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At Hartford HealthCare, we live by our values. Our values, boldly and
simply stated, are both an external promise to those we are privileged
to serve and an internal reminder of why we are called to this work.

Quality and safety have always been bedrock principles at Hartford
HealthCare, but acknowledgement of their importance has never
been greater. While contending with the COVID-19 pandemic, we
realize with special significance the healing power of committing to
do what is kind, safe, best and right. In the face of this global health
crisis, we have been living our vision of being “most trusted for person-
alized coordinated care.”

You will see examples of our ongoing efforts in these pages:
• How we are using technology to be a true partner in care.
• The role of innovation in our quality journey.
• Our attention to creating and adhering to best practices.

Almost every aspect of safety and quality reporting can be expressed
as a metric. We value the importance of analysis and measurement
— but we know that every data point fundamentally relates to an
individual.

On behalf of my 30,000 colleagues at Hartford HealthCare, thank you
for your interest in our quality and safety journey. It is our ongoing
quest to consistently provide the best, most advanced care with a great
experience to those we care for. Working together, we are helping
people live their healthiest lives.

I am immensely proud of the efforts of my colleagues. In the end,
this is a report on the things we do and how we do them — with
caring, safety, excellence and integrity.
Teamwork and Research Support High-Level Care

The start of a new decade brought with it the seemingly insurmountable challenge of the COVID-19 global pandemic. As the disease traveled across the globe, to our doorstep in Connecticut, Hartford HealthCare was ready to meet this public health emergency head on. The strength of our organization and the communities we serve was tested to the extreme and, together, we rose to the challenge. Never have Hartford HealthCare’s commitment, scale and capabilities been more apparent than in the 2020 response to the pandemic. Our dedicated teams led our state’s response, providing policy direction and high-quality, accessible, community-based care at a time when we were needed most. Our ability to effectively respond to the 2020 coronavirus global health crisis is a testament to our steadfast ambition, commitment and passion to deliver the safest, most excellent, compassionate care. Our collective response to the pandemic allowed us to recommit to quality and safety, our journey of high reliability and continuous improvement. COVID-19 taught us important lessons. Practices that grew out of the pandemic response presented us with the opportunity to reinforce certain practices, expedite long overdue changes in others, while putting new and improved, sustainable processes into place. Together, we have demonstrated that we will emerge as a stronger, better and safer place to work and receive care and I am humbled by the hard work and dedication demonstrated by Hartford HealthCare during such unprecedented times.

Through every challenge, Hartford HealthCare remains committed to its mission: to improve the health and healing of the people and communities we serve. Whether you visit one of our clinics or stay in one of our hospitals, we will provide the same high level of care that we would want for our most cherished loved ones. With your safety and well-being as our top priority, you will be treated with respect and will receive high-quality, compassionate care.

Teamwork and accountability are the most essential components of safe practice at Hartford HealthCare. Additionally, the care we provide is supported by the latest evidence-based research, the most current medical knowledge and advanced state-of-the-art technology and innovation in the hands of our skilled and experienced staff. We have taken major steps to build a system of care that provides timely, efficient, equitable, safe and effective services. We have launched initiatives to reduce variation in care and eliminate harm by reducing unnecessary testing and healthcare hazards, including hospital-acquired infections, falls and pressure ulcers. We have created an environment in which staff members feel empowered to report concerns, allowing us to address and resolve issues quickly. As a result of our commitment to continuous improvement, we have made dramatic progress in making care safer — a 47 percent reduction in the number of harmed patients and 32 percent reduction in hospital-acquired infections. This report provides many examples of our progress in the journey to improve quality, safety and patient experience.

The programs and initiatives outlined in this report reflect 2019 activity and performance and exemplify how Hartford HealthCare defines “value” in new and innovative ways. The Value Report explores Hartford HealthCare’s transformation into an integrated, coordinated care delivery system, through the building of ecosystems, characterized by dedicated resources and improved capabilities that enable Hartford HealthCare to deliver care more effectively and efficiently.

Further, the report demonstrates Hartford HealthCare’s commitment to ever greater transparency, cost efficiency and quality in our effort to create and sustain healthier communities.

Message from Our Chief Clinical Officer

Ajay Kumar, MD, MBA
Executive Vice President & Chief Clinical Officer
Hartford HealthCare
SYSTEM-WIDE AREAS OF FOCUS
Quality & Safety: Striving for Excellence

At Hartford HealthCare, nothing is more important than the lives and health of our patients, and we are here to help them live their healthiest lives. Our healthcare system is designed to provide services across a network of hospital and ambulatory sites of care, using evidence-based best practice, research, education and innovation to deliver a high standard of care. During this past year, we have made impressive strides in reaching our goal of providing the safest and highest quality of care. Some highlights from the past year are as follows.

Our High-Reliability Journey Continues

Hartford HealthCare’s core value of safety is embedded in everything we do. We demonstrate our commitment to this value with a relentless prioritization of safety first. In 2019, we engaged our clinical providers in high-reliability, case-based learning and reinvigorated our high-reliability training module for all new hires. These refresher sessions were offered throughout our regions, with more than 100 sessions scheduled and more than 2,000 of our providers participating.

Each participant received a pocket resource card – “Be a Safety Champ” – as a reminder of how to demonstrate our safety behaviors in every interaction. High-reliability is one of the core aspects of How Hartford HealthCare Works (H3W) leadership behaviors, which govern the way we work.

Communication, Apology and Resolution Program

When medical error or unexpected clinical outcomes occur, Hartford HealthCare is dedicated to communication and transparency. We have adopted the Communication, Apology, Resolution Program (“CARE”), partnering with Risk Management and our legal teams across all Hartford HealthCare clinical settings. Hartford HealthCare is a national leader in this area and participates in a national collaborative, under the sponsorship of Ariadne Labs and the University of Washington, to test CARE metrics. The CARE model addresses injuries that occur during medical procedures caused by a deviation from standard practice. These events are communicated clearly, with apology and a willingness to provide compensation in cases of a deviation from the standard of care. The goals of the program include restoration of our patients’ trust, reduction of lawsuits and improved patient satisfaction by providing information and support to a patient/family at a difficult time. The program not only supports Hartford HealthCare’s commitment to high-reliability, but is also consistent with the Hartford HealthCare way of doing the right thing.

Fewer Hospital-Acquired Infections

Hospital-acquired infections (HAIs) remain a significant cause of preventable patient harm. These infections can originate from the healthcare environment, healthcare workers and the patient’s own microorganisms. Invasive procedures, devices and antibiotic overuse contribute to this risk. Guided by Infection Prevention and Quality departments, HAI elimination is a top-priority for our organization. It has been a multi-year focus area for all of our hospitals. In 2019, Hartford HealthCare exceeded its target of a 12 percent reduction in HAIs, resulting in 52 fewer patients suffering the effects of infections.

Stephanie Calcasola
Vice President for Quality & Safety

2019 Value Report
Reduction in Risk-Adjusted Mortality

Risk-adjusted mortality ratios are quality data that compare actual deaths to expected deaths. They are expressed as the ratio of observed mortality to expected mortality. A mortality ratio above 1.0 means the actual number of deaths exceeds the predicted number, whereas a ratio below 1.0 means fewer patients died than expected. By focusing on evidence-based care, evaluating opportunities and optimizing clinical documentation, Hartford HealthCare’s risk-adjusted mortality rate has dropped below the national average.

Our Commitment to Eliminate Sepsis Mortality

Why Sepsis?

Sepsis is a life-threatening complication from an infection that can cause damage to multiple organs, sometimes resulting in death if not treated appropriately. Sepsis is the leading cause of unscheduled hospital admissions and patient mortality. All patients are at risk for developing sepsis, making it a pertinent opportunity for continuous improvement.

Task Force Work

A system-wide sepsis team was established with nursing, physician, advanced practitioner and quality representation from all regions of Hartford HealthCare. Collaborative discussions focused on all aspects of sepsis management from identification to treatment — all directed at reducing the human toll of this condition.

Accomplishments include:

- Deployed sepsis screening process for all patients entering through the Emergency Department (ED) to identify patients meeting sepsis criteria.
- Developed and deployed sepsis education to all Hartford HealthCare nurses to increase knowledge of sepsis criteria and treatment.
- Created sepsis resources to assist with identification and treatment (sepsis worksheet, sepsis pocket cards, sepsis resource page on Hartford HealthCare intranet) and reports providing data analytics for all aspects of sepsis measures.
- Creation of Emergency Department sepsis management protocol led by a lead ED physician and nurse. Eighty to ninety percent of patients who present to the hospital with sepsis criteria enter through the ED.
- Standardized sepsis mortality case reviews by clinical documentation specialists and quality nurses looking for accurate documentation and clinical opportunities for improvement.
- Created sepsis dashboards to provide feedback on timeliness
  - Sepsis Data Catalog — a monthly report displaying performance from previous month, in addition to Key Performance Indicator performance

Outcomes: Saving Lives and Eliminating Patient Suffering

A significant improvement of sepsis mortality was seen, as demonstrated in the risk-adjusted mortality data above. The Premier mortality observed to expected (O/E) 90-day composite for May, June, and July 2019 (reported October 2019) indicated a rate of 0.78, which is significantly below the target of 1.04. O/E ratio score of 1.0 signifies a hospital’s morality is equal to what is expected; a lower score is better. The fiscal year 2019 Balanced Scorecard goal of reducing Sepsis O/E Mortality by 5 percent was surpassed, reaching a 21 percent reduction across Hartford HealthCare. This equates to approximately 105 lives saved.
Hartford HealthCare Pioneers Wellness

Workplace wellness is associated with safety, quality and financial success. Chronic unmanaged workplace stress can result in burnout syndrome, a strictly occupational phenomenon. While U.S. workers average 27.8 percent burnout, rates in nurses and physicians (35-55 percent), residents and medical students (45-60 percent) are higher. In healthcare, burnout is associated with patient harm, errors, decreased patient experience, early retirement, decreased clinical effort, depression, anxiety and suicidal ideation.

In October 2019, the National Academy of Medicine published its Consensus Study Report, “Taking Action Against Clinician Burnout,” and called for immediate action for healthcare systems to “create, implement and evaluate their own interventions using a systematic approach to reducing clinician burnout and burnout risk, and sharing lessons learned with other healthcare organizations.” Hartford HealthCare is ready to accept that challenge and to lead regionally and nationally.

The challenges described impact the people who work in healthcare differently and require resilience or the ability to recover and remain engaged in challenging work circumstances. Hartford HealthCare’s benchmarked measurement of engagement includes questions around resilience with two domains, activation and decompression. Our performance in these specific domains has been average or below, against U.S. and regional benchmarks, especially for physicians. This is not surprising because high engagement may predispose burnout. In response to these findings, and to a critical incident in 2018, the Hartford HealthCare Provider Health and Wellness Initiative was begun to understand and address physician and advanced practice provider needs. Initiative successes included implementation of efficiencies in the electronic medical record and the development of a Peer Support Program. This work laid the foundation for the formation of the Department of Wellness and the appointment of the first Chief Wellness Officer, Sharon C. Kiely, MD, MPM, a unique distinction nationally and regionally.

Hartford HealthCare recognizes that clinicians work in a multidisciplinary ecosystem. As a result, the vision of the Hartford HealthCare Department of Wellness is, “To create an exceptional workplace by advancing the wellbeing of all who care for others.” Our model maximizes professional fulfillment with three drivers: a culture of wellness, workplace efficiency/safety and personal resilience.
Hartford HealthCare Resilience Index* – Mixed Performance At or Below Average

Measures the ability of providers & employees to recover and remain engaged even in challenging work circumstances, providing an early warning system for burnout.

Two domains- activation and decompression- combine to form this measure.

*Press Ganey Survey FY2019

Hartford HealthCare Wellness Vision & Model –To create an exceptional healthcare workplace by advancing the well-being of ALL who care for others

Culture: Shared values, behaviors, and leadership qualities that prioritize personal and professional growth, community, and compassion for self and others.

Efficiency: Workplace systems, processes, and practices that promote safety, quality, effectiveness, positive patient and colleague interactions, and work-life balance.

Personal Resilience: Individual skills, behaviors, and attitudes that contribute to physical, emotional, and professional well-being.

