his side. During his speech, Bill recognized those in attendance from UPMC for the caring, compassionate care that he received during his stay.

We were pleased to have presenters representing three different UPMC providers at the 2016 Client Conference—UPMC McKeesport, Children's Hospital of Pittsburgh of UPMC and UPMC.

UPMC MCKEESPORT

UPMC McKeesport is dedicated to providing the right care, every time—from the surgeons in the operating room, to the nurses at the bedside, the staff is committed to delivering excellent, compassionate care to the patients they serve. The hospital offers 216 beds for acute care patients and 56 beds for patients who need skilled nursing care.

For the third consecutive year, The Joint Commission has selected UPMC McKeesport as a Top Performer on Key Quality Measures®. This program annually recognizes hospitals that are leading the way nationally in using evidence-based clinical processes that are shown to be the best treatments for certain conditions.

Challenges

As a community teaching hospital, UPMC McKeesport plays an important role in meeting the healthcare needs of 200,000 residents of McKeesport and its surrounding communities. And with a large number of elderly residents, acute care services were especially in demand—leading to capacity and access issues. Specifically, they were dealing with:

- * Heavy ED demand that affected patient flow
- * Capacity challenges through the consolidation of 6 units to 5 units
- * Use of real-time data was underutilized—and therefore it was difficult to respond immediately to issues

Actions

- * An organizational process was established in order to help decompress the emergency department when patient volumes reached a certain level.
- * High census alert activations and interventions were also implemented to help decompress the inpatient and critical care areas.
- * The placement of patients through TeleTracking began in September 2015 and was driven by nurses, since they are on the front lines and in touch with how to properly place patients.
- * The characteristics and inpatient unit accommodations were all reexamined. The needs of different units were taken into consideration and indicators—such as close to the nurse's station, flexible telemetry and bariatric suitewere implemented.
- * The increased use of discharge milestones to expedite patient discharges was implemented, in addition to scheduling daily bed huddles and publishing a capacity grid three times a day.

Results

- * Successful emergency department decompression
- * Improvements in the number of discharges before 4pm making evening admissions possible without the threat of capacity issues
- * Increased patient satisfaction rates
- * Seamless utilization of flex units
- * A strong physician commitment to effective patient flow strategies and the role it plays in delivering excellent patient care

CHILDREN'S HOSPITAL OF PITTSBURGH OF **UPMC**

Regionally, nationally, and globally, Children's Hospital of Pittsburgh of UPMC is a leader in the treatment of childhood conditions and diseases, a pioneer in the development of new and improved therapies, and a top educator of the next generation of pediatricians and pediatric subspecialists.

Children's Hospital has fulfilled this mission since its founding in 1890. Children's is named consistently to several elite lists of pediatric hospitals, including ranking 10th among children's hospitals and schools of medicine (FY 2015) in funding for pediatric research provided by the National Institutes of Health, and is one of 11 pediatric hospitals in the United States named to U.S. News & World Report's Honor Roll of America's "Best Children's Hospitals" for 2016-2017.

Children's Hospital is a Pediatric Level I Trauma Center that is part of UPMC. The campus has 315 licensed beds, including a 41-bed Emergency Department and Trauma Center, 103-bed Critical Care Unit, 13 Operating Suites, including six equipped with leading-edge minimally invasive equipment, and state-of-the-art technology.

UPMC integrates 65,000 employees, more than 25 hospitals, 600 doctors' offices and outpatient sites, and a more than 3 millionmember Insurance Services Division, the largest medical and behavioral health services insurer in western Pennsylvania.

Challenges

- * As part of the implementation of TeleTracking, a hospital-wide committee comprised of the Health Unit Coordinators [HUC] was established— which was designed to empower the group to manage bed flow in their respective units.
- * Even with HUCs, there were questions as to who was managing patient flow at the unit level, especially given the multiple responsibilities nurses manage as part of delivering quality care.

