



Carolina's HealthCare System



Carolinas HealthCare System

# 2015 VALUE REPORT



# FRIENDS AND COLLEAGUES



**ROGER A. RAY,**  
MD, MBA, FACPE

*Executive Vice President &  
Chief Physician Executive*

We are pleased to share with you our 2015 Value Report, a summary of the high-quality, innovative care delivered across Carolinas HealthCare System in 2014. As one of the largest comprehensive networks of care in the country, we aim to provide seamless access to coordinated services closer to where our patients work and live.

As the healthcare landscape in the United States continues to evolve, organizations like ours are enhancing the way they deliver care and connect patients to the resources they need for continued health. Consumer demands for more convenient, higher value and lower cost options are driving the marketplace, coupled with equally robust expectations from regulatory and ranking agencies. Change is the new constant, but it is ripe with opportunities for empowering collaborations and for goal-setting at new levels.

Over the past year, we continued to set bold clinical aims and to work as a system, alongside other health organizations, to provide the safest, high-quality and convenient healthcare possible. Our care management programs are helping patients with complex health conditions stay out of the hospital and emergency department – we have already reduced avoidable healthcare visits by 53 percent. Working with our community partners to slow the spread of chronic illnesses at the population level, we completed more than 53,000 diabetes risk assessments in one year and identified over 27,000 people at risk for developing prediabetes or diabetes. Today, we are helping those at risk to make more informed and sustainable lifestyle choices and changes.

We also have expanded our virtual care programs and services, which are available in our emergency departments and doctors' offices, and in the comfort of patients' homes. Patients now can see multiple providers in one office visit and receive care when and where they need it the most. We are continuing to enhance and spread these convenient services across the Carolinas.

At every encounter, in our facilities and in the community, Carolinas HealthCare System engages patients and their families, helping them become more active participants in their health. We are dedicated to excellence in patient care and safety, and to continuing our long-standing commitment to the health of communities near and far.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger A. Ray MD". The signature is fluid and cursive.



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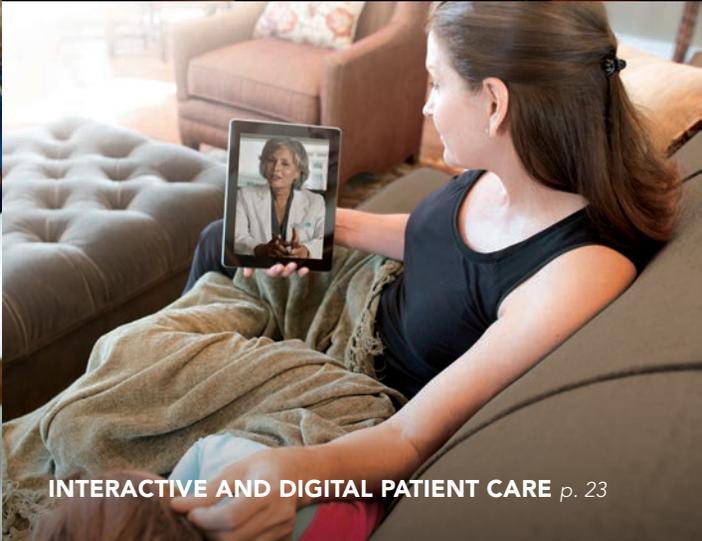
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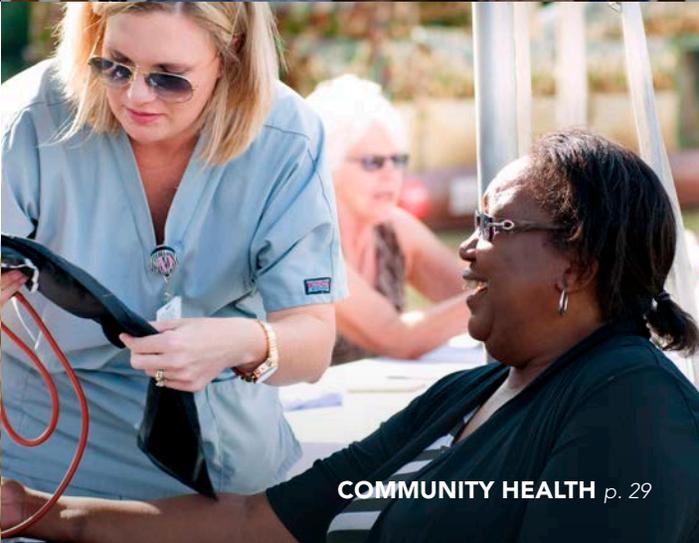
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**61,000** EMPLOYEES

**3,000** DOCTORS  
AND ADVANCED CLINICAL  
PRACTITIONERS,  
AND **15,000** NURSES

**7,800** LICENSED  
PATIENT BEDS

**11 MILLION**  
PATIENT ENCOUNTERS  
PER YEAR

**1 MILLION** PATIENTS IN OUR  
PRIMARY CARE NETWORK

# WHO WE ARE

## Integrated System of Care

As one of the largest integrated healthcare networks in the country, Carolinas HealthCare System leverages knowledge, scale and virtual technologies to drive better patient care. We deliver quality care quickly and conveniently, creating value for our patients, communities and payors.

## Patient-Centered Focus

We believe the experiences of patients and their families are a crucial component of the healing process. In every interaction, we aim to deliver personalized care that engages and connects patients through tools and resources that make them feel included, informed and inspired.

## Transformative Care Delivery

In everything we do, we strive to achieve affordability of and access to quality healthcare. The value of care we deliver is enhanced by our ability to collect and analyze critical data from millions of patient interactions. Our data models allow providers across hundreds of care locations to more accurately predict and address the medical needs of our patients and communities.

**210+**

ICU beds offer virtual  
telemonitoring in  
addition to on-site care  
by a provider

**9,800+**

Patient safety events avoided

**\$60 MILLION**

saved in care-related costs  
in 3 years through the hospital  
engagement network

**500+**

Emergency behavioral  
health consults  
conducted virtually  
every month

**27,000+**

People identified  
at risk for prediabetes or  
diabetes in one year

**60,000+**

Diabetic patients in managed care



**18 MILLION**

Transactions per day  
in our electronic medical  
records system

**141,100**

Patients enrolled to use our  
online patient portal

# BEHAVIORAL HEALTH

A mental health diagnosis, like depression, can increase the cost of care by **60 TO 70 PERCENT.**

Carolinas HealthCare System is leading the way through innovative initiatives to improve individual and population health. Our approach is characterized by high-quality, coordinated patient care, covering a vast range of services. One example is our work in behavioral health.