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Health Equity and the Quality and Safety Journey

“Evidence of racial and ethnic disparities in healthcare is, with few exceptions, remarkably consistent across a range of illnesses and healthcare services... The majority of studies...find that racial and ethnic disparities remain even after adjustment for socioeconomic differences and other healthcare access-related factors.”

These words open the landmark 2003 Institute of Medicine report, “Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.” The report was the first national, comprehensive examination of the prevalence and nature of racial and ethnic disparities in healthcare quality, and ushered in a new era of academic inquiry, medical research and quality improvement initiatives to better define, understand, and address these disparities.

One thing has been clear since the publication of “Unequal Treatment,” and “Crossing the Quality Chasm,” published two years earlier, equity is an essential component of quality. Named by the Institute of Medicine, equity is one of the six aims for a 21st century health system and is continually validated as a bedrock principle of successful quality improvement initiatives.

While the root causes of health disparities may overlap with other quality and safety drivers, many times they are distinct and require their own interventions. This reality underlies the rationale for the creation of Hartford HealthCare’s first Health Equity Department. One of the founding objectives of our department is to engage in a system-wide effort to identify, measure, understand and design solutions to reduce disparities in health status and outcomes.

Existing data underscores the urgency of our work. According to reports by the Robert Wood Johnson Foundation and the Connecticut Health Foundation, the difference in life expectancy between a resident in the North End of Hartford and West Hartford Center is 15 years; the difference in life expectancy between a resident of Bridgeport and nearby Westport is 19 years. The infant mortality rate for babies born to black mothers in Connecticut is more than four times higher than it is for babies born to white mothers. Black men in our state are nearly twice as likely to die from prostate cancer as white men. Black and Hispanic residents are more than twice as likely to have diabetes as white residents. Overall, black people in Connecticut are expected to die younger than white people.

This sobering data, and, most importantly, the numerous lives and stories captured within each data point, inspires and fuels our health equity mission. Our vision for health equity is that every person, regardless of race, ethnicity, gender identity, ability, disability, language, place of origin or socioeconomic status, has fair and just access to being as healthy as possible. Fulfilling this vision for all of our patients requires a bold agenda and a system-wide commitment to embedding equity in everything we do.

To that end, our team has determined five core areas of work that comprise our system-wide health equity strategy:

**Health Equity Strategic Priorities**

- Targeted interventions, both clinical and community
- Implicit bias reduction
- Strengthen diversity, equity and inclusion practices
- Advocacy
- Spending and investment strategy/“Anchor Mission”
Many objectives of our first two strategic priorities — targeted interventions to reduce health disparities and implicit bias reduction training — are best achieved through a quality and safety framework. Implicit or unconscious biases are judgments or conclusions that we draw without being aware of them. We all have them — they are part of the adaptive cognitive framework that helps us separate friend from foe — and having them doesn’t make us bad people. But unknowingly harboring negative biases against other groups of people can interfere with the way that we treat our patients and relate to our colleagues. The prevalence and perpetuation of disparities in health status and outcomes are chronic harms, and a harm occurs during each instance of conscious or unconscious bias by a provider towards a patient. This is why equity must be included as an explicit aim in all quality and safety initiatives; without a concerted effort to understand the drivers behind health disparities, we will not know how to address them. Studies have shown that when equity is not included in a healthcare organization’s quality and safety mission, disparities remain or, in some cases, worsen.

The publication of this report coincides with what is likely only the beginning of the COVID-19 pandemic. What is often true of existing crises is that they only worsen with time. Sadly but predictably, this is exactly the way the COVID-19 pandemic is unfolding across our state and across our country. Rates of infection and death associated with the SARS-CoV-2 virus fall along long-standing racial and ethnic fault lines. To date, data from across the United States indicate that African Americans and Hispanics are testing positive for COVID-19 infections at higher rates than whites, and dying from the disease at disproportionately rates as well. In Connecticut, at time of writing, African Americans and Hispanic residents are seeing higher rates of positive COVID-19 cases compared to white people, and African Americans are experiencing a higher mortality rate than white people.

The urgent necessity of our work was clear long before the emergence of this deadly pathogen. As healthcare providers and community members, it is our responsibility to mount an equitable response to the disease’s inequitable impact. We have begun by examining our own internal COVID-19 data according to race and ethnicity, making testing more widely available and accessible, and developing and disseminating validated and culturally informed communications to a variety of audiences, at times in collaboration with leading community groups. These initial responses to the pandemic are just the beginning. We have more to do as a system to name and mitigate the systemic inequities that lead to early death and disability for too many of our community members.

Through the leadership and expert guidance of Dr. Rocco Orlando, Chief Academic Officer, Dr. Ajay Kumar, Executive Vice President and Chief Clinical Officer, and Stephanie Calcasola, Vice President of Quality & Safety, and the dedicated work of countless colleagues within each of our patient care settings, Hartford HealthCare has a high-performing, system-wide quality improvement infrastructure. Our unified efforts to reduce patient harm are made possible by the ongoing cultivation of a culture of safety, the integration of lean principles into our operating model, and Balanced Scorecard objectives that keep our patients’ safety top of mind. Just as we need a culture of safety, we need a culture of equity. It is imperative that we incorporate this cross-cutting dimension into the way we collect and analyze data, care for our patients and one another, and evaluate the design and effectiveness of our quality improvement initiatives. In doing so, we will better our chances to fulfill our mission to improve the health and healing of the communities we serve. We have no time to lose.
Progress Towards #123: Priorities, Strategies & Analytics

The goal of being number one in patient experience in the northeast by 2023 (#123) is not simply an aspirational target. In 2019, we evolved our culture, systems and processes to a level of performance that supported making this commitment to our board, our executive team and, most importantly, to our staff with the belief and confidence we could achieve this status. In partnership with Press Ganey, our patient experience survey vendor, we embarked on a transformation strategy. Hartford HealthCare connected Employee Engagement, Quality and Safety and Patient Experience to link our high-reliability work, workforce solutions and ongoing clinical and operations as a part of our continuous improvement efforts.

In support of this work, the Patient Experience Department reorganized and created a new Department of Analytics – a team dedicated to the collection, analysis and generation of insights from engagement and experience data. Focusing on the connections to quality and safety, some initial results demonstrated high correlations with:

- The best practice of hourly rounding and the reduction in falls.
- Hourly rounding and employee perception of their leader.
- Employees’ likelihood to recommend our organization as a good place to work and patients’ likelihood to recommend for care.
- Team cohesion and response to concerns/complaints and how well staff work together to care for the patient and how well staff work together to care for the patient.

This work identified those previously unleveraged connections among employee engagement, patient experience and quality and safety from the patient, staff and provider perspectives.

In October 2019, Press Ganey launched a new 2020 transformation initiative, and because of our agility, resilience and overall performance, Hartford HealthCare was chosen among select clients in the U.S. As a result, Hartford HealthCare was to benefit from more than $3 million dollars of data collection, assessment and advisory consulting services from Press Ganey. The Hartford HealthCare executive leadership team participated in a strategy workshop that reflected where we were in the journey to #123, and how to excel going forward in the areas identified in the graphic below. These initiatives included:

- Anchoring patient experience as a strategic priority
- Defining what patient experience means for Hartford HealthCare
- Developing the narrative and ensuring leaders use it
- Integrating the narrative into the enterprise communication strategy
- Forming a cross-functional team to lead this work
- Integrating efforts into strategic talent management
- Including a provider-centric strategy
- Identifying and fixing what is broken
- Evolving new best practices
- Developing a focused and dynamic data strategy
- Defining behaviors and linking them to the definition and narrative

In the first quarter of our fiscal year 2019, we had already begun to see an increase in year-over-year patient experience scores in inpatient, emergency services and outpatient services. Plans for 2020 include expanding the staff and regional representation of human care directors, including one dedicated solely to emergency services system-wide.
PUBLIC & REGULATORY REPORTING
Leapfrog Patient Safety Performance

Public reporting of healthcare quality and cost data empowers consumers to make informed decisions about their health and care. Increased transparency equips physicians, hospitals and insurers with data necessary to assess performance. In order to address the dearth of healthcare consumer information, government and private organizations released user-friendly comparison tools, such as Medicare’s Hospital Compare and Leapfrog’s Quality & Safety Ratings. Hartford HealthCare is proud to achieve high ratings on public reporting tools while continuously striving for excellence.

Hartford HealthCare exemplifies the core value of patient safety and the oath all healthcare providers make — do no harm. The Leapfrog Group’s semiannual quality and safety performance survey allows hospitals and health systems to benchmark themselves against other hospitals locally and nationally. Each survey presents an opportunity for learning and improvement. It is a Hartford HealthCare goal to improve grades across the system of care as part of our promise of “one standard of excellence.”

Hartford HealthCare significantly improved performance in 2019. Four out of seven hospitals received an “A” grade (Backus Hospital, Charlotte Hungerford Hospital, MidState Medical Center and Windham Hospital). Additionally, The Hospital of Central Connecticut improved from a “C” to a “B.” Lastly, Hartford Hospital, although there was no change in letter grade, “C,” saw significant improvement in year-over-year performance in reducing hospital-acquired infections and deepening its error prevention practices.

Collectively, Hartford HealthCare has made great strides in enhancing quality and safety for patients we serve. For example, we have reduced hospital-acquired infections, serious safety events and blood clots.

Hartford HealthCare strives for excellence in all quality and safety measures. As even one instance of avoidable harm is unacceptable, Hartford HealthCare is committed to eliminating all preventable harm and preventable mortality.
HARTFORD HEALTHCARE REGIONS
Our H3W culture helps facilitate innovation and ingenuity, empowering staff to come together to design and implement initiatives aimed at improving the patient experience, quality and safety, and promoting care standardization and value-based care.

In 2019, one project stood out. Using Lean principals, Hartford Hospital’s Intravenous Services team established a process for centralizing peripheral intravenous catheters (PIVCs) in almost all Hartford Hospital patients. With a curious yet non-judgmental approach, the group conducted a two-year study to show that the way in which caregivers were inserting PIVCs was not the safest and most cost-effective. They designed and implemented a way to improve the insertion process and measured its success so it can be shared across our health system and industry. As you will see below, the results are impressive.

Using evidence-based standards of care and always putting patient safety first, the Intravenous Services team and others like it, continue to drive meaningful change at our hospital and across our health system. These efforts are helping us deliver on our commitment of greater transparency, cost efficiency and always delivering the safest, highest quality care to our patients.
The team enrolled 94 Group 1 sites and 113 Group 2 sites, showing a positive statistical difference, better outcomes and longer dwell times with PIVCs catheters placed by a VAST using a bundled approach.

1. **Group 1 (standard of care for IV insertions by staff nurses)**
   - 15% of PIVs lasted till end of therapy
   - 40% complication rate

2. **Group 2 (IV inserted by VAST using a bundled approach)**
   - 89% of PIVs lasted till the end of therapy
   - 11% complication rate
   - 96% first stick success rate

3. **Cost per bed savings of $3,376.00 per year ($2.9-million annual yearly savings)**

The team’s work is being shared across the industry. In the fall of 2019, the results of the study (*Reaching One Peripheral Intravenous Catheter (PIVC) Per Patient Visit with a Lean Multimodal Strategy: the PIVSRight™ Bundle*) were published in *The Journal of the Association for Vascular Access*. In addition, members of the IV team shared their findings during the 2019 Association for Vascular Access (AVA) annual national meeting in Las Vegas, Nevada, and at the San Antonio Nursing Consortium’s first symposium entitled “Safe Accountable Nursing Care: Evidence-Based Practice across the Care Continuum.”