Actions

- * The HUCs met regularly to discuss potential concerns including EVS, transport and bed placement—and worked together to come up with solutions prior to the implementation of TeleTracking.
- * HUCs were empowered to manage unit bedboards, which meant they had the best idea of the available resources in the unit and therefore the most efficient way to manage them.
- * The HUCs also manage the ADT system, and so hospital leadership relied on them to educate other members of the nursing staff. These responsibilities gave the HUCs credibility with nursing leadership and their staffs.
- * HUCs were visible to staff and visitors entering units—staffed in acute care units 7am 11pm, in critical care units 24/7 and in the emergency department 24/7. This visibility emphasized their importance to the patient flow process.

* Three "Super Users" were selected among the HUCs and conducted training sessions for all HUCs.

Results

- Regular meetings run by the unit leader, the leader for capacity management and guests from EVS, transport, patient access and informatics has improved engagement and communication.
- Ongoing troubleshooting regarding barriers to flow and processes has made it possible to deal with issues quickly.
- * HUCs own the unit management of TeleTracking and update predicted discharges in the system, in addition to managing transfers and discharges in the ADT system.
- * Unit leadership is alerted about issues related to flow, and EVS is alerted about special need rooms (terminal clean for isolation), reducing delays and improving patient safety.
- * Requesting transport to testing areas and discharges has gotten easier with this more centralized approach.



A \$13 billion world-renowned health care provider and insurer, Pittsburgh-based UPMC is inventing new models of patient-centered, cost-effective, accountable care. UPMC provides nearly \$900 million a year in benefits to its communities, including more care to the region's most vulnerable citizens than any other healthcare institution. The largest nongovernmental employer in Pennsylvania, UPMC integrates 65,000 employees, more than 25 hospitals, 600 doctors' offices and outpatient sites, and a more than 3 million-member Insurance Services Division, the largest medical and behavioral health services insurer in western Pennsylvania. Affiliated with the University of Pittsburgh Schools of the Health Sciences, UPMC ranks No. 12 in the prestigious U.S. News & World Report annual Honor Roll of "American's Best Hospitals." UPMC Enterprises functions as the innovation and commercialization arm of UPMC while UPMC International provides hands-on health care and management services with partners in 12 countries on four continents.

Challenges

- * Multiple departments requesting rapid patient transport resulted in challenges that included:
 - Explaining dispatch logic to department heads in an easy-to-understand way
 - Transporters dealing with challenges regarding cycling jobs correctly and/or consistently
 - Engaging nursing leadership and other associated departments on how and when to request patient transport

Actions

- * Everyone involved in requesting transport was educated on best practices for doing so. Meetings were set up with transport leadership to review zoning, alerts, dispatch logic, dictionary items, among other subjects and to discuss recommendations. In addition, agendas were developed for staff meetings to helpfacilitate and engage leadership support. And finally, leadership was also trained to not just focus on averages, but also look closely at how often transporters were meeting their goals.
- * Transporters were educated on how the dispatch logic system worked, giving them greater insight into how to do their job more efficiently. This included:
 - Clearly defining cycling jobs and when to start each phase
 - Sharing data with transporters and explaining the importance of having accurate data
 - Weekly meetings to review reports and work through any issues or questions
- * Staffing was adjusted in order to provide the appropriate coverage for patient volume
- * A process was put into place using a dispatch set that uses proximity when the transport department is meeting demand, but transitions to priority when demand exceeds current staffing. Realistic escalation alerts were sent to supervisors in order to facilitate consistent follow up.

Results

- * The transport team increased their productivity, reducing response time by 14%
- *The number of rejected jobs decreased
- * Satisfaction rates with transport increased among the requesting departments
- * Reducing the total transport trip time, resulted in a savings of more than 25 hours per day
- * Delay times were reduced by 50%



OCTOBER 2016:

NHS Improvement launches The Patient Flow Software Implementation Pilots agreed on with the Secretary of State, to share progress, benefits and best practices from TeleTracking's Command Centre model and IT Operations Platform.

TeleTracking is awarded the single supplier Framework Agreement for Real Time Healthcare Tracking and Patient Flow Systems by The Countess of Chester Hospital NHS Foundation Trust, offering a fully compliant procurement route for all NHS and other public sector bodies to access TeleTracking services and solutions.