**One in four Americans has a diagnosable behavioral or mental health issue at any given time.** But resources for treating mental health are limited nationwide. Recognizing this critical need, Carolinas HealthCare System developed an array of services to help patients receive timely care.

## Telepsychiatry in the Emergency Department

Patients in urban and rural communities often go to the emergency department with psychiatric care needs – either underlying or as a primary diagnosis. Carolinas HealthCare System's telepsychiatry program brings the expertise of system psychiatrists to patients in emergency departments in the Charlotte region.

Patients who have mental illnesses are connected virtually, in the emergency department, with a psychiatrist who can help diagnose and later treat the patient, avoiding the need for the patient to set up a separate appointment for diagnosis.

**In 2014, the System performed close to 4,700 telepsychiatry consultations.**





## Primary Care Virtual Behavioral Health Integration

**More than 70 PERCENT  
of primary care visits  
involve an underlying mental  
health issue.**

Carolinas HealthCare System connected its large primary care network with its behavioral health providers via virtual technology. Launched in 2014, the Primary Care Virtual Behavioral Health Integration program offers patients quick, convenient access to mental health services while they are in the doctor's office. Over 1,700 patients have received support through this service, which includes:

- A brief mental health assessment
- Real-time counseling and support in a provider's office
- Treatment recommendations
- A call from a behavioral health team member (once enrolled in the program)
- Follow-up calls to help patients reach treatment goals

# VIRTUAL CRITICAL CARE

In the US, critical care beds account for about 10 percent of inpatient beds but up to **30 PERCENT OF TOTAL COSTS** and up to **40 PERCENT OF DRUG COSTS IN THE HOSPITAL.**

In 2013, Carolinas HealthCare System launched Virtual Critical Care to provide an extra level of clinical expertise for critically ill or injured patients. The program provides real-time, 24/7 monitoring and two-way audio and video connectivity to ensure patient safety at all times.

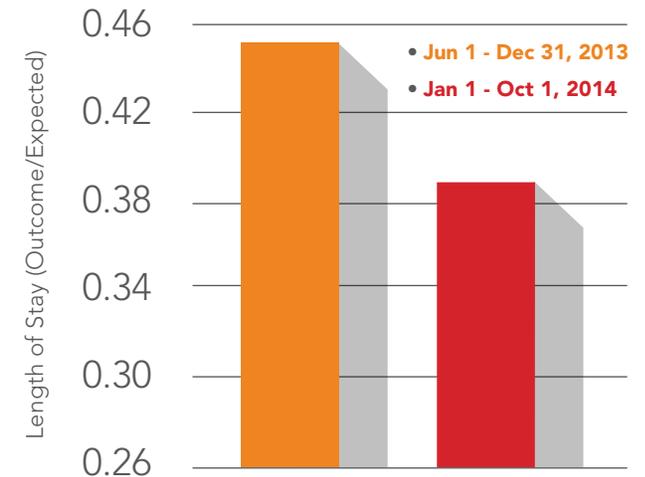
Virtual Critical Care is available in 10 system care locations – small and large community and urban hospitals – allowing patients to stay as close to home as possible. Since the program was implemented two years ago, **it has helped decrease patient's length of stay in the intensive care unit by 7.4 percent and has reduced mortality by 5.2 percent.**

## The System's Virtual Critical Care Center:

- Reduces complications, mortality rates, length of stay and costs
- Enhances the patient and family experience
- Ensures immediate response to urgent and emergent situations
- Allows for earlier recognition of subtle changes to a patient's condition
- Leverages the expertise of all specialists in critical care units
- Increases collaboration among care teams
- Facilitates quality data collection, reporting and benchmarking

## Hospital Mortality

(Ratio of outcomes vs. expected outcomes)



Equates to **13 lives saved in 2014.**

# ICU Length of Stay



Equates to a 1 year **cost savings of \$1,744,215.**  
Representing a **4.2% reduction.**

A man in a light blue shirt and tie is leaning over a desk, pointing at a computer monitor. He is looking at a woman sitting at the desk, who is wearing a headset and looking at the same monitor. There are several other computer monitors in the background, some displaying data and charts. The setting appears to be a control room or a data center.

## FROM OUR PROVIDERS

"As a nurse, you can be very busy at the bedside. You're performing tasks minute to minute to take care of patients.

With Virtual Critical Care (VCC), I know there's someone digging into our patients' charts who can look at the trends and is going to pick up something so subtle that I may not have time to pick it up if I am at the bedside. Early intervention is key to making sure our patients get that excellent care.

For example, we recently had a patient in a regional facility who needed urgent dialysis, which wasn't provided at that facility. VCC helped the bedside nurse arrange transportation to another Carolinas HealthCare System hospital 60 minutes away where the patient could receive this care. Once the patient was en route, the VCC received critical lab results from the regional facility and was able to have a medication order, written by the VCC intensivist, sent to the ambulance so the patient could receive this immediately."

– **SANDY ARNESON**

*CCRN, Virtual Critical Care Clinical Supervisor*

# CAROLINAS SIMULATION CENTER



Carolinas HealthCare System's Carolinas Simulation Center provides high-level education and training for both medical students and clinical providers to promote national patient safety initiatives, care standards and team communication to improve patient outcomes.

One initiative includes a collaboration with skilled nursing facilities (SNFs) resulting in a decrease in hospital readmission rates for participating SNFs by 10 percent. Local EMS agencies reported drops in patient transports from these facilities by up to 35 percent.