**Team members:**

- Suzanne Alvarado, RN
- Joseph Baczewski, RN, VA-BC
- Karen Bement, RN, VA-BC
- Jeffery Bergeron, RN
- Maria Cardozo, RN, CRNI
- Tiffany Chalfant, RN
- Sengphet Chantarak, RN, VA-BC
- Nicole Daigneau, RN
- Stefanie Devito, RN
- Devin Hahn, RN
- Angela Hansen, RN
- Heather Hatch, RN, VA-BC
- Junsheng Hou, RN, VA-BC
- Margaux Lear, RN
- Kyle Malan, RN, VA-BC
- Anne Minar, RN
- Kimberly Pantano, RN, VA-BC
- Elizabeth Permedi, RN
- Lee Steere, RN, CRNI, VA-BC
- David Tincopa, RN, VA-BC
- Xuqin Wang, RN, VA
Outpatient Services

In September 2019, we opened the 50,000-square-foot Hartford HealthCare HealthCenter in Cheshire. It is the largest footprint of healthcare services under one roof in town. It includes the David and Rhoda Chase Family Movement Disorders Center, plus a variety of specialties, including headache, cardiology, primary care and more.

A new 5,000-square-foot outpatient physical rehabilitation space at The Hospital of Central Connecticut (HOCC) now provides the latest exercise equipment and specialized care for patients with mobility challenges, with services that include headache management, post-surgical rehabilitation and work injury rehabilitation.

We also launched the new Breast Care Center at MidState Medical Center (MidState). From nurse navigators to breast and oncologic surgeons, our patients have access to our extraordinary team of experts, all under one roof.

Emergency Care

All three Emergency Departments (ED) piloted a new ED access option. On My Way enables patients to view wait times at HOCC New Britain and Bradley campuses, as well as MidState, and notify staff that they are on their way to the hospital. This is particularly useful for patients seeking care outside of urgent care hours.

MidState welcomed Northeast Emergency Medicine Specialists as its new ED physician team, and in just a few short months, there was a significant improvement in patient satisfaction.

Vascular Services

We invested significantly in enhancing our vascular and cardiac capabilities by constructing new hybrid procedure rooms at MidState and HOCC. These rooms, outfitted with the latest technology, allow us to provide the most advanced care close to home.

We are looking forward to another successful year in 2020.

SPECIAL PROJECT: ADDING VALUE TO THE ORGANIZATION

In March 2019, the HOCC Spine Center opened on the New Britain campus. Adults struggling with acute back and neck pain now have same-day access to specialized care in an updated location that provides urgent and follow-up care. Patients can see a physician or advanced practitioner, receive imaging, get an epidural injection and go to physical therapy, all under one roof. The center is truly changing how patients experience their care. This center can be scaled to the Hartford HealthCare system as entities implement the proven successful model.

The center, which accepts walk-ins and appointments, treats a variety of conditions, including: injuries, acute pain, spinal stenosis, degenerative discs, pinched nerves, bulging or herniated discs, sciatica and muscle spasms.

Patients may receive referrals for imaging, physical therapy, pain management and, when appropriate, a surgical opinion. The center uses a multidisciplinary model, including clinicians from physiatry, behavioral health, pain management, neuro and orthopedic surgery, emergency medicine, radiology and more. It also emphasizes a non-opioid approach to pain management.
Key Takeaways:

- A patient referred to physical therapy through the Spine Center has a 57 percent decrease in pain score between the start of therapy and completion of therapy versus 33 percent for all of Hartford HealthCare.

- A patient referred to physical therapy through the Spine Center is likely to be discharged from treatment 30 percent earlier than someone referred from another specialty.

Additional details:

- 99 percent of patients are scheduled for same or next day appointments, unless otherwise requested by the patient.

- 9 percent of patients treated in the Spine Center are referred to a spine surgeon for a consultation and, of those sent, 30 percent had successful spine surgeries.

- This information is useful as the other 91 percent have been treated functionally through physical therapy or injections, etc.
Hartford HealthCare’s mission is to improve the health and healing of the people and communities we serve. In 2019, the East Region had great focus on this mission by both expanding access to local primary and specialty care for our patients and by enhancing our preventive health services to improve the health of our community.

The expansion of the Hartford HealthCare institutes in the East Region has driven the recruitment of specialty physicians, who bring more specialized care to the region and the community. We opened a health center in Pawcatuck, offering primary care and pediatric primary care, as well as rehabilitation services; established a Congestive Health Failure Clinic at the Heart & Vascular Institute’s Norwich location; and broke ground on a multi-specialty care center in Mystic that will bring heart and vascular and neuroscience expertise to the community.

In addition to our expansion of physical locations with specialty and primary care services, we also expanded our preventive health services in the region. We expanded the Preventive Medicine Team at Backus Hospital, which is a program designed to connect our most at-risk patient population to essential services, education and screenings to improve patients’ quality of life and decrease hospital utilization. The results have yielded success and so far 68 percent of patients indicated their quality of life had improved as a result of the program.

The expansion of access to specialty and primary care settings and the Preventive Medicine Team’s approach for our most vulnerable patients allows for coordinated care to ensure our patients are receiving the care they need when they need it. It is our commitment to making a difference that has improved the health of our community in 2019 and beyond.

**SPECIAL PROJECT: ADDING VALUE TO THE ORGANIZATION**

**Background**
Between August 2016 and July 2017, the top 100 highest cost patients admitted to Backus Hospital were identified as having a total of 695 inpatient and observation encounters, accounting for $17.3 million in charges. Review of these frequently-admitted patients revealed a vulnerable population that often experienced fragmented care, poor health outcomes and high resource utilization. In response to this data, Backus Hospital developed the Preventive Medicine Team comprised of an Advanced Practice Registered Nurse (APRN) and Licensed Master Social Worker (LMSW) to provide enhanced management for high-risk patients admitted three or more times in the previous six months. The goal of this program was to create a complex care management team which will identify at-risk patients, implement interventions and establish measurable Triple Aim goals for experience of care, cost and population health.
How Does a Preventive Medicine Team Improve Quality of Life and Reduce Hospital Utilization for Frequently Admitted Patients?

Lisa DeCarlo, APRN; Barbara Sinko, LMSW; Lisa Hageman, RN, MSN; Peter Shea, MD; Naomi Nomizu, MD; Nader Bahadory, MD

**INTERVENTIONS**
- Identify at-risk patients and enroll in Preventive Medicine registry
- Personal interview and in-depth clinical and psychosocial assessment
  - Identify and address social determinants of health (SDOH)
  - Complete depression screening (PHQ-2/PHQ-9)
  - Assess self management abilities
- Solicit patient, family, and caregiver engagement and understanding of current health status and goals of care
- Review and/or educate on Advance Directives
- Complete intensive medication reconciliation and thorough review of medical history
- Explore current reported Health Related Quality of Life (HRQOL) and elicit patient driven course of action for improving future HRQOL
- Develop personalized Transitional Care Guide
- Update problem list/medical history in EMR
- Educate on chronic disease states
- Coordinate transitions with community medical providers and partners
- Follow up with patient after discharge (phone calls and home visits as needed)

**IMPACT**
- Health Related Quality of Life – 68% good or improved
- Total inpatient/observation encounters – 65% decrease
- Total inpatient/observation days – 66% decrease (1,562 days)
- Total ED visits – 38% decrease

A dedicated team can improve quality and decrease utilization for frequently admitted complex patients

Health Related Quality of Life Rating >30 Days

Post PMT Intervention

<table>
<thead>
<tr>
<th>Decreased</th>
<th>No Change</th>
<th>Improved/Good</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>2%</td>
<td>2%</td>
<td>68%</td>
<td>17%</td>
</tr>
</tbody>
</table>

**OUTCOMES**

- Of the 113 patients who completed the HRQOL more than 30 days after discharge, 80% reported an improvement, 8% reported no change, and 8% reported a decrease. A chi-squared test hits 17%, highlighting the severity of those of the patient population. When this is subset, the improved group increases to 66%.

**IMPACT**

- This program brings continuity and coordination of care to the most vulnerable subset of patients, some of whom were hospitalized so often that they never had a chance to see an outpatient provider between admissions,” notes Naomi Nomizu, MD, former chief hospitalist at Backus and Windham.

**Next Steps**
- Expand process to other acute care facilities in the Hartford HealthCare System
- Develop similar process for patients with frequent emergency department visits
- Capture value-based care opportunities created by this process
- Change inclusion criteria to patients identified by Epic with high risk of unplanned readmission scores
NWCT “Fit Together” Community Health Initiative
Northwest Connecticut “Fit Together” is a CHH-initiated community collaborative of health and social service providers and public officials aimed at identifying and implementing environmental and social improvements in the greater Torrington and Winsted areas that help individuals make healthy, easy choices. With objectives to increase physical activity and promote healthy lifestyles, Fit Together serves as the main vehicle for implementing many of the region’s health strategies that relate to this purpose and receives $100,000 per year for the next five years from Hartford HealthCare with which to accomplish this goal.

The program has been busy building healthy kids and families by promoting wholesome eating and active lifestyle programs. Executive Director Carla Angevine, MS, RDN, and Program Coordinator Jessica Stewart have developed and presented an array of initiatives with the group’s steering and marketing committees made up of local health and nonprofit leaders who volunteer their time.

Fit Together adopted “5-2-1-0” as a central message for all of its initiatives. Let’s Go!, a childhood obesity prevention initiative in Maine, originally developed the 5-2-1-0 message, which stands for five or more fruits and vegetables a day, two healthy screen time habits, one hour or more of physical activity a day, and zero sugary sweetened beverages. Let’s Go! uses a six-sector approach to reach youth and families where they live, learn, work and play to reinforce the importance of healthy eating and physical activity. The six sectors are: early childhood, schools, after-school, workplace, healthcare and communities.
Fit Together gives GOLD Partner recognitions to honor sites in Torrington and Winsted for their positive impact on children's health, including seven child care centers that are proactively implementing evidence-based strategies to increase daily healthy habits and three healthcare practices that are initiating conversations to reinforce the importance of healthy habits. The group also allocates its resources for community assistance and has awarded more than $15,000 in grants to community partners to help support projects that align with Fit Together’s mission and strategies.

Fit Together also supports sustainable healthy environmental opportunities in Torrington and Winsted and designated funding for a new all-level fitness trail along the Sue Grossman Still River Greenway. It also organized a Bike Rack Sponsorship Program, with 20 new Fit Together bike racks allotted for placement throughout the two towns.

**Building Healthier Communities Fund**

As part of the affiliation agreement between CHH and Hartford HealthCare, a distribution of $2.5 million has been made to the Northwest Connecticut Community Foundation, Inc. for the express purpose of enhancing the economic and community well-being of the greater Torrington and Winsted areas. Funds are to be used for the formulation of a regional economic and social development plan to improve the social determinants of health.

In December 2019, the fund awarded the largest grant in its history, totaling $1,196,750, to the towns of Torrington and Winsted to support economic development strategies designed to attract new businesses, promote job growth and enhance community wellbeing. The grants will be distributed to town administrators over a three-year period. The towns worked together on a comprehensive joint proposal that addresses their similar needs and challenges and a desire to work collaboratively to create effective economic growth in Northwest Connecticut. The towns plan to hold future joint monitoring meetings to discuss and track progress.

Presented to Torrington Mayor Elinor Carbone and Winsted Mayor Candy Perez, this generous grant is not only about economic development, but a chance for our towns to partner for meaningful change to benefit the entire region. The grant is not calling for a branding and imaging study but promoting their communities beyond the use of traditional marketing strategies. The strategies will consist of concrete, proven initiatives to change misconceptions, develop useful communications and online resources, and engage community members and start-ups with personal assistance.

Some specific projects covered under the grant include comprehensive support of programs tied directly to job creation, high-quality employment opportunities, and investment in infrastructure improvements. A new website will also be created with an online resource library, toolkit, and evaluation mechanisms designed to promote Torrington’s Opportunity Zone and Winsted’s Enterprise Zones and connect developers, property owners, and funders. Also included are façade and building improvements and way-finding signage initiatives that serve as key elements to town growth and revitalization efforts.

This is the second and largest grant awarded by the Northwest Building Healthier Communities Fund since its inception. It awarded its first round grants during the first half of 2019 totaling $295,400. The grants were awarded in support of the Fund’s focus areas: education, health and healthcare, neighborhood and environment, and economic stability and growth. Grant recipients included EdAdvance, New Beginnings of Northwest Hills Litchfield County, Inc., Northwest Hills Council of Governments, Northwest Regional Workforce Investment Board, and Torrington Public Schools.
Quality Metrics: TCAR Center of Excellence in the State of CT

Each year, more than 700,000 Americans suffer from a stroke. Vascular surgeons play a vital role in preventing strokes, which can occur as a result of blockages in the carotid arteries, by providing cutting-edge carotid revascularization therapies. The vascular surgeons at Hartford Hospital have been performing carotid endarterectomy (CEA) procedure with outcomes superior to national benchmarks. For two years in a row, our asymptomatic patients had a 0-percent peri-procedural stroke/death rate after CEA.