SEPTEMBER 2016:

NHS Improvement*, Director of Performance, Bernard Quinn, publishes a blog post entitled, "Better management and better care — piloting a different approach for patients," which focuses on the impact patient flow can have on hospital operations.

MAY 2015

The Royal Wolverhampton NHS Trust goes live with TeleTracking's Patient Flow and Real-Time Locating System (RTLS) solutions, which provides real-time visibility to all beds, inpatients, 4,000 staff and over 1,500 assets across the 800 bed hospital.

INITIALLY AN INNOVATION PROJECT TO MONITOR HAND HYGIENE COMPLIANCE, NEW CROSS HOSPITAL PARTNERED WITH TELETRACKING IN AN EFFORT TO:

- Improve patient access, throughput, discharge and safety by becoming more efficient
- Remove the burden of administrative tasks for frontline staff by automating workflows
- Provide staff with real-time alerts to patient safety risks, isolation alarms, and patient walk out alarms

• Monitor all staff-patient-asset interactions for infection prevention tracing

RESULTS INCLUDE:

- Despite an overall increase in annual admissions, there has been a reduction in ED breaches
- Cancelled operations due to lack of bed availability have decreased by 63%
- No winter pressure beds were opened in 2015/16, unlike the previous 8 years
- The total number of bed days occupied by medical outliers have decreased by ~30% in 2016 as compared to the previous year. This is equivalent of having ~9 additional surgical beds in 2016.
- Beds are turned over and available for the next patient within 35 minutes
- The Trust has seen a 10.8% reduction in length of stay since going live with TeleTracking's RTLS enabled platform

PAGE 18 PATIENT FLOW QUARTERLY

APRIL 2017:

David Loughton, CEO of The Royal Wolverhampton NHS Trust, and Michael Gallup, President of TeleTracking, invited as keynote speakers at the National Hospital Innovations Conference, with Lord Carter.

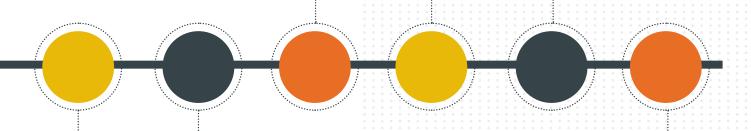
MARCH 2017:

The Royal Wolverhampton NHS Trust hosts the 2nd Annual NHS Conference: The Command Centre, Creating Capacity through the Regionalisation of Care with keynote speakers including:

- The Royal Wolverhampton NHS Trust
- The Countess of Chester Hospital NHS Foundation Trust
- Sharp Healthcare, U.S.
- NHS Improvement

JULY 2017:

The Royal Wolverhampton NHS Trust asked to speak at independent healthcare think tank, The King's Fund's Digital Health and Care Congress 2017 on "Creating additional capacity through the implementation of a real-time patient flow and tracking solution."



DECEMBER 2016:

The Countess of Chester Hospital NHS
Trust becomes the first NHS Trust to adopt
TeleTracking's Command Centre model and
IT Operations Platform under the
The Patient Flow Software Implementation
Pilot programme.

FEBRUARY 2017:

The Countess of Chester Hospital NHS Trust goes live with Phase I of TeleTracking's Command Centre and IT Operations Platform.

OCTOBER 2017:

The Patient Flow Software Implementation Pilots,
The Royal Wolverhampton NHS Trust and The Countess of
Chester Hospital NHS Foundation Trust attend
TeleTracking's Annual Client Conference in Arizona to
share early outcomes.

* NHS Improvement is the financial oversight body for NHS Trusts and Foundation Trusts and is responsible for ensuring the financial sustainability of the NHS *







SETTING THE BAR FOR SUCCESS IN ACTION



RICHMOND HOSPITAL

Richmond, British Columbia

Richmond Hospital, one of Vancouver Coastal Health's 13 hospitals, is located in Richmond, British Columbia, and is a large, urban community teaching hospital with 208 funded beds.



Richmond Hospital currently serves a population of more than 200,000 residents; however, the current population is projected to grow by nearly 25% over the next 15 years. In addition, the over-65 population is expected to grow by 130% and the residents of Richmond have a life expectancy [84.9 years]—four years longer as compared to the rest of Canada [81.2 years]. Given the current and projected capacity demands, effective patient flow and care transition strategies were becoming more essential than ever in order to ensure that patients would have—and continue to have—access to timely healthcare.