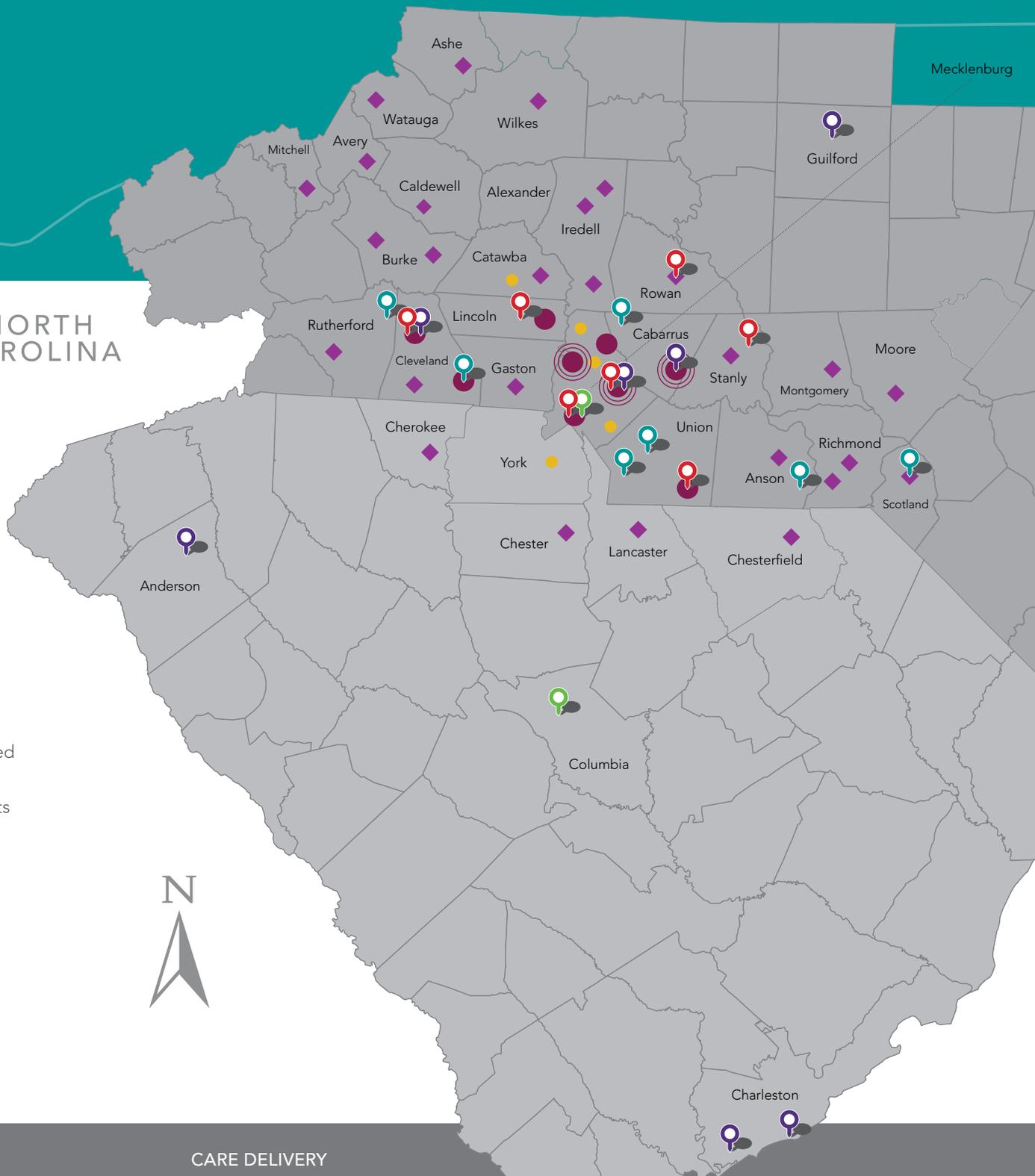
Neonatal emergency education is also offered to 10 freestanding emergency departments and hospital-based emergency departments without obstetric or neonatal specialists on-site. The goal is to integrate the core concepts of neonatal resuscitation, teamwork, communication and the transfer process to promote safe care of newborn babies. The transfer process includes criteria for initiating "Code Baby," a specialized response to ensure the sickest of newborns are transferred to an appropriate facility. The simulation-based education has offered healthcare providers hands-on learning, team training and realistic preparation in their own care setting. All nine core knowledge questions on the follow-up surveys showed improvement, six of which increased by more than 50 percent.

# NORTH CAROLINA

- ### Chest Pain Network
-  Carolinas Chest Pain Network Society of Cardiovascular Patient Care (SCPC) Accredited with Percutaneous Coronary Intervention (PCI)
  -  Carolinas Chest Pain Network SCPC Accredited
  -  Other SCPC Accredited Hospitals
  -  Other Hospitals with the Chest Pain Network

- ### Stroke Network
-  **Expertise:** Stroked-trained neurology and advanced stroke services
  -  **24/7 Access:** Telephone access to stroke specialists and ambulance air transport
  -  **Information:** Clinical information and imaging
  -  **Support:** Code stroke protocol and education and training

- ### Trauma Network
-  Trauma Centers
  -  Poison Control Centers



A stylized map of South Carolina is shown in the background, with the state's outline in white and its counties shaded in a light gray. The map is positioned on the left side of the page, partially overlapping the teal header.

# INTEGRATED NETWORKS

## Chest Pain Network

Carolinas HealthCare System's Chest Pain Network monitors door-to-balloon and first-medical-contact-to-balloon times. This helps providers track the times a patient arrives to the emergency department (ED) or is seen by a provider to the time the patient receives a coronary angioplasty.

**Since 2012, the Center's times have been better than the national recommended 90 minutes, and they continue to improve:**

- Door-to-Balloon – 38 minutes
- First-Medical-Contact-to-Balloon – 58 minutes

## Stroke Network

In North Carolina, the number of patient deaths from stroke are among the highest in the nation. To reduce this number, Carolinas HealthCare System hospitals gathered to create the Carolinas Stroke Network. These hospitals use a Code Stroke process to standardize best practices and minimize delays in treating patients with acute stroke. Emergency department providers meet monthly to review cases and track important patient data, including "door to physician" and "door to CAT scan" times. By improving these times, providers can help improve a patient's overall outcome.

## Trauma Network

Through the Carolinas Trauma Network and its several programs, Carolinas HealthCare System collaborates with others locally to develop and implement best practice guidelines to address nationally recognized public health issues in trauma.

### Programs include:

- Concussion/Mild Traumatic Brain Injury
- Fragility Fracture
- Unintentional Poisonings

SOUTH  
CAROLINA

# DECENTRALIZED CANCER CARE

Using an integrated model that extends across states and leverages cancer experts and resources across Carolinas HealthCare System, **Levine Cancer Institute has created a unique, decentralized approach to cancer care to provides high-quality care across a broad geography.**

Nationally and internationally renowned physicians and specialists in more than 24 facilities throughout the Carolinas collaborate daily to develop standard treatment protocols that accelerate efficient, effective therapy and improve patient access to clinical research. The Institute offers robust patient survivorship support programs like patient navigation, integrative medicine and fertility preservation. It also pilots programs to reduce disparities in accessing this type of care.