While CEA remains the “Gold Standard” procedure for carotid revascularization, a somewhat recent trend showed an increasing utilization of transcarotid artery revascularization (TCAR) in the treatment of cerebrovascular disease. The procedure has comparable outcomes to CEA, while providing a minimally-invasive alternative. Hartford vascular surgeons have been the first ones in the state of Connecticut to embrace the innovative and minimally-invasive TCAR procedure for carotid revascularization. Since then, our TCAR volume has increased dramatically with more than 60 TCAR procedures performed at Hartford Hospital in 2019 with 0 percent stroke rate.

"In 2019, Hartford Hospital was the first one to be named the TCAR Center of Excellence in the state of Connecticut, and also is the preceptor teaching site for TCAR, the only one in the entire New England region," says Dr. Thomas Divinagracia, Physician-in-Chief of Vascular Surgery at Hartford HealthCare.

Isolated Mitral Valve Repair – Mortality Continues to be 0% for the Last Three Years

Mitral valve repair is a complex sub-specialty of cardiac surgery. The likelihood of repair depends not on the pathology of the valve but on the skill and experience of the surgeon. The published guidelines from the American Heart Association and the American College of Cardiology encourage cardiologists to refer their patients to surgeons who have a track record of achieving a repair rate that exceeds 90 percent for degenerative mitral valves. The guidelines also recommend patients travel to seek such surgeons in hospitals out of state if necessary. Those hospitals have been called mitral valve reference centers. Hartford Hospital is recognized by mitral valve experts as one of the national reference centers.

In addition to the highly successful repair rate for mitral surgery, our team has had vast experience with the less invasive mini thoracotomy incision that avoids sternotomy and promotes rapid recovery. Our expertise in minimally-invasive mitral surgery gives Hartford Hospital patients an opportunity for more rapid recovery.
In 2019, Hartford Hospital once again received the prestigious STS 3-star rating for all mitral valve categories, making it the only center in Connecticut to consistently benefit from this recognition. Our surgical team’s efficiency in the operating room sets us apart from other centers, as shown in The Society of Thoracic Surgeons (STS) graph below. Our median operating room time for a mitral repair operation is 200 minutes, while it is 290 minutes for our peers and 315 minutes for the STS.

Hartford HealthCare Heart Attack Care Ranks among the Best Hospitals in America

Each year, more than 1,000,000 Americans suffer from a life-threatening heart attack, making heart disease the number one cause of death in men and women in the United States in 2019. The most lethal type of heart attack is the ST-Elevation Myocardial Infarction (STEMI), in which a patient’s heart artery becomes blocked, depriving heart tissue from receiving critical oxygen and nutrient-rich blood. Early STEMI diagnosis and rapid restoration of blood flow in the occluded coronary artery with percutaneous coronary intervention (PCI) has been shown to reduce the size of the heart attack and dramatically improve mortality. Hospitals nationwide are ranked on their “door-to-balloon time” (DTB) for their STEMI care, measuring the time between when a STEMI patient presents to the emergency department and their occluded heart artery is opened with PCI in the cardiac catheterization laboratory.

To achieve best practice and improve outcomes for STEMI patients, the cardiac catheterization laboratory at Hartford Hospital, in collaboration with the Emergency Department and Emergency Medical Service, launched a quality initiative to reduce DTB. The initiative began in 2017 and included workflow evaluation and process improvements. Since the launch of the action, the organization observed a continuous improvement in STEMI treatment times and, currently, Hartford Hospital DTB ranks in the top 10 percent of hospitals nationwide, as documented in the national American College of Cardiology’s National Cardiovascular Data Registry and Percutaneous Coronary Intervention (PCI) Registry.
Volume Metrics

In fiscal year 19, the Heart & Vascular Institute cared for more patients, compared to fiscal year 2018, across all subspecialties.

Cardiac surgery had 31 percent growth, electrophysiology grew 10 percent across the system, interventional grew 12 percent, advanced heart failure continued double-digit growth with expansion to new sites, and clinical cardiology visits were up across the state. Hartford structural heart physicians have pioneered the use of the carotid approach as a preferred alternative vascular access for treating transcatheter aortic valve replacement (TAVR) patients.

Hartford Hospital DTB

Improvement of STEMI care across the span of the Hartford HealthCare system, including three PCI hospitals (Hartford Hospital, St. Vincent’s Medical Center, Hospital of Central Connecticut) and four non-PCI hospitals (MidState Medical Center, Backus Hospital, Windham Hospital, Charlotte Hungerford Hospital), has required ongoing collaboration of emergency medical services, emergency departments, and cardiac catheterization labs from each institution to streamline STEMI diagnosis and treatment. These efforts have been led by Hartford HealthCare’s system-wide Acute Coronary Syndrome (ACS) Council.

The Hartford Hospital TAVR Program: One of the Largest in New England.

Aortic valve stenosis, or aortic stenosis, is a common cardiac condition in which the aortic valve opening becomes narrowed secondary to calcification and fibrosis of the aortic valve leaflets, restricting the ability of the aortic valve leaflets to fully open and, thereby, preventing a patient’s heart from pumping blood to the rest of the body. Aortic stenosis is one of the most serious cardiac valve disorders, since patients who have developed symptoms from severe aortic valve narrowing have approximately a 50 percent chance of dying within two years and an 80 percent chance of dying within five years if their aortic valve is not replaced. Aortic stenosis is a progressive disease, taking many years to develop to the point that the valve narrowing is considered severe. After many years of having an asymptomatic heart murmur, patients typically develop symptoms, such as shortness of breath, fatigue, exercise intolerance, chest pain, dizziness or true syncope, temporary loss of consciousness.

The only definitive treatment of severe, symptomatic aortic stenosis is to replace the aortic valve. There are currently two ways to replace the aortic valve, either with conventional open-heart surgery with surgical aortic valve replacement (SAVR) or with transcatheter aortic valve replacement (TAVR). TAVR is a less invasive technique involving implantation of a new aortic valve using catheters that are introduced through a peripheral artery (e.g., femoral artery in the groin, subclavian artery in the chest, carotid artery in the neck).

Following approval of TAVR in 2012 by the United States Food and Drug Administration (FDA) as an alternative to open-heart surgery, Hartford Hospital has performed more than 1,400 TAVR procedures in patients that have severe symptomatic aortic stenosis, making it the largest TAVR center in the state of Connecticut and one of the largest TAVR programs in New England.
Hartford physicians have served as the principal investigators for multiple multicenter national trials documenting the safety and efficacy of TAVR and leading to FDA approval for TAVR use in extreme-risk, high-risk, intermediate-risk and, most recently, low-risk patients. To date, successful valve replacement has been performed with both balloon-expandable and self-expanding TAVR valves, utilizing transfemoral, subclavian, carotid, direct aortic and transapical approaches. Hartford structural heart physicians have been leaders in establishing the routine use of conscious sedation, rather than general anesthesia, as the predominant TAVR technique used in patients with adequate transfemoral anatomy. Equally important, Hartford physicians have pioneered routine use of the transcatheter approach as an alternative-access TAVR procedure, and Hartford Hospital has been designated as a regional teaching center for this technique. Finally, use of cerebral protection with the Sentinal device to avoid procedure-related strokes and percutaneous closure of paravalvular leaks are two new procedures currently performed by the TAVR Team. Current clinical outcomes as published by the National Society of Thoracic Surgeons/American College of Cardiology Transcatheter Valve Therapy Registry (STS/ACC TVT) rank Hartford Hospital among the top performing hospitals in the U.S.

**New CardioMEMS Implant Monitors Heart Failure Patients Remotely**

Heart failure management in the outpatient clinic incorporates a comprehensive approach. In addition to disease management, medication optimization and infusion therapy, new advances in technology are now playing a key role in this approach. Pulmonary artery (PA) sensor monitoring (CardioMEMS) is one of the newer tools in outpatient heart failure management. The sensor is implanted in the pulmonary artery in an outpatient setting and transmits clinical data points to clinicians on a daily basis. The clinicians use this data to optimize medications that treat congestion to prevent heart failure. This technology has been shown to decrease hospital readmissions related to cardiac heart failure and contribute to overall improvement in quality of life for patients. Hartford HealthCare has developed a comprehensive CardioMEMS program that provides heart failure patients throughout Connecticut access to this outpatient treatment option for managing heart failure. It supports patients to return to their community for management, further enhancing collaboration of care throughout the Hartford HealthCare system.
Because of the success of the ACS Council, the American Heart Association has recognized Hartford HealthCare for achieving superior outcomes for evidence-based care of STEMI patients. In 2019, The Hospital of Central Connecticut was awarded the Gold-Plus Award, Hartford Hospital was awarded the Gold Award and Backus Hospital was awarded the Bronze Award. In addition, Hartford HealthCare was awarded the 2019 Regional Trailblazer Award for the pioneering and innovative work performed by Hartford Hospital, MidState Medical Center, Backus Hospital, The Hospital of Central Connecticut and Windham Hospital in improving the regional STEMI system of care.
The innovative team at the Ayer Neuroscience Institute specializes in diagnosing and treating neurological conditions affecting the brain, spinal cord and central nervous system. Neurological diseases are inherently complex, which often leaves patients feeling overwhelmed and confused. The Ayer Neuroscience Institute team believes that patients should have accurate and easy-to-understand information so they can make the best healthcare decisions for themselves and their loved ones. Our commitment to providing exceptional patient care includes educating our patients on the unique challenges of these neurological conditions. This enables our patients to overcome the fear and uncertainty associated with the diagnosis and treatment process. Our approach increases patient comfort by helping them understand the disease and earns their confidence and trust in the treatment plan set forth by the Ayer Neuroscience Institute team. We take pride in providing individualized, equitable, safe and effective care based on each patient’s needs, preferences and values. Our dedication to meeting the highest standards of patient care at every point along the care continuum sets us apart. We use quality measures and apply evidence-based practice to remain competitive and innovative in the treatment of neurological conditions. Our clear focus on using cutting-edge technology in neurology and neurosurgery allows us to deliver the safest and most effective care to our community.

Quality Metrics
We are the only center in Connecticut that can implant all three deep brain stimulation (DBS) neuromodulation systems for Parkinson’s Disease and essential tremors: the Medtronic, Abbott and Boston Scientific systems. The Chase Family Movement Disorders Center (CFMDC) was one of the first in the Northeast to successfully implant the latest innovation in DBS technology, Abbott’s directional leads, and Boston Scientific’s Vercise Gevia and Cartesia Directional Lead.

Primary Symptom Improvement

![On-Time Improvement in Patients with Parkinson’s Disease](chart)

- Improvement (16)
- No Improvement (1)

- 94% Improvement
- 6% No Improvement

![Medication Reduction in Patients with Parkinson’s Disease](chart)

- Medications Not Reduced (6)
- Medications Reduced (15)

- 71% Medications Not Reduced
- 29% Medications Reduced
Integrative Medicine
We continue to offer naturopathic medicine and integrative medicine, such as acupuncture, yoga, massage therapy, Tai Chi, Reiki and Qigong. Our Dancing for Parkinson’s event and Beat PD Today boxing and fitness classes in our Vernon and now Cheshire community rooms also continue to be very popular. In 2019, the CFMDC provided 267 acupuncture and 193 massage therapy treatments on patients referred to the various integrative medicine services. In the last two months of the year, the Center began offering patients naturopathic consultations and has completed 13 visits to date.

Volume Metrics

Hartford HealthCare hired a total of seven providers in FY18 and 16 providers in FY19.

Total number of new patients went from 920 in FY18 to 1,545 in FY19.

Total Visits 2019

The total number of visits went from 7,160 in FY18 to 10,476 in FY19.

Total New Patients 2019

Total number of new patients went from 920 in FY18 to 1,545 in FY19.
**Hartford HealthCare** had a total of 14 DBS cases in FY18 compared to 21 DBS cases in FY19.