With a typical occupancy rate of 120% and at times even higher—staff was dealing with the following challenges:

- Unit-to-unit communications were handled through faxed reports and multiple phone calls
- Managing real-time patient information
- Limited access to reports
- Separate servers and databases at each site which meant the data was not integrated

Culture was also a challenge. The teams didn't have a vested interest in patient flow—they relied on an archaic infrastructure to communicate patient information. For example, the reasons behind patient discharge delays were simply assumptions. And, staff was frustrated with the numerous bottlenecks, but did not have access to the data they needed to determine the reasons why these delays were occurring. They just didn't have the tools to ensure that the right patient was in the right bed.

In addition, historically, staff members

were hesitant to embrace new technology. Reasons for this included a lack of messaging from leadership on the need for change—as well as the change management strategies that had been used, which focused on administration versus frontline users.

Finally, Richmond was dealing with technical infrastructure and stability issues which prevented the hospital from being able to upgrade and take advantage of the features that would lead to better patient flow efficiencies.



ACTION

As a first step, Richmond's hardware was updated, interfaces were developed and a technical architecture platform to support the application upgrade was implemented.

Next a detailed implementation and change management plan was developed and included:

• Executive Support & Project Team—a team that included dedicated project managers, business unit team leaders and

members, change leaders and a steering committee.

- Flexible Implementation Methodology—not just at Richmond, but across the Vancouver Coastal Health system, the project manager tailored each implementation to the site's specific user adoption needs.
- Effective Training Program —training included hands-on classroom training for superusers and computer-based training

for the end users.

- Dedicated Communications Team—responsible for developing a strategy to keep team members and end users informed and engaged.
- Go-Live Support Resources—onsite 24/7 IMITS and user readiness staff, combined with additional technical resources that were available on call.

In addition, best practices and process changes were utilized in order to fully support and optimize patient flow; standard processes across all Vancouver Coastal Health sites were implemented to support enterprise-wide patient flow improvement initiatives; and custom reports were developed for measuring patient flow performance and identifying performance optimization opportunities.



- Instant notify, alerts and paging have reduced the number of phone calls
- A single view of real-time patient information allows nurses to manage discharge milestones, monitor bed requests and identify critical patient attributes
- Decisions can be made based on access to more than 90 reports
- Upgraded to a digital phone system that supports future smart phone devices
- Upgraded to virtual servers with a shared database to reduce maintenance costs

Specific improvements in metrics include:

- Bed Request to Assignment (Clean Bed) within 30 minutes: Initially < 20% Consistently > 50%, have achieved 70%
- Bed Request to Bed Occupy within target of 4 hours: Initially < 40% Consistently > 60%, have achieved 90%
- ED Admitted Patients meeting target time of 10 Hours: Reaching target of 55% Historically was < 40%
- EVS Turnaround Times (Response + Clean): Consistently meeting average time of 40 minutes



ADVOCATE GOOD SAMARITAN HOSPITAL

Downers Grove, IL

Advocate Good Samaritan
Hospital [part of Advocate Health
Care] in Downers Grove, IL is
a 324-bed community hospital,
which operates as the only Level 1
Trauma Center in DuPage County.
The hospital has received Magnet®
recognition for nursing excellence
and is the only healthcare
organization in Illinois to earn
the prestigious Malcolm Baldrige
National Quality Award for
performance excellence.



Advocate faced operational challenges related to placing the right patient with the right nurse in the right location the first time.

• Nurses had multiple responsibilities including managing patient flow

throughout the hospital, ensuring that patients were being appropriately placed the first time based on their level of care (precision patient placement), and initiating reviews with Case Management.

• Lack of transparency from unit to unit created silos, as well as delays in everyday operations related to bed turnover, patient transport and unplanned discharges — leading to ambulance diversion to other sites, patients leaving without being seen, and overall capacity issues.

 Charge RNs and Staffing Coordinators were making staffing decisions without knowing which patients were being discharged, or anticipating incoming admissions—resulting in units not being properly staffed for incoming admissions.