## FROM OUR PATIENTS

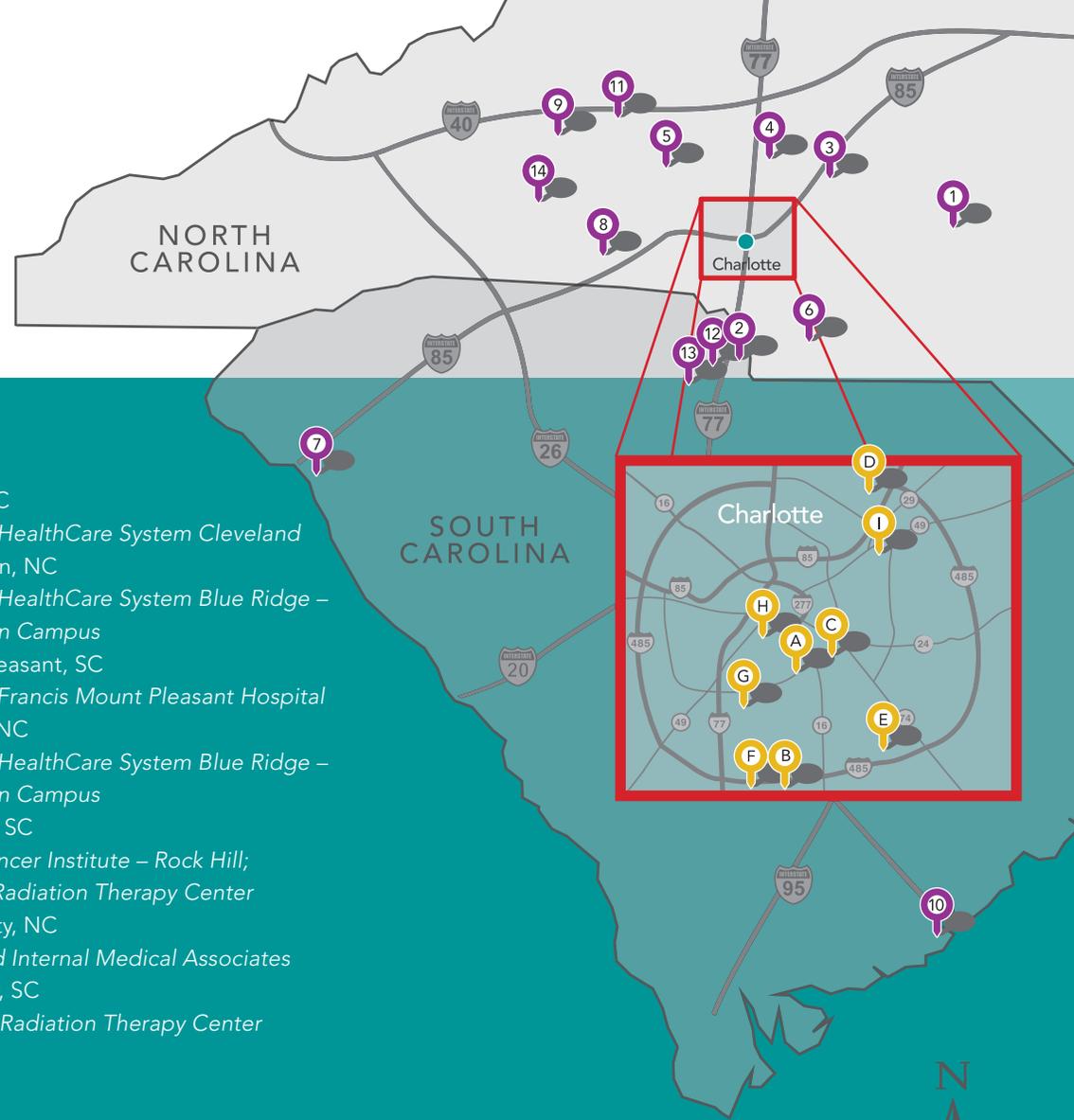
During a workout with her niece, **EDWINA EDGEWORTH** started experiencing shortness of breath. Her breathing continued to worsen and at an appointment with her primary care physician, she learned that her left lung had collapsed.

Edwina was diagnosed with advanced, stage four cancer in her lungs and brain. After not responding well to standard therapy, doctors at the Levine Cancer Institute location in her hometown of Monroe, NC, gave Edwina the option of participating in an experimental treatment.

“They weren’t quite ready for me to go on chemo and, personally, I wasn’t ready for that either,” she said. “So, I chose to try the clinical trial.”

After her initial diagnosis at Levine Cancer Institute-Monroe, oncologists there connected her to a clinical trial at the Institute’s research headquarters in Charlotte. The trial tested a novel drug that significantly decreased the size of Edwina’s tumor, improving her quality of life.

The collaborative approach of the providers in Charlotte and Monroe allowed Edwina to gain access to life-saving medicine and stay near home for follow-up care.



## Levine Cancer Institute Locations

- |   |  |
|---|--|
| <p>1. Albemarle, NC<br/><i>Carolinas HealthCare System Stanly</i></p> <p>2. Indian Land, SC<br/><i>Levine Cancer Institute – Carolina Lakes</i></p> <p>3. Concord, NC<br/><i>Batte Cancer Center at Carolinas HealthCare System NorthEast</i><br/><i>Carolinas HealthCare System NorthEast – Radiation Oncology</i></p> <p>4. Cornelius, NC<br/><i>Levine Cancer Institute – Cornelius</i></p> <p>5. Lincolnton, NC<br/><i>Carolinas HealthCare System Lincoln</i></p> <p>6. Monroe, NC<br/><i>Edwards Cancer Center at Carolinas HealthCare System Union</i><br/><i>Carolinas HealthCare System Union – Radiation Oncology</i></p> <p>7. Anderson, SC<br/><i>AnMed Health Medical Center</i></p> | <p>8. Shelby, NC<br/><i>Carolinas HealthCare System Cleveland</i></p> <p>9. Morganton, NC<br/><i>Carolinas HealthCare System Blue Ridge – Morganton Campus</i></p> <p>10. Mount Pleasant, SC<br/><i>Roper St. Francis Mount Pleasant Hospital</i></p> <p>11. Valdese, NC<br/><i>Carolinas HealthCare System Blue Ridge – Morganton Campus</i></p> <p>12. Rock Hill, SC<br/><i>Levine Cancer Institute – Rock Hill;</i><br/><i>Rock Hill Radiation Therapy Center</i></p> <p>13. Forest City, NC<br/><i>Rutherford Internal Medical Associates</i></p> <p>14. Lancaster, SC<br/><i>Lancaster Radiation Therapy Center</i></p> |
|---|--|