**SPECIAL PROJECT: ADDING VALUE TO THE ORGANIZATION**

The Ayer Neuroscience Institute team is committed to delivering the most advanced, evidence-based care to its patients. We are leaders and innovators in the development and adoption of new technologies to provide the best and safest care to our patients and their families. Our commitment and dedication to offering comprehensive and individualized treatment options to our patients and their loved ones are what make us unique. The Ayer Neuroscience Institute’s goal is to be a national leader in the field by offering innovative care, advanced treatment, cutting-edge clinical research and compassionate home and community services. With the unique breadth of clinical expertise available to all of our patients, regardless of the location where they are seen, we are providing truly integrated, personalized and comprehensive care.
Advances in Neurological Rating Scale (NRS):
Dr. Inam Kureshi, Chief of Neurosurgery at Hartford Hospital, combines minimally-invasive endoscopic surgery with precise neuronavigation equipment. The Artemis Neuro Evacuation Device offers a “stereotactic” technique that provides controlled deep blood clot evacuation through a small opening through the skull in which the clot is “aspirated” and removed. Surgery for these types of strokes was once deemed too risky; however, this technique has proven to show favorable outcomes.

Advances in Pain Management – Percutaneous Implantation of Dorsal Root Ganglion Stimulator for Treatment of Pain:
Chronic pain limits the ability to partake in activities that may otherwise bring pleasure and joy to life. Neurosurgeon Dr. Mohamad Khaled uses the Proclaim Dorsal Nerve Root Ganglion (DRG) Nerve Stimulation System, the most innovative and advanced way to control pain, in patients suffering complex regional pain syndrome.

Carbon-Fiber Screws for Spine Surgery:
Rather than the traditional treatment of decompressing spinal column tumors using titanium screws and rods, Dr. Paul Schwartz offers a new and safer alternative in carbon fiber screws and rods, which are more durable and do not interfere with MRI imaging. Such technology will allow oncologists to continue monitoring response to treatment and tumor growth or recurrence after surgery using MRI.

Advances and Innovations in Epilepsy:
Electroencephalogram (EEG) Neurodiagnostic Lab
The only EEG Neurodiagnostic Lab in Connecticut to be awarded a five-year accreditation by The American Board of Registration of Electroencephalographic and Evoked Potential Technologists (ABRET).

First Intracranial EEG (iEEG) Implantation Surgery at Hartford Hospital
For patients with seizure and epilepsy disorders, our Epilepsy Center continues to offer cutting-edge medical care, including iEEG, the most advanced epilepsy diagnostic procedure. This is a truly multidisciplinary approach to patient management through the highly-coordinated care of physicians, surgeons, EEG technologists, nurses, information technologists and radiology technologists, delivered to our patients with outstanding initial outcomes. iEEG offers patients the expertise of our medical specialists integrated with cutting-edge neurosurgery and diagnostic imaging.
Cancer mortality rates are an important tool for tracking our progress against cancer. The risk-adjusted observed over expected methodology (O/E) illustrated in the graph below takes into account many patient-specific factors, such as age, other chronic conditions and stage of disease. In order to make this comparison, Hartford HealthCare uses data from Premier, the nation’s largest healthcare alliance. In 2019, the Cancer Institute’s O/E ratio improved and trended to below expected.

### Quality Metrics – Process Measures

The Hartford HealthCare Cancer Institute (HHCCI) is the only healthcare system in the state of Connecticut accredited by the American College of Surgeons Commission on Cancer as an Integrated Network Cancer Program. Our hospitals share a unified cancer committee, a data repository system and a single standard of care across all our care locations and providers. The HHCCI cancer registry has been submitting data annually to the National Cancer Database since its inception in 1989. This data is used to report close to 30 quality measures allowing our program to benchmark our performance to state and national data. Below you will find several examples of the most recent comparison data available from calendar year 2017. For these measures, higher is better.

#### Volume

The HHCCI saw nearly 8,200 cancer surgeries and growth rates of 24.6 percent in radiation oncology visits and 42.2 percent in infusion visits. The HHCCI expanded services in eastern Connecticut, with a new cancer center in Manchester offering infusion, medical oncology and surgical subspecialists.

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**New and ongoing initiatives contributing to improvements at the Hartford HealthCare Cancer Institute:**

- Early identification and treatment for febrile neutropenia
- Earlier incorporation of palliative care
- Improved documentation and coding
- Optimization of HHC’s Memorial Sloan Kettering (MSK) Alliance partnership for best practices
- Maximization of the electronic medical record’s system-wide access to Code Status and Goals of Care

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**Peter Yu, MD**
Senior Vice President, Physician-in-Chief
Cancer Institute

**Kristi Gafford**
Senior Vice President of Operations,
Cancer Institute
Geriatric Oncology: From Pilot to Program

Cancer treatment cannot be generic, with one answer for every patient. Each individual is unique, and age at diagnosis can impact how cancer develops and responds to treatment. More importantly, life has shaped how people react emotionally to serious illness and its effect on them.

National data has shown that cancer is a disease of an aging population. More than 55 percent of Hartford HealthCare cancer patients are older than 65 years of age. Dr. Rawad Elias and the Comprehensive Oncology and Aging Care Team at Hartford HealthCare (COACH) recognized the need to personalize treatments for this population.

A pilot study in late 2018, which utilized a geriatric frailty screening tool administered by medical assistants, revealed a significant number of potentially frail and/or vulnerable patients who otherwise would have been considered as having a “good” performance status based on conventional assessments.

This study helped shape the formation of COACH, the state’s only cancer program specifically for older patients. The program
combines various services to address patients' differing needs. Providers work together – and with the referring oncologist, patient and family – to ensure that care is seamless and comprehensive.

Headed by a physician who is board-certified in both geriatrics and hematology/oncology, the team includes physicians (geriatrician, oncologist), nurses, nurse practitioners, physician assistants, nutritionists, physical and occupational therapists, pharmacists, financial counselors, social workers, palliative and integrative care therapists, and staff from the Center for Healthy Aging.

Together, these providers form a network of care tailored to meet the specific needs of this population.

**Standardizing Early Identification and Treatment of Febrile Neutropenia, a Potentially Life-Threatening Complication of Chemotherapy**

Based on Hartford HealthCare’s Balanced Scorecard priorities, the HHCCI leadership identified a need to standardize the treatment of oncology patients presenting with neutropenic fever to Hartford HealthCare emergency departments. Timeliness of antibiotic administration is critical for optimal health and best outcomes for these patients.

A quality improvement project was designed to significantly reduce the time between the patient’s triage in the ED and the administration of the antibiotic. Utilizing Lean principles and tools, barriers were identified, various countermeasures were considered and a plan was implemented. This initial project proved to be a catalyst for the ongoing inter-professional, system-wide initiatives to improve patient outcomes.

**Countermeasures included:**

- Order sets, specially designed for oncology patients in active treatment and arriving at the Emergency Department with fever, were embedded in the electronic medical record to guide the evaluation and treatment of the patient.
- Neutropenic fever education materials, highlighting best practices, were created for ED staff.
- Planning sessions with laboratory and infectious disease leadership led to a more rapid release of test results for this patient population.
- New patient education materials and processes improved the timeliness of communication between patient and the care team and also emphasized the most important symptoms to share.
- A banner in the electronic medical record was created to immediately identify oncology patients undergoing active cancer therapy.
Quality Metrics

The Tallwood Urology & Kidney Institute exemplifies Hartford HealthCare’s values of excellence and safety through a commitment to reduce mortality rates. The institute achieved a mortality rate of zero for several procedures and diagnostic groups in FY19. We are proud of the work our team has done to accomplish this exceptional level of safety. Physicians in the Tallwood Urology & Kidney Institute exceed expectations when it comes to safety. Our mortality rates of zero are better than risk-adjusted expectations for procedures and diagnostic groups.

Volume/Growth Metrics

System-wide market share continues to increase month-over-month and year-over-year. Tallwood leads the market in the state of Connecticut for the treatment of urologic and kidney conditions. Surgical volume increased year-over-year by 7 percent.
Tallwood Men’s Health provides the most advanced, clinically integrated care to men in comfortable and accessible settings across Connecticut. Tallwood Men’s Health is focused on treating the whole man. Men’s health experts at Hartford HealthCare are respected as regional and national leaders in their field. They understand the greater implications of the diseases they treat and recognized a need for better coordination of care.

Tallwood has partnered with other Hartford HealthCare specialists and community providers with an understanding of male-specific disease processes. Our comprehensive model of care includes experts in urology, cardiology, surgical and medical weight loss, endocrinology, behavioral health, colorectal health, geriatric medicine and sleep disorders.

Our nurse navigators ensure men are up-to-date with their preventative health screenings and engage other members of the team to address linked medical conditions in a timely and efficient manner.

Tallwood Men’s Health has surpassed targets for volume, patient experience and regional recognition; demonstrating the demand for men’s healthcare throughout Connecticut.

**SPECIAL PROJECT: ADDING VALUE TO THE ORGANIZATION**

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2019 Value Report

- **173** PCP Requests
- **14,817** Calls
- **431** Leads 154% of Goal (279)
- **87.8%** Patient Score Experience
- **35,553** Website Pageviews
- **208** Surgeries above Target
- **$2.1M** Incremental Financial Impact
- **+10%** Unique Male Patients
- **30.2** Market Share Leaders

**Farmington Location:**
- Visits +6% over budget
- Revenue +15% over budget
The Hartford HealthCare Bone & Joint Institute (BJI) celebrated many accomplishments in growth and quality over the past year. The BJI has enjoyed three years in a new, state-of-the-art building on the Hartford Hospital campus. The BJI welcomed four additional surgeons to the team and has seen an increase in volume by 5 percent over FY2018. While volumes continue to grow, it has become more important than ever to strive for excellence in quality. The BJI has sustained a reduction in length of stay from 2.8 to 1.7 days for elective total joint replacement patients, allowing our patients to recover at home sooner.

Quality Metrics and Outcomes
The Bone & Joint Institute conducts a comprehensive quality improvement program, supported by an Orthopedic Surgery Patient Registry. Data is collected through 60-day, post-operative patient phone calls concerning complications, emergency department visits and re-admissions. The Joint Commission has awarded disease-specific certification for total knee arthroplasty, total hip arthroplasty, total shoulder arthroplasty and spine surgery. There are 16 performance measures specific to these certifications, which are measured and reported monthly to BJI staff. BJI Key Performance Indicators (KPI) are reported monthly via Control Charts to staff, leaders and annually as part of the Hartford Hospital Quality Assessment Performance Improvement. KPI's include: 30-day post-operative venous thromboembolism and readmission and 90-day post-operative deep surgical site infections for total knee replacement, total hip replacement, orthopedic trauma and orthopedic spine patients. A summary of the FY2019 KPI data can be found on the next page.
Additional metrics include transition to skilled nursing facility versus home for elective surgery patients. For total joint arthroplasty, in FY 2019, 86.85 percent of patients transitioned home compared to FY18’s rate of 84.85 percent. This continued improvement is significant considering that more elective total joint replacements are being performed as an outpatient surgery, and the inpatient procedures at BJI are higher risk, based on age and comorbidities.