 Inconsistent processes and missing information often times led to unanswered questions and the need to make multiple phone calls to patient placement, transport and environmental services.



A multi-pronged approach was initiated to improve patient safety, efficiency, throughput, communication and transparency:

- Technology: The Advocate IT team worked to ensure that the campus infrastructure was sound so that interfacing with other software solutions and customizations were not an issue.
- People: Engaged leadership and key stakeholders understood why TeleTracking was instrumental in changing process and improving efficiency. Involved departments included: Corporate, Executive Teams, Nursing Operations, Clinical Bed Management, IT, Transport, and EVS.
- Process: It was clearly communicated that utilizing TeleTracking was not an option, it was the expectation, and all caregivers needed access to real-time updates. A consistent work flow was developed that took into account the needs of each department, as well as customizing their access views. Finally, clinical bed management started managing beds in collaboration, not competition with, the charge nurses.

Unit View

Customized columns that display detailed patient information for physicians, multidisciplinary teams and visitors.

Nursing Portal View

Shows occupied, assigned, transfer requests, bed number, diagnosis, physician, nurse, PCA, etc. There are also customized columns to meet the needs of each unit.

Nursing Portal View w/ ED Admissions

Shows patients coming from the ED that have an admit order, including patients with a bed request, those with a pending assignment, and those who are assigned to a unit.

Nursing Portal View for PACU Admissions

Shows bed requests for patients currently in PACU, along with their level of care, target unit and placement status.

Nursing Portal View for Discharges

Shows patients with pending and confirmed discharges. This is updated by the unit charge nurse, with a place for social workers and care managers to add comments.

Central Transport View

Notifies the receiving unit nurse that a patient is coming to the floor.

Portal View for Multidisciplinary Team

Includes physicians, care management, social work, PT/OT/ST, dietary & labs. Can see patients occupying a room, assigned to a unit, transport information and location.

Customized Patient Attributes

Updated by the clinical bed manager or nursing unit(s). Reporting is available daily, weekly, monthly and has enhanced the ability to adapt to changes and forecast future needs.



- Transparency between units and functional areas has improved collaboration and communication and consequently improved patient throughput.
- Improved data collection and reporting has led to cost-saving initiatives.
- Bed request to patient occupy times have decreased dramatically 180 to 300 minutes before TeleTracking to 50 to 65 minutes after TeleTracking. This has also decreased ED length of stay, making it possible for Advocate to accept more patients.
- Patient transport turnaround times also decreased from approximately 40 minutes to 24 minutes after TeleTracking.

THE **CAREGIVER** & DATA DIVA OF **STAMFORD** HEALTH

Meet Kelly Jones, BSN, RN, Nurse **Manager Informatics**



STORY BY SAL SANZO

Mother Knows Best?

While she was still in high school, Kelly knew she wanted to be a nurse. However, her mother saw that the tech industry was booming, the jobs were plentiful—and most importantly her daughter had an aptitude for the field. So Kelly reconsidered her career goals and shuffled off to Buffalo to study computer science. As we know, however, nursing truly is a calling and that call remained strong to Kelly. So she shifted again and went on to complete nursing school—eventually taking her first position at Stamford Health in the General Surgery unit. In the end, both Kelly and her mother knew what was best since Kelly was able to combine her love of nursing with her love of technology when she was named the Manager of Clinical Informatics at Stamford Health.

The RTLS Journey

Like many health systems, Stamford Health dealt with headaches related to being able to track down the right piece of equipment at the right time. Kelly knew that a Real Time Locating Solution (RTLS) could alleviate these issues and put Stamford Health on the path to owning, renting and losing less equipment. Her feelings were reinforced after attending TeleTracking's Client Conference, where she saw firsthand how RTLS could have a positive impact on workflow and throughput. She came back from conference enthusiastic about the potential of automated workflows and found a sympathetic ear in John Rossi, Director of Information Services, who had already embarked on his own RTLS journey. John became a key collaborator and went on to drive the successful acquisition and implementation of RTLS at Stamford Health.