## Levine Cancer Institute: Charlotte Locations

- |   |   |   |
|---|---|---|
| <p>A. Research and Administrative Headquarters<br/><i>Carolinas Medical Center Radiation Therapy Center</i></p> <p>B. Ballantyne</p> <p>C. Carolinas Medical Center - Mercy</p> | <p>D. Mallard Creek</p> <p>E. Matthews</p> <p>F. Pineville<br/><i>Carolinas HealthCare System Pineville</i><br/><i>Pineville Radiation Therapy Center</i></p> | <p>G. SouthPark</p> <p>H. Tryon</p> <p>I. University<br/><i>Carolinas HealthCare System University</i><br/><i>University Radiation Therapy Center</i></p> |
|---|---|---|

# HOSPITAL ENGAGEMENT NETWORK

“Our achievements are the result of the innovative, patient-centered work of our hospitals and the collaboration among participating organizations. While metrics show how we measure success, behind each number is a patient whose care was improved by these efforts. We will continue to excel in these areas as part of our commitment to our patients.”

**MICHAEL C. TARWATER**

*Carolinas HealthCare System President & CEO*

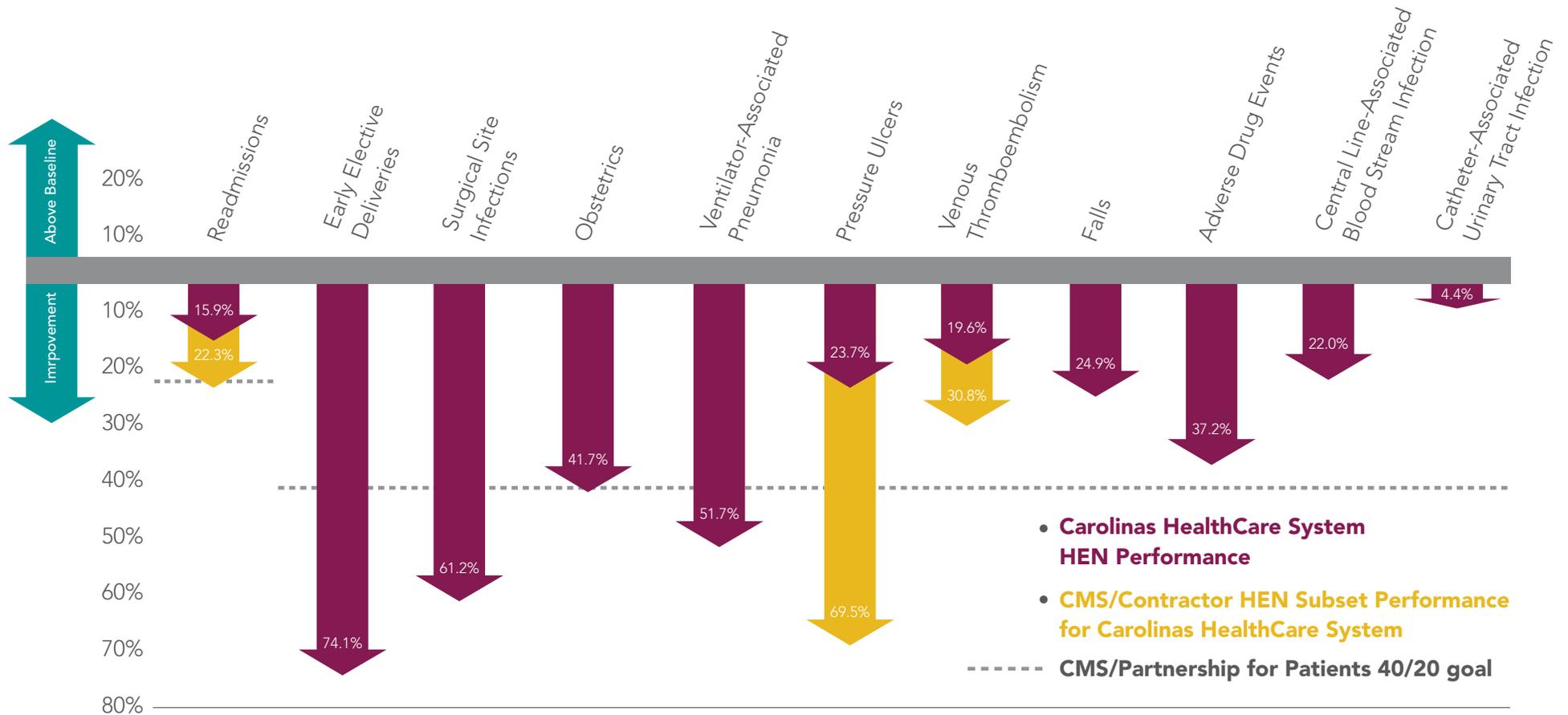
Leveraging national collaborations to improve quality and patient safety, Carolinas HealthCare System continued to work with the Centers for Medicare and Medicaid Services in 2014 through the Partnership for Patients' Hospital Engagement Network (HEN) and the Leading Edge Advanced Practice Topics (LEAPT) contract.

The HEN is a national public-private partnership of only 26 health organizations aimed at reducing preventable patient harm by 40 percent and 30-day hospital readmissions by 20 percent. The Carolinas HealthCare System HEN applied evidence-based practices to improve care in key clinical areas.

Using an integrated, aggressive approach, **the system prevented more than 9,800 potential patient safety events in three years, equivalent to more than \$60 million in related care costs savings.** The System was recognized by the North Carolina Hospital Association for its achievements.

# CAROLINAS HEALTHCARE SYSTEM HEN

## Improvements in Key Clinical Focus Areas (January 2012 – December 2014)



The Carolinas HealthCare System HEN showed **improvement in 11 of 11** key clinical focus areas.

## FROM OUR PATIENTS

"I just wasn't feeling right and then passed out. I was taken to Carolinas HealthCare System's Carolinas Medical Center, where the care team knew what to do and how to help me. I had hours if not minutes to make it out alive. If it can happen to me, it can happen to anyone."