**60-Day Post-Op Opioid Use for TKA and THA Patients**

<table>
<thead>
<tr>
<th></th>
<th>TKA</th>
<th>THA</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY16</td>
<td>9.84%</td>
<td>4.96%</td>
</tr>
<tr>
<td>FY17</td>
<td>10.82%</td>
<td>5.93%</td>
</tr>
<tr>
<td>FY18</td>
<td>11.24%</td>
<td>1.40%</td>
</tr>
<tr>
<td>FY19</td>
<td>7.32%</td>
<td>2.54%</td>
</tr>
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</table>

**Total Knee Arthroplasty Complication Rates**

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTE</td>
<td>0.38%</td>
<td>0.31%</td>
<td>0.22%</td>
<td>0.00%</td>
</tr>
<tr>
<td>SSI</td>
<td>0.65%</td>
<td>0.15%</td>
<td>0.28%</td>
<td>0.46%</td>
</tr>
<tr>
<td>Readmission</td>
<td>3.28%</td>
<td>2.26%</td>
<td>2.40%</td>
<td>2.15%</td>
</tr>
</tbody>
</table>

**Total Hip Arthroplasty Complication Rates**

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTE</td>
<td>0.77%</td>
<td>0.26%</td>
<td>0.13%</td>
<td>0.25%</td>
</tr>
<tr>
<td>SSI</td>
<td>0.73%</td>
<td>0.56%</td>
<td>0.63%</td>
<td>0.25%</td>
</tr>
<tr>
<td>Readmission</td>
<td>3.26%</td>
<td>1.05%</td>
<td>2.64%</td>
<td>2.54%</td>
</tr>
</tbody>
</table>

**Improving Fragility Hip Fracture Time to Surgery and Post-Operative Mobility**

It is well described in the orthopaedic literature that fragility hip fracture patients have improved outcomes if timely operative fixation is performed followed by early mobilization. The BJI Fragility Fracture Steering Committee set an expectation of operative fixation within 30 hours of arrival in the Emergency Department. Registry data allowed for monthly analysis and regular reporting to the orthopaedic trauma team. The goal was met almost immediately and has been sustained. Patients presenting with a life-threatening medical problem requiring intervention were excluded from this report, but are tracked and delay to OR reviewed.

**Goals in FY2020 are focused on the following:**

- Improve performance with our orthopaedic spine patients in order to appreciate a reduction in the VTE, SSI and readmission rates.
- Reduce post-operative opioid use for all patients.
- Reduce emergency department visits and readmission for elective total joint and spine patients.

**SPECIAL PROJECT:**

**ADDING VALUE TO THE ORGANIZATION**

**Reducing New Persistent Opioid Use for Elective Total Hip and Knee Arthroplasty Patients.**

A research study involved transitioning total hip and knee patients to home with an opioid diary. Telephone interviews track 60-day post-op opioid use. Results show a significant decrease in persistent opioid use for total knee patients and a moderate decrease for total hip patients.
Quality Metrics:
In January 2019, Connecticut Orthopaedic Institute (COI) underwent a rigorous on-site review for The Joint Commission’s (TJC) Gold Seal of Approval® for Advanced Certification for Total Hip and Total Knee Replacement. The advanced certification is for Joint Commission-accredited hospitals, critical access hospitals and ambulatory surgery centers seeking to elevate the quality, consistency and safety of their services and patient care. Nationally, approximately only 3 percent of hospitals have this elite designation. A Joint Commission expert evaluated compliance with advanced disease-specific care standards and total hip and total knee replacement requirements, including orthopaedic surgeon consultation, pre-operative, intraoperative and post-surgical orthopaedic surgeon follow-up care and program outcomes. This designation of excellence was granted to COI because of the seamless transition our patients experience, beginning in the surgeon’s office, through their hospitalization and continued follow-up care after surgery.

This award confirms COI’s dedication to providing the best care and providing excellent patient outcomes, including low infection and complication rates. This is facilitated by a team approach in which the patient is guided through their experience with proper pre-operative education, excellent in-patient care and appropriate rehabilitation after surgery. This recognition acknowledges the efforts of the COI team in demonstrating a commitment to maintaining excellence and continually improving the care we provide to the community. Established in 2016 and awarded for a two-year period, the advanced certification was developed in response to the growing number of patients undergoing a total hip or total knee replacement surgery, as well as the increased focus on clinical evidence-based patient care as it relates to pain management, quality of life issues, functional limitation in mobility, and the return to normal daily activities.

Designations of Excellence
- Joint Commission Advanced Certification for Total Hip and Total Knee Replacement
- BCBS+ Blue Distinction® Centers for Knee and Hip Replacement
- BCBS+ Blue Distinction® Centers for Spine Surgery
- Aetna Institutes of Quality ®(IOQ) for Spine Surgery
- Premier Recognition- The award recognized Midstate’s efforts in clinical redesign leading to be high performers in the Premier Bundled Payment Collaborative Program for performance year 2
- Future state application for Joint Commission Spine certification accepted; awaiting site visit
2019 MidState Medical Center

<table>
<thead>
<tr>
<th></th>
<th>COI</th>
<th>National Average</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Patients who recommend our hospital</td>
<td>97.5%</td>
<td>89.7%</td>
<td>Press Ganey</td>
</tr>
<tr>
<td>2) Complications</td>
<td>0.10%</td>
<td>0.50%</td>
<td>Premier QA</td>
</tr>
<tr>
<td>3) Infection rate</td>
<td>0.10%</td>
<td>0.58% – 1.60%</td>
<td>NHSN</td>
</tr>
<tr>
<td>4) Patients able to return directly home after surgery</td>
<td>95%</td>
<td>87%</td>
<td>Premier QA</td>
</tr>
<tr>
<td>5) Readmission to hospital</td>
<td>1.42%</td>
<td>4.20%</td>
<td>Premier QA</td>
</tr>
<tr>
<td>6) Surgeries performed annually (2019)</td>
<td>4,217</td>
<td></td>
<td>Hospital-reported Data</td>
</tr>
</tbody>
</table>

1) Patients who recommend our hospital: Press Ganey database scores obtained from 821 surveys received Jan. 2019 - Sept. 2019

2) Risk adjusted complications, Premiere QA database: blood clot, hematoma, infection, myocardial infarction that occurs during hospital admission

3) Infection rate: infection occurring deep to the surgical incision

4) Patients able to return home after surgery versus going to a nursing home

5) Risk-adjusted Readmissions, Premier QA database: patients who are readmitted to the hospital for any reason within 30 days of surgery

6) Surgeries performed annually: surgeries performed from October 2018 - September 2019

### Volume/Growth Metrics

Surgical procedure volumes
- COI saw more than 4,200 cases in FY19
- Number of all cases grew by approximately 1,200 year over year (YOO)
- Joints increased by 450 YOY; spine increased by 300

### SPECIAL PROJECT: ADDING VALUE TO THE ORGANIZATION

#### Quality Metrics

We achieved success in the Comprehensive Care for Joint Replacement (CJR) model, with reduced readmissions/complications leading to net payment reconciliation to the hospital and improved quality scores.

As healthcare transitions to value-based payments, optimization of work processes while improving clinical outcomes and patient satisfaction is essential. The Centers for Medicare and Medicaid Services’ (CMS) for CJR bundle payment model has required hospitals to evaluate the care of the joint replacement patient. The goal of the model is to promote quality and financial accountability for care within the 90-day episode of care. The model began on April 1, 2016 and will run through December 31, 2020, with a possibility of a three-year extension.

COI at MidState Medical Center identified opportunities in the elective orthopaedic service line through evidence-based clinical care redesign to achieve success in the CJR bundle. A multidisciplinary approach across the care continuum resulted in improved quality care, reduced costs and maintained top 1 percent nationally HCAHPS patient experience scores.

Hartford HealthCare’s two acute care hospitals — Backus Hospital and COI at MidState Medical Center — were mandated by CMS to participate in the CJR bundle payment model, which was the first CMS bundle in Hartford HealthCare. COI’s multidisciplinary teams designed and implemented best practices with a focus on excellence across the episode of care, beginning in the surgeons office through the continuum of care, pre-operatively, acute inpatient and post-operative phases of care.
As of result of this multidisciplinary approach, COI has seen improved results through the entire episode of care for joint replacement patients. With the modifications made in the clinical care redesign to our knee and hip replacement program, we have seen improvement in our quality outcomes. These outcomes include decreases in complications, readmissions, length of stay, and use of skilled nursing facilities. With patient and family feedback, we continue to be in the top 1 percent nationally for HCAHPS patient experience scores.

With the goal of improving the quality of care and reducing variations, the following areas of opportunity were identified:

1. Standardizing the pre-operative evaluation to identify and address comorbidity early; optimizing health status of complicated surgical candidates.

2. Setting patient expectations and engaging patients early in the pre-operative process.

3. Implementing standardized best practice, evidence-based care, thus reducing the risk of complications and readmissions.

4. Streamlining and improving utilization of post-acute care services.

5. Increasing post-op follow up intervals.

This comprehensive approach to excellence has improved the quality of services and the confidence that our patients have with the care they receive at our hospitals. Our interdisciplinary team achieved this dramatic improvement through the use of data to improve and drive clinical results. (See below CJR data graphs representing Medicare A & B patient population).

We have realized significant improvement in outcomes and recognition for such improvement, as proven by receiving Premier’s award recognizing our efforts in clinical care redesign leading us to be high performers in the Premier Bundled Payment Collaborative Program for performance year two and in, 2019, COI achieving TJC’s advanced certification for hip and knee replacement.
HARTFORD HEALTHCARE BEHAVIORAL HEALTH NETWORK
Quality Metrics

Child and Adolescent Inpatient Care: Shifting Our Focus on Access to Care

Fiscal year 2019 saw the initiation of work at the Institute of Living’s child and adolescent inpatient units to improve access to care. Taking a full-court press approach, all unit staff participated in finding ways to safely transition youth out of the hospital more efficiently. Key positions are now in place, including a resource coordinator to assist in discharge planning, and a transition caseworker to assist when there are gaps between discharge and initiation of outpatient treatment. Critical to the safe transition of youth is the transition caseworker’s connection to families from the time after discharge until they are able to link with outpatient providers.

Increasing transparency with unit staff regarding length of stay per unit, per clinician and per provider has helped keep an “eye on the ball.” Additionally, weekly Access Meetings were implemented to discuss any barriers for access into the inpatient units. Standardized work was created for new Progressive Rounds and Clinical Systems Meetings are held as needed when there are barriers to discharge.

Last but certainly not least, changing how we engage youth and families in their treatment was necessary for the success of Institute of Living improved access. Discussing with families on admission what to expect with treatment and discharge planning helps set the recovery-centered approach. Revising treatment plans with trauma-informed and individualized strategies has the entire team focused on the same clinical plan and, ultimately, has led to earlier stabilization and transition to the next level of care.

Volume Metrics

Expanding Our Reach in Addressing the Opioid Epidemic through Community-Based Interventions

The state of Connecticut continues to suffer the ravages of opioid overdose death, as evidenced by a death rate among the 10 highest in the country. An emerging approach to addressing the opioid epidemic is the outcome of a $2-million, four-year grant from Substance Abuse and Mental Health Services Administration. The “MORR” grant (Meriden Opioid Recovery Response) partners Rushford with the City of Meriden to implement prevention strategies to reduce opioid death and treat opioid substance use disorders for residents. Meriden first responders refer those who have been treated with Narcan to Rushford’s MORR Team, who then engages individuals through support and treatment. Approximately 49 percent of all Narcan deployments by first responder partners resulted in a referral to Rushford in year one. In 2019, Connecticut had its highest ever recorded number of opioid overdose deaths, yet in Meriden there was a 24 percent decrease which may, in part, be attributable to MORR.
Institute of Living: Improved LOS & Discharge Volume

In FY2019, IOL Length of Stay decreased by 47% and Discharge Volumes increased by 86%.

MORR Client Engagement at Follow-up Intervals, Year 1

<table>
<thead>
<tr>
<th></th>
<th>Participating in Rushford Services</th>
<th>Participating in Community Based Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-week follow up</td>
<td>58%</td>
<td>31%</td>
</tr>
<tr>
<td>3-month follow up</td>
<td>55%</td>
<td>34%</td>
</tr>
<tr>
<td>6-month follow up</td>
<td>45%</td>
<td>45%</td>
</tr>
</tbody>
</table>

- 6-week follow up N=45
- 3-month follow up N=39
- 6-month follow up N=20
SPECIAL PROJECTS:
ADDING VALUE TO THE ORGANIZATION

Enhancing the Service Delivery Structure: Improving Access to Care
In 2017, Hartford HealthCare partners saw 406,719 inpatient days, handled 80,536 transitions from inpatient care, had 360,293 Emergency Department (ED) visits, and 427,226 primary care visits in our 118-town service area. To better serve our patients with opiate use disorders, the Connecticut Treatment Expansion for Accessibility (C-TEA) project, funded through Substance Abuse and Mental Health Services Administration, was initiated in February 2019 to support increased access to Medication Assisted Treatment (MAT) for patients who may be overlooked and not identified through traditional paths, who struggle to access care, and/or are unlikely to follow up on their treatment without peer support. C-TEA expanded patient access through coordinated care utilizing a digital intervention tool (TryCycle) and Recovery Support Specialists.