Accountability

Getting the solution in place was only half the battle. Who was going to own it? Who was going to drive the adoption of automated workflows? Kelly, empowered by Mary McKiernan, Director of Professional Development and Nursing Informatics, met those challenges head-on. Working hand-in-hand with Stamford Health's Unit Coordinators, the clinical staff realized the value in having the ability to see, in real time, the location of their patients. The constant calls inquiring about patient location are becoming a thing of the past. The benefits to patient and staff safety are becoming evident—and with RTLS triggering dirty bed notifications to housekeeping, lost bed time is decreasing and patients are getting to the right bed more efficiently.

Data Diva

Kelly Jones exemplifies the values of Stamford Health: teamwork, compassion, integrity, respect and accountability. The Stamford Health maxim of "HealthCare Reimagined" is not simply a motto for Kelly, it represents her commitment to ensuring patients are receiving the best care possible and the staff is delivering it.

"When I started in nursing, I cared for the patients on my unit. Now I think beyond the unit and want the best for all patients at Stamford," says Kelly.

Armed with the data she pulls from TeleTracking, Kelly recognizes the areas of excellence, as well as the areas for improvement opportunities. Kelly is genuinely reimagining how healthcare can be delivered and here at TeleTracking we're very proud to be a part of that journey.

EMPLOYEE SPOTLIGHT



NATE GILKERSON // Configuration Supervisor

Nate was recently honored with TeleTracking's Employee of the Year award for his outstanding work in driving the success of TeleTracking's Clinical Workflow™ Suite solution at a number of client sites. Nate's thorough knowledge of the product and ability to wear many different hats, combined with his drive for results and customer focus truly sets him apart.

YEARS OF SERVICE: Seven years of service in June 2017

WHAT MOTIVATES YOU? WHAT DO YOU ENJOY MOST ABOUT HELPING HEALTH SYSTEMS IMPROVE PATIENT FLOW? I'm motivated to help the world in general—and people in particular—thrive and flourish. Our products help get the right patient to the right bed at the right time. Our work at TeleTracking helps others work more effectively! So what motivates me about working at TeleTracking? Every day that I come to work I have the opportunity to bring order to chaos and help people thrive and flourish. To me, that is inspirational!

WHAT IS THE MOST EXCITING/INTERESTING PROJECT YOU'VE WORKED ON? What makes TeleTracking projects exciting are the outcomes we hear from our customers. Our products truly provide a "means to an outcome" and these outcomes have a positive impact on patients, their families, and the healthcare professionals who care for them.

HOBBIES: Swimming, biking, running and spending time with my wife, four daughters, and son.

We love what we do. Here's a sneak peek at the people behind the passion.



OREN LION // Senior Database Administrator

Oren was recently honored with TeleTracking's Customer Focus Award for his accomplishments related to resolving client issues and expediting the closure rate of technical support cases —while also using the information to anticipate client needs and make improvements along the way.

YEARS OF SERVICE: Five

WHAT MOTIVATES YOU? WHAT DO YOU ENJOY MOST ABOUT HELPING HEALTH SYSTEMS IMPROVE PATIENT

FLOW? Each day I get to take on tough problems by working collaboratively with great, highly-skilled colleagues. When I stop to down an espresso (or three!), I see—and admire—the energetic spirit that is all around my department to take the actions that we know helps patients get the right care at the right time.

WHAT IS THE MOST EXCITING/INTERESTING PROJECT YOU'VE WORKED ON? My manager, Raghu Ramesh, who I worked with for years as a technical contributor, gave me a life and career changing "gift"—the hottest seat on the Technology Team, to lead Production Support. What made this project more exciting and more interesting than any I worked on before was the urgency to revamp a dated process, while resolving the most impactful and complex incidents experienced by our clients.

HOBBIES: Watching foreign films, American independent films and documentaries. Studying the Chinese language and enjoying Asian food.

PATIENT FLOW PODCAST

Join Us for Patient Flow Podcast!

In one convenient place, you'll find insightful conversations with the leading experts in patient flow. You'll also find a focus on the best practices that drive successful outcomes, giving you the information you need to help patients across the healthcare continuum get the right care, in the right place, at the right time.

For more information, please visit: https://podcast.teletracking.com/