**HOWARD HOOVER**, *Patient and Sepsis Survivor*

# LEADING EDGE ADVANCED PRACTICE TOPICS

The LEAPT contract, **awarded to only six health organizations in the country**, helped Carolinas HealthCare System facilities explore innovative solutions for clinical issues that challenge the healthcare industry, such as antimicrobial stewardship and deaths due to sepsis.

Sepsis is one of the leading causes of death in hospitals, affecting more than one million Americans each year. Sepsis is more common than heart attack and more harmful than stroke, killing one person every two minutes.

Patient **HOWARD HOOVER** was a seemingly healthy, 41-year-old father and husband in 2009 when he experienced severe septic shock. Bacteria known to lead to strep throat quickly entered Howard's lungs and bloodstream and led to a severe infection in only two days.

Carolinas HealthCare System hospitals have prioritized caring for patients with severe sepsis. The Code Sepsis emergency response program makes quick diagnoses of acute infections and provides a tailored treatment plan for patients in critical condition within the first hours of care.

Because of its impressive work in sepsis, **Carolinas HealthCare System was the only health system in the nation named a "Sepsis Hero" by the Sepsis Alliance.**



## Reducing Readmissions in Home Care

**Between June and October 2014, the system saved 40 PERCENT MORE lives and patients were able to return home 1.5 DAYS SOONER.**

As part of the LEAPT contract, Carolinas HealthCare System worked to further reduce avoidable 30-day readmission rates among patients transferred from hospitals to skilled nursing facilities (SNFs) and home health agencies. **SNFs saw nearly 19 percent improvement in their goal and home health agencies saw 26 percent improvement.**

The program identifies hospitalized patients as being low, medium or high risk for readmission and specific discharge plans are developed to help prevent readmissions. In physician offices, a live answer staff is trained to take calls from home health nurses while they are in patients' homes so patients can get medication orders filled immediately and speak with a physician if needed.

# QUALITY & SAFETY OPERATIONS COUNCIL

Carolinas HealthCare System's Quality & Safety Operations Council (OSOC™) helps drive the integration of quality care and patient safety across the System.

The Council's **20 TEAMS** meet monthly to develop and replicate best practices.

Teams build on the clinical experiences and achievements of providers across care locations and are managed by quality and clinical leaders, chief medical officers and other medical staff. This helps them more quickly spread and sustain best practices.



Goal-Oriented Team    Informational Team    Networking Team



# PATIENT SAFETY ORGANIZATION

One of the first healthcare systems in the nation to form its own Patient Safety Organization (PSO), Carolinas HealthCare System uses the benefits of the federal PSO designation to share information across the system. The organization's robust data capabilities help providers collaborate in a coordinated harm prevention program that drives measurable, lasting improvement.

## **Carolinas HealthCare System's PSO membership includes:**

- 27 hospitals
- Three skilled nursing facilities
- Two hospice programs
- Palliative care programs
- 400+ provider practices
- Homecare programs (Healthy@Home)
- Eight physician peer committees

Collaboration among various departments – including analytics, quality, infection prevention, risk management and in-house counsel – allow the rapid spread of best practices to improve quality care and patient safety across participating care locations.

# INTERACTIVE AND DIGITAL PATIENT CARE

Real-time access to patient information and feedback helps patients and providers receive and deliver the best possible care when it is needed most. Carolinas HealthCare System has developed technology and programs that support

**TIMELY,  
PERSONALIZED  
HEALTHCARE.**

## Virtual Care

In 2014, the System adopted virtual technologies in several care locations to more quickly help patients with everything from depression to the common cold. Our virtual behavioral health services offer patients a virtual consultation with a mental health expert during a primary care appointment (for more details, see pg. 8). And, our recently launched Virtual Visit program helps patients connect with a medical professional online, 24 hours a day, seven days a week, for a lower cost than a doctor's office visit.

More than 1,500 patients have been treated through Virtual Visit. Of these, **30 percent replaced a doctor's office visit and 38 percent replaced an urgent care visit.** More than half of the visits were conducted on mobile phones.

### Carolinas HealthCare System virtual services include:

- Cancer support groups
- Primary care
- Nutritional and genetic counseling
- 24/7 virtual critical care
- Telepsychiatry
- Virtual visits for primary care
- Care management

## Interactive Patient Care

Carolinas HealthCare System uses interactive technologies to share important health information (specific to their treatment or condition) with patients and capture their voice and feedback.

To date, the System offers interactive patient care in nearly 1,700 patient beds across eight hospitals. This technology encourages patients to learn about their health and hospital stay through tailored educational videos and to communicate individual requests directly with departments like nutrition and environmental services.

In 2014, Carolinas HealthCare System's Sanger Heart & Vascular Institute piloted interactive patient care using iPads to provide patients information on heart health before they discuss with a provider.



## FROM OUR PROVIDERS

For primary care doctors like **BRIAN KERSTEN, MD**, tools like MyCarolinas patient portal are changing the way he approaches patient care. MyCarolinas is a secure online patient health management tool that allows patients and providers to communicate via email and schedule appointments at any time.

One night, Dr. Kersten sent a secure message using MyCarolinas to a patient wanting to discuss changes to his diabetic regimen. The patient saw the message and scheduled an appointment through MyCarolinas for the next morning.

"The old way of communicating would have taken weeks," Dr. Kersten said. "This new two-way communication improves customer satisfaction and helps us more easily form a lasting partnership with our patients."

### **MYCAROLINAS allows patients to:**

- Book doctor appointments
- Request medication prescription renewals
- Securely send messages to care providers
- View information from their electronic medical records, such as medication history, immunizations and hospital discharge summaries
- View lab results 72 hours after results are returned to the doctor.
- Pay medical bills

# PATIENT AND FAMILY ADVISORY COUNCILS

In 2014, the national Caregiver Action Network named Carolinas HealthCare System **ONE OF THE TOP 25 HEALTH ORGANIZATIONS** to use best practices in patient and family engagement.