Another milestone which occurred later in 2019 was the kickoff of the Recovery Leadership Academy. The program is an 80-hour training and certification program which prepares persons in recovery or family members of persons in recovery to become certified Recovery Support Specialists (RSS). RSSs work in behavioral health systems using their own experience with recovery to support those seeking or receiving treatment for mental illness or substance use. The first RSS program celebrated graduation with 13 specialists earning certifications.

“Clients need people who can relate to and understand what they’re going through. It’s the best of both worlds — they get medical expertise from the doctors and ‘lived’ experience from me. No one but a person who has been in their shoes can truly understand the grips of substance use and mental illness.”

– Recovery Support Specialist

TryCycle, a clinician-decision support mobile app, facilitates remote monitoring of client behaviors, symptoms and treatment compliance outside the clinical walls. With TryCycle and RSS, health teams can safely and remotely monitor risk factors, intervene early and reduce the rate of relapse using TryCycle’s unique digital tether. Through the C-TEA funding, we are providing consistency of care, stimulating human connectivity, supporting treatment goals during and after clinical hours and helping reduce the loneliness experienced commonly by patients. These simple gestures in treatment are forging a much-needed connection with patients, and TryCycle and RSS are bridging this gap, allowing for an unprecedented continuum of care. In the spaces between scheduled visits and in-person appointments, TryCycle, with the use of RSS, increases communication and improves engagement. Client insights, trends or patterns can be transformed into actionable responses by the treatment team. TryCycle extends treatment and can strengthen the client treatment team relationship. This on-demand access to stratified patient data allows RSS to action targeted resources, and delivers the right interventions to the right clients at the right time.

Patient Story:
K came in this morning to group. She didn’t drink alcohol last night despite her high TryCycle risk level. When I asked her how she managed her cravings she said, “TryCycle. This helped me so much last night. It got the thoughts and urges from here (head) to here (phone) and I was able to think it through. I ended up having tea a couple of hours later with my partner and her mother. I was sober yesterday and today.”

Fast Facts:

17 new RSS hired during FY2019

More than 250 clients engaged through the TryCycle app

More than 2,200 risk-based interventions delivered

290 interventions occurred between 11 p.m. and 6 a.m.

43 percent of clients were active users of the app for 30 days

69 percent of clients had at least moderate engagement with the app
HARTFORD HEALTHCARE COMMUNITY NETWORK
Quality Metrics

Inpatient Rehab Unit (IRU)
Hartford Hospital opened its rehab unit in October 2018. In its first year, the Hartford Hospital IRU admitted 680 patients, who stayed an average of 12 days to receive state-of-the-art, evidence-based acute rehab care. The care provided on the unit exceeded our quality, safety and experience targets:

- 80 percent of patients were able to transition directly home following their stay on the rehab unit.
- In the second half of the year, fall rates in the unit were below state and national benchmarks (see below)

<table>
<thead>
<tr>
<th>FY19</th>
<th>HHIRU</th>
<th>Regional</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>4.10</td>
<td>4.03</td>
<td>4.53</td>
</tr>
<tr>
<td>Q2</td>
<td>4.77</td>
<td>4.25</td>
<td>4.58</td>
</tr>
<tr>
<td>Q3</td>
<td>1.39</td>
<td>3.88</td>
<td>4.38</td>
</tr>
<tr>
<td>Q4</td>
<td>2.09</td>
<td>3.79</td>
<td>4.38</td>
</tr>
</tbody>
</table>

Spine Standardization
- Hartford HealthCare Rehabilitation Network monitors functional outcomes in our outpatient division.
- Included fiscal 2019 data on acute low back pain with national benchmark comparisons.
- A number of clinicians trained in STarT tool, screening tool to alert doctors to the right treatment for low-back pain, and psychologically informed physical therapy training.
- HHCRN uses the STarT Back tool which is a risk-stratification tool to ensure individuals with low back pain receive the right care at the right time.
- Program expanded with 20 percent growth over prior year in referrals.

Volume Metrics

Lymphedema
- Received grants to provide lymphedema compression garments, bandages and supplies for patients in need. These grants provide patients the garments and care they need, when they would otherwise be unable to benefit from skilled intervention.
- Outcome data demonstrates significant volumetric reductions in the involved extremities, which improves function and quality of life.
- Program expanded with 56 percent growth over prior year in referrals.

continued on next page >>
An 85-year-old woman was found wandering in the neighborhood in a confused state and brought to the emergency room. During her observation stay, it was discovered that her son, with whom she lived, had been hospitalized and was in a coma. Following observation, this woman was referred to Hartford HealthCare at Home (HHCAH) for home care services.

Many patients referred to HHCAH are living at home but have support provided by family, friends and neighbors. When the support fails, the situation becomes emergent.

This had become an increasing familiar scenario. Not fitting criteria for an acute care admission, and unsafe to live alone, our only recourse was to call Portosystemic Encephalopathy (PSE). In 2019, we realized anecdotally there was an increase in cases referred to PSE for elder neglect. With no one to turn to for support, most patients often return to the emergency room (ER). PSE often would find the patient did not meet criteria for Department of Social Services assistance. HHCAH relied on assessment data to determine where a PSE referral was indicated due to significant cognitive impairment, however on PSE assessment this was not the case. We were curious to know for PSE perspective the criteria they used to determine the need for intervention.

We found that PSE considers general presentation of the patient and environment, however no standardized testing occurred. We shared our standardized tools and agreed that standardization between providers would give a reliable measure from which to discuss and plan interventions for patient safety.

We knew that patients found with significant impairment, low food levels, low funds, lack of supports, isolation and with dementia were a significant safety risk, however they were not fitting criteria for acute care admission or intervention by PSE.

Data on the prevalence of community dwelling elders who are socially and/or physically isolated, without available supports at HHCAH is largely dependent on clinician report of a PSE referral. There were no reliable reports to further understand this population in the healthcare space.

Referred to as Elder Orphans, we realized it takes a village to restore safety and mitigate the adverse consequences of low social support, few social skills and altered neurophysiological functioning. As stated by Laurel Reagan, APRN, Director of Behavioral Health, “There must be a more efficient way to secure these patients.”

Our behavioral health team at HHCAH, led by Laurel, quickly pulled together a collaborative that included Center for Healthy Aging, Protective Services for the Elderly, Physicians from Geriatric and Adult Psychiatry, Independence at Home, Foodshare, and Meals on Wheels. Laurel put together a community multidisciplinary team to care for patient and community dwelling elders with medical, functional, social and safety needs. Based on clinical experience and literature review, the collaborative put together steps to identify standardized assessment, PSE now uses the SLUMS assessment, a screening tool for dementia, in care approaches. We now routinely collaborate with physicians when the person presents in the ER or community: Our staff and the collaborative focused on three areas depicted below.

The behavioral collaborative was activated. Dr. Joanna Halina Fogg-Waberski, a geriatric psychiatry specialist, performed an evaluation of the patient prior to ER discharge. Our Elder Orphan was discharged from the ER with Independence at Home in-home services, with 24/7 care paid by DSS, home care services and two boxes of food from our Foodshare project. DSS was also able to locate a Polish-speaking vendor for continued services.
HARTFORD HEALTHCARE AMBULATORY CARE
Quality Metrics
Hartford HealthCare Medical Group (HHCMG) is committed to improving preventive care for its patients. Using Epic capabilities, HHCMG was able to monitor improvements, identify best practices and intervene where indicated. The initial focus has been on care of diabetic patients and cancer screening. Teams developed standard work, weekly messages for huddle boards with practice-specific metrics, centralized staff outreach to patients, tested pilot programs and implemented patient recall systems. As a result of this work, there was an improvement in the metrics. In 2020, there is anticipated greater improvement as the new process continues to be refined.

HHCMG Year over Year Comparison

Definitions
Breast Cancer Screening: Percent of women 50-74 years of age who had a mammogram during the current calendar year or the 15 months prior.

Diabetic A1c: Percent* of patients 18-75 years of age with diabetes with no hemoglobin A1C result or A1C greater than 9.0 percent during the current calendar year. *For this metric, a lower percentage indicates better quality.

Diabetic Eye Exam: Percent of patients 18-75 years of age with diabetes who had a retinal or dilated eye exam by an eye care professional during the current calendar year.

Diabetic Nephropathy: Percent of patients 18-75 years of age with diabetes with a nephropathy screening test (microalbumin or urine protein) or evidence of nephropathy (diagnosis or use of ACE inhibitor or ARB).
**Volume/Growth Metrics**

HHCMG optimized MyChart (Hartford HealthCare’s patient portal) utilization to 54 percent at year-end by enabling Instant Activation. The use of MyChart was encouraged through education and ease-of-use initiatives focused on patient engagement. In our drive towards #123, ambulatory practices also improved MyChart message return rates from 91 percent answered within two days to 97 percent.

HHCMG grew by 100 specialty providers and 47 primary care providers, including the addition of Hartford HealthCare’s largest ambulatory integration to date — Soundview Medical Associates in Norwalk. Additionally, three new multi-specialty ambulatory care centers opened in Pawcatuck, Cheshire and Manchester. HHCMG also deepened community involvement by establishing a partnership with Trinity College and the University of Hartford to operate their school health centers. These partnerships will provide enhanced access to other Hartford HealthCare services.

HHCMG is establishing an Ambulatory Access Center that will open in fiscal year 2021 and will increase patients’ access to care. The Access Center will have nurse triage to ensure the most appropriate visit is offered, have the patient scheduled with the right provider, reduce phone pressure for practices and decrease wait times.

<table>
<thead>
<tr>
<th></th>
<th>FY18</th>
<th>FY19</th>
<th>% Growth YoY</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG Visits</td>
<td>856,067</td>
<td>1,013,826</td>
<td>18%</td>
</tr>
<tr>
<td>Patient Calls Answered</td>
<td>1,589,826</td>
<td>2,021,834</td>
<td>27%</td>
</tr>
<tr>
<td>MyChart Messages Completed</td>
<td>50,000</td>
<td>103,800</td>
<td>108%</td>
</tr>
<tr>
<td>Total Patient Touches</td>
<td>2,495,893</td>
<td>3,139,460</td>
<td>26%</td>
</tr>
</tbody>
</table>

**SPECIAL PROJECT: ADDING VALUE TO THE ORGANIZATION**

**Connections That Matter**

At Hartford HealthCare, thousands of clinicians and staff dedicate their time and efforts to provide the highest level of care for patients. However, despite their tremendous efforts, there are social factors outside of the patients’ control that can significantly determine overall health.

HHCMG was awarded funds through a Community and Clinical Integration Grant from the Connecticut Office of Health Strategy. HHCMG used the funds to integrate a new online platform allowing clinicians to connect their patients to an array of community resources addressing the social determinants of health through electronic referrals. From housing to employment to food, these vital support services can have a significant impact on a person’s physical and emotional well-being.

The process of building the pilot program, the first of its kind in the area, began in the early fiscal year 2019 with outreach to our community-based organization partners to engage and encourage participation with the platform. A critical task at this time was to decide on which platform best fits with the vision and values of Hartford HealthCare. After careful consideration, in January 2019, a decision was made to partner with Aunt Bertha, a nationally-known online resource database for free or reduced-cost services. In April 2019, the medical group signed the contract and the work to integrate Hartford HealthCare’s newly named “Connections That Matter” platform into Epic began. By June 2019, the CareConnect team started to build a communication plan and staff training commenced soon after in July 2019. The pilot launched on August 12, 2019, at 12 HHCMG Care practices, which had behavioral health embedded in them. Staff at the Hartford Hospital Emergency Department began piloting on August 26, 2019. In the early pilot stages, searches on the platform for community services continued to gain momentum since its launch. By mid-October, searches increased by more than 25 percent over September, with a dozen referrals made in a single week.
Need a little help?
Find the resources you need quickly and easily
Find Programs | Connect to Services
Apply for Benefits | View Hours and Locations

Connections that Matter
powered by Aunt Bertha

www.ConnectionsThatMatter.org
Because everyone needs a little help sometimes.
Quality Metrics

Population health is a model of healthcare that identifies health opportunities in a defined population and strives to achieve measurable improvements. The strategy for this model focuses on the “quadruple aim” of controlling the cost of care, enhancing the patient’s experience of care, improving the providers’ experience and improving quality outcomes for a population. The population can be segmented in multiple ways, by geographical locations, chronic disease states, or socioeconomic risk factors. Population health at Hartford HealthCare finds its roots in our mission to improve the health and healing of the people and communities we serve. Foundational to health and healing is a focus on promoting wellness.

In order to achieve our mission, as well as position the organization for future success in alternative care delivery and payment models, Hartford HealthCare created Integrated Care Partners (ICP) in 2013 to build the necessary capabilities to drive population health for the system. ICP is a clinically-integrated provider network, which provides the entire Hartford HealthCare system, including ICP community practices, with enhanced resources to build a model of holistic and coordinated care, to track populations over time, to manage risk through contracting capabilities and to collect data to support achieving quality aims.

Quality Improvement

The Hartford HealthCare Medicare Shared Savings Program Accountable Care Organizations (MSSP ACO), led by ICP teams, achieved a quality score of 100 percent in 2018 compared to 86.1 percent in 2017. Preliminary quality results for 2019 demonstrate improvement in eight out of 10 ACO quality measures as compared to the results from 2018, setting up the MSSP ACO for another potential exceptional quality score versus MSSP peer groups.

<table>
<thead>
<tr>
<th>ACO Quality Measure</th>
<th>HHC ACO 2018</th>
<th>HHC ACO 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARE-2: Screening for Future Fall Risk</td>
<td>68.94%</td>
<td>92.55%</td>
</tr>
<tr>
<td>DM-2: Diabetes HbA1C Poor Control</td>
<td>16.40%</td>
<td>14.53%</td>
</tr>
<tr>
<td>HTN-2: Controlling High Blood Pressure</td>
<td>68.19%</td>
<td>67.38%</td>
</tr>
<tr>
<td>MH-1: Depression Remission at 12 months</td>
<td>0.00%</td>
<td>10.53%</td>
</tr>
<tr>
<td>PREV-5: Breast Cancer Screening</td>
<td>72.61%</td>
<td>77.41%</td>
</tr>
<tr>
<td>PREV-6: Colorectal Cancer Screening</td>
<td>59.32%</td>
<td>73.08%</td>
</tr>
<tr>
<td>PREV-7: Influenza Immunization</td>
<td>67.07%</td>
<td>70.38%</td>
</tr>
<tr>
<td>PREV-10: Tobacco Use: Screening &amp; Cessation Intervention</td>
<td>56.41%</td>
<td>78.05%</td>
</tr>
<tr>
<td>PREV-12: Screening for Depression &amp; Follow-Up Plan</td>
<td>53.43%</td>
<td>64.56%</td>
</tr>
<tr>
<td>PREV-13: Statin Therapy for Prevention &amp; Treatment of Cardiovascular Disease</td>
<td>84.07%</td>
<td>86.46%</td>
</tr>
</tbody>
</table>
ICP teams collaborate with ICP adult primary care practices on quality improvement initiatives and continue to demonstrate marked quality improvement in 2019 ICP Incentive Program year to date performance.

<table>
<thead>
<tr>
<th>Adult Measures</th>
<th>YTD 2018 Performance</th>
<th>YTD 2019 Performance</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes Care A1C Testing</td>
<td>91.4%</td>
<td>92.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Diabetes Care Eye Exam</td>
<td>59.6%</td>
<td>66.7%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Diabetes Care Kidney Disease Monitoring</td>
<td>83.2%</td>
<td>86.9%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Breast Cancer Screening</td>
<td>84.0%</td>
<td>85.6%</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

*Aetna, CCI and UHC data is through December; Anthem is through November; Cigna is through September

ICP teams collaborated with ICP community practices and key quality leaders within HHCMG to markedly improve quality metric performance in key value-based programs. This quality improvement resulted in a projected increase in financial and shared savings.

**End-of-Year Quality Push Impact on ConnectiCare Commercial Program**
Quality Push Project began 10/9/19

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Cancer Screening</td>
<td>85.6%</td>
<td>100%</td>
<td>25</td>
<td>83.7%</td>
<td>0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Colorectal Cancer Screening</td>
<td>60.4%</td>
<td>100%</td>
<td>242</td>
<td>51.9%</td>
<td>0%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Diabetes Care A1C Testing</td>
<td>93.1%</td>
<td>25%</td>
<td>14</td>
<td>88.3%</td>
<td>0%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Diabetes Care Eye Exam</td>
<td>68.6%</td>
<td>75%</td>
<td>49</td>
<td>59.9%</td>
<td>0%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Diabetes Care Kidney Disease Monitoring</td>
<td>93.6%</td>
<td>50%</td>
<td>11</td>
<td>91.6%</td>
<td>25%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

**End-of-Year Quality Push Impact on United Healthcare Medicare Advantage Program**
Quality Push Project began 10/9/19

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult BMI Assessment</td>
<td>93.1%</td>
<td>3</td>
<td>94</td>
<td>90.1%</td>
<td>2</td>
<td>+1</td>
</tr>
<tr>
<td>Breast Cancer Screening</td>
<td>79.3%</td>
<td>4</td>
<td>26</td>
<td>77.5%</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Colorectal Cancer Screening</td>
<td>74.3%</td>
<td>4</td>
<td>171</td>
<td>69.0%</td>
<td>3</td>
<td>+1</td>
</tr>
<tr>
<td>Diabetes Care A1C Testing</td>
<td>81.7%</td>
<td>4</td>
<td>163</td>
<td>64.1%</td>
<td>3</td>
<td>+1</td>
</tr>
<tr>
<td>Diabetes Care Eye Exam</td>
<td>82.2%</td>
<td>5</td>
<td>45</td>
<td>77.3%</td>
<td>4</td>
<td>+1</td>
</tr>
<tr>
<td>Diabetes Care Kidney Disease Monitoring</td>
<td>95.7%</td>
<td>4</td>
<td>18</td>
<td>93.8%</td>
<td>3</td>
<td>+1</td>
</tr>
</tbody>
</table>
ICP’s current ambulatory quality focus is on Centers for Medicare and Medicaid Services (CMS) Star ratings, which will be a critical measure of success as we embark further into our joint venture Medicare Advantage plan, CarePartners of CT. In 2019, ICP completely redesigned its quality reporting capabilities, developing a new quality data repository, automating standard reports, developing new reports to support CarePartners of CT and ICP’s focus on Medicare Advantage Stars ratings, incorporating HEDIS and CMS Stars data for better benchmarking abilities and more.

Patient Experience
ICP behavioral health clinicians are now fully integrated into the Primary Health Care system through HHCMG. This model utilizes a care team approach to treatment, with coordinated treatment plans to address the multifactorial preventive measures to improve overall health. The model continues to demonstrate an increase in patient satisfaction, earlier detection and treatment of mental health and lifestyle issues, which leads to better health outcomes. ICP community care managers have transitioned to a longitudinal model, creating a seamless and personalized relationship with the patients we care for. Wherever the patient accesses the Hartford HealthCare system, their care manager, with whom they have formed a bond, is there to support them. ICP Community Care Managers aim to be the common thread for our patients navigating the vast health care system and have modified their daily work and structure to achieve this goal.

Care Standardization
Throughout the last year, ICP community care management has optimized standardized assessments in the areas of chronic disease management, as well as cognitive and physical function. Additionally, the Community Care Management team has led a system-wide initiative to adopt and optimize standardized, universal screening for social determinants of health, with an embedded Epic tool. These changes have been fully implemented within the Community Care Management and Primary Care Behavioral Health teams, began to be piloted in adult primary care, and socialized within inpatient care coordination. Plans for continued scale, implementation, and optimization are underway in 2020.
Volume/Growth
ICP continues to concentrate on opportunities to expand our membership. We are focused on growing our primary care and specialty care footprint in geographic areas that align with Hartford HealthCare’s strategic vision. Our current focus has been centered on the Northwest Region, Fairfield Region and New Haven territory to support our most recent acquisitions.

ICP Focus for Fiscal Year 19
For decades, Hartford HealthCare has provided high-quality primary and specialty care, extensive home services and senior living options. Now, we’re proud to offer our own Medicare Advantage plan with options that meet the needs of our Medicare patients. We have created a market-leading experience for seniors that reduce the burden on providers.

Hartford HealthCare and Tufts Health Plan have created a new health plan just for seniors – CarePartners of Connecticut. It’s the first and only Medicare Advantage plan of its kind in our state and we started enrolling members in January 2019. Teams from both companies developed product offerings, plan designs and care management models to provide a high-quality, innovative model to the Medicare Advantage population.

This plan cuts through red tape, giving us more on-the-spot decision-making power, faster access to more top specialists and more health and wellness benefits designed specifically for our senior patient population. The plan, built on the doctor-patient relationship, is helping seniors live their healthiest lives by integrating the payer into the delivery system.

CarePartners of Connecticut is the combination of patients, providers and a health plan all working together to provide the best care possible.
Hartford HealthCare Board Quality & Safety Committee

The Board Quality and Safety Committee assists Hartford HealthCare’s Board of Directors by providing oversight for clinical quality and safety across all Hartford HealthCare venues of care. The Committee discusses key topics and makes recommendations related to areas that impact Hartford HealthCare’s ability to achieve exceptional clinical quality and safety, including inpatient, ambulatory, post-acute, sub-acute and behavioral care as elements of holistic care excellence, in a manner that furthers the mission and purpose of Hartford HealthCare.

Members of the Committee:

- **Lakshmi Halasyamani, MD**
  Chief Quality & Care Transformation Officer
  NorthShore University HealthSystem

- **Carmen Cid, PhD**
  Dean, School of Arts & Sciences
  Eastern Connecticut State University

- **David P. Hess**
  Chair, Hartford HealthCare Board

- **John Janco**
  President & CEO
  Torrington Savings Bank

- **Stephen W. Larcen, PhD**
  Member, East Region Board

- **Jeffry Nestler, MD**
  President, Connecticut GI

- **Carol Polifroni, EdD**
  Professor, PhD Program Director
  University of Connecticut School of Nursing
  Co-director of School & Child Health

- **George Springer, Jr., Esq.**
  Partner
  Rogin Nassau, LLC

- **Dara Richards, MD**
  Chief Medical Officer
  Southwest Community Health Center

- **Irfan Chughtai, MD**
  Connecticut Nephrology Associates, LLC

- **James Caroll, MD**
  Radiologist
  Midstate Radiology Associates

- **Edward Arum**
  Quality & Safety Committee Board member

- **Joseph Abreu, MD**
  Noninvasive Cardiologist
  Director of Echocardiography Lab
  Charlotte Hungerford Hospital

- **Jeff Finkelstein, MD**
  Vice President of Medical Affairs
  Central Region

- **Robert Sidman, MD**
  Vice President of Medical Affairs
  East Region

- **Paul Scalise, MD**
  Vice President of Medical Affairs
  Northwest Region

- **Daniel Gottschall, MD**
  Vice President of Medical Affairs
  Fairfield Region

- **John Foley, MD**
  Associate Vice President of Medical Affairs, Hartford HealthCare Medical Group

- **Deborah Weidner, MD**
  Vice President of Quality & Safety, Behavioral Health Network

- **Kristen Ramsay**
  Director of Operations Clinical Affairs, Hartford HealthCare

- **Kwisha Patel**
  Department Coordinator
  Clinical Affairs and Quality, Hartford HealthCare

- **Hartford HealthCare Staff:**

  - **Ajay Kumar, MD, MBA**
    Executive Vice President & Chief Clinical Officer, Hartford HealthCare

  - **Stephanie Calcasola, MSN, RN-BC, CPHQ**
    Vice President of Quality & Safety Hartford HealthCare

  - **James Cardon, MD**
    Executive Vice President & Chief Integration Officer, Hartford HealthCare
    Chief Executive Officer, Integrated Care Partners

  - **Adam Steinberg, MD**
    Vice President of Medical Affairs
    Hartford Region