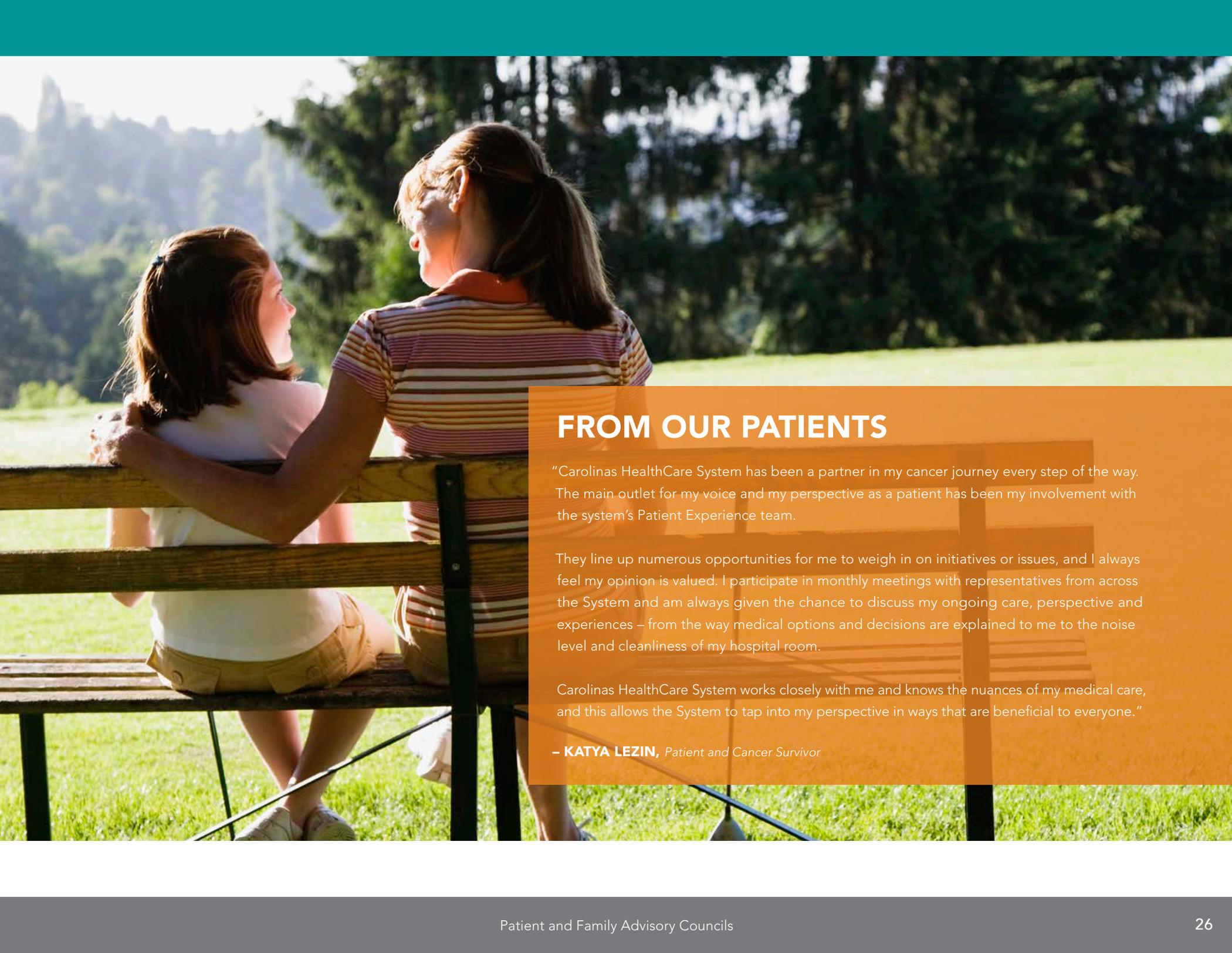
## Using the Patient Voice to Drive Change

Over **230 patients and family members share their unique perspectives as advisors or council members** for more than 25 care locations or service lines across the system. They have direct input and influence on policies, programs and practices that impact patients' healing and experiences.

At doctors' offices and some hospitals, advisors have participated in way-finding projects that have led to increasing lettering on signs and adding signs where needed. Advisors also share ideas for improving education and resources for hand-washing.

Levine Children's Hospital continuously gathers feedback from teen and family advisory councils, which provide input on everything from patient surveys and family-provider communications to the comfort of MRI holding areas and parent-to-parent support networks.





## FROM OUR PATIENTS

"Carolinas HealthCare System has been a partner in my cancer journey every step of the way. The main outlet for my voice and my perspective as a patient has been my involvement with the system's Patient Experience team.

They line up numerous opportunities for me to weigh in on initiatives or issues, and I always feel my opinion is valued. I participate in monthly meetings with representatives from across the System and am always given the chance to discuss my ongoing care, perspective and experiences – from the way medical options and decisions are explained to me to the noise level and cleanliness of my hospital room.

Carolinas HealthCare System works closely with me and knows the nuances of my medical care, and this allows the System to tap into my perspective in ways that are beneficial to everyone."

– **KATYA LEZIN**, *Patient and Cancer Survivor*

# SPECIALTY PHARMACY SERVICE

There has been an increase over the years in the demand of high-cost, specialty medications that treat complex chronic diseases. In 2014, they accounted for 33 percent of roughly \$400 billion spent on drugs in the US (a 23 percent increase from 2009).

“Many of these medications have high out-of-pocket expenses and limited distribution channels and payor networks,” said **BOB CARTA**, vice president of Pharmacy Service at Carolinas HealthCare System. “They require additional steps, such as co-pay assistance, intensive patient counseling and special handling, which can disrupt patients getting and staying on therapy.”

In 2011, the system streamlined its outpatient specialty medication support service, managing patient communication and documentation through electronic medical records. Pharmacists and technicians work with providers to monitor patients’ prescriptions and ensure patients don’t have trouble with their medications. They also work with hospital staff, non-System providers, payors and drug manufacturers on issues that can affect a patient’s health.

The new process allows Carolinas HealthCare System patients to get on their prescribed therapy quickly and stay on therapy 99 percent of the time (significantly higher than the industry standard).

## Specialty Pharmacy Service supports patients with:

- Cancer
- Growth Deficiency
- Infertility
- Hematology
- Hepatitis C
- Transplant
- Multiple Sclerosis/Neurological Disorders
- Psoriatic and Rheumatoid Arthritis

## FROM OUR PROVIDERS

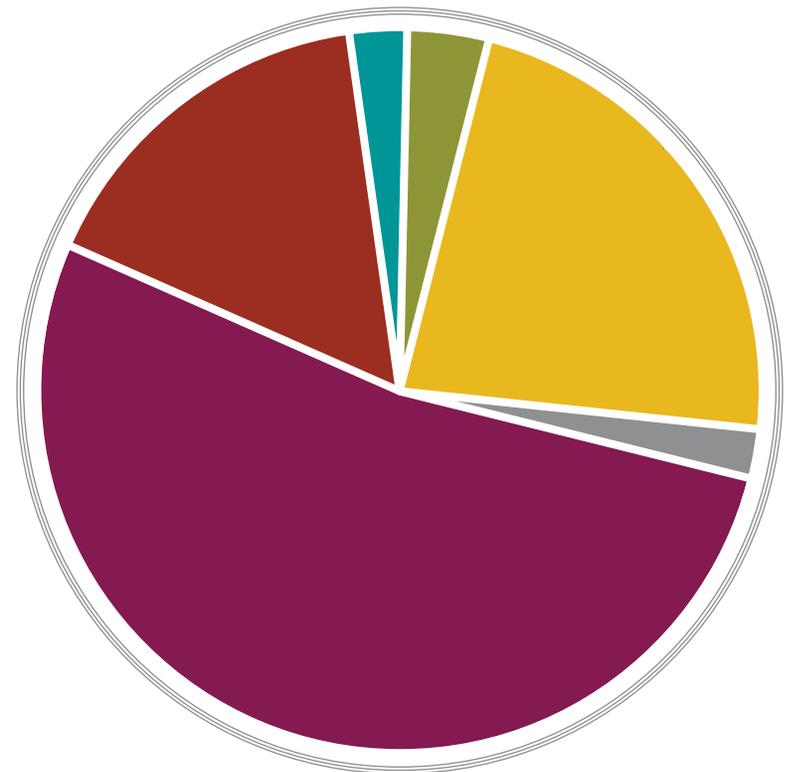
“The growth of this service comes down to the unique capabilities of our integrated healthcare system to coordinate care. It saves time and energy, and allows for an improved overall patient experience.” – **JOHN ROBICSEK**, *Assistant Vice President for Pharmacy Service*





## Personalized Clinical Interactions by Therapy

June 2014 - July 2015



**Hematology** 3%

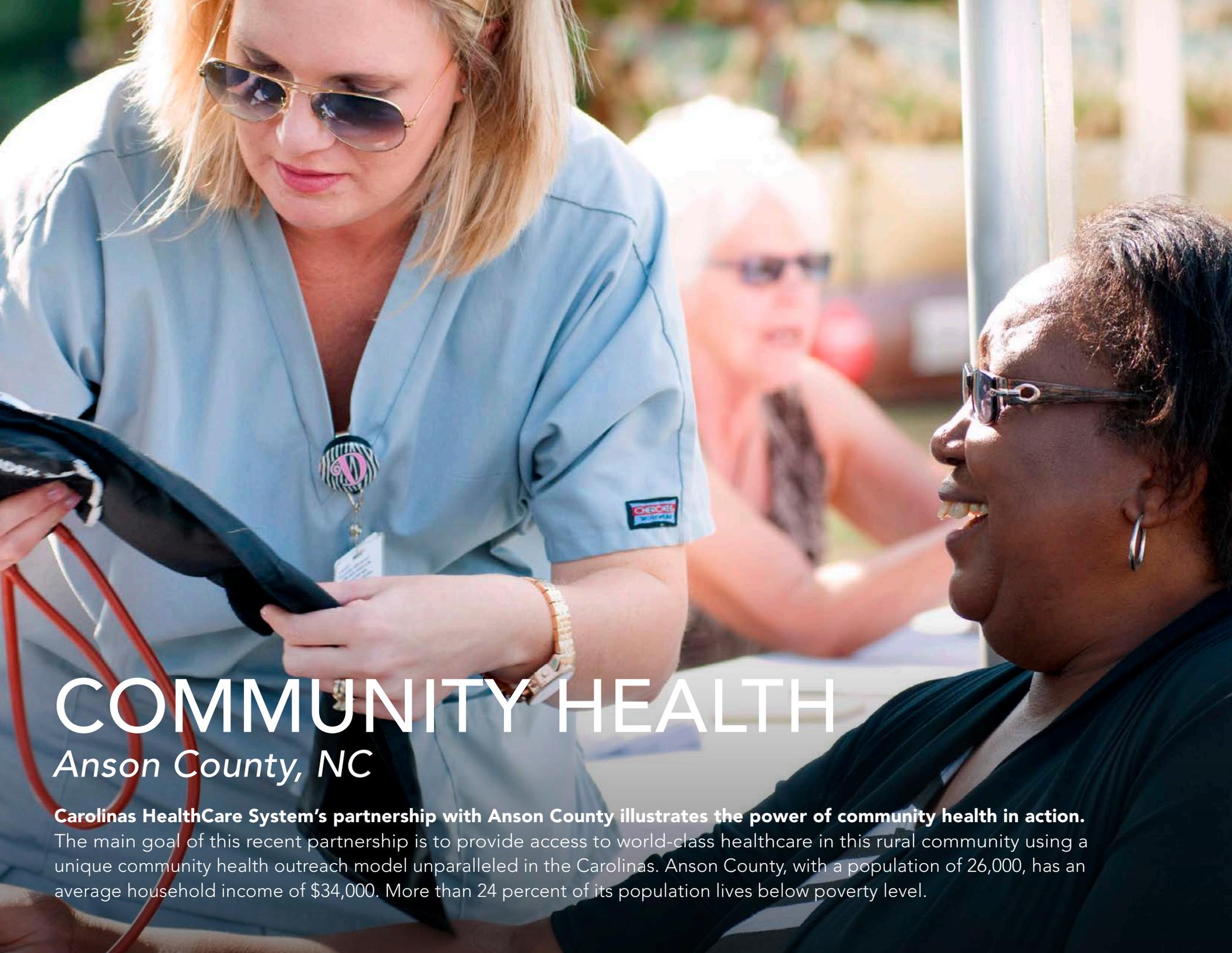
**Hepatitis C** 24%

**Multiple Sclerosis** 2%

**Cancer** 53%

**Psoriatic and Rheumatoid Arthritis** 16%

**Other** 2%



# COMMUNITY HEALTH

*Anson County, NC*

**Carolinas HealthCare System's partnership with Anson County illustrates the power of community health in action.**

The main goal of this recent partnership is to provide access to world-class healthcare in this rural community using a unique community health outreach model unparalleled in the Carolinas. Anson County, with a population of 26,000, has an average household income of \$34,000. More than 24 percent of its population lives below poverty level.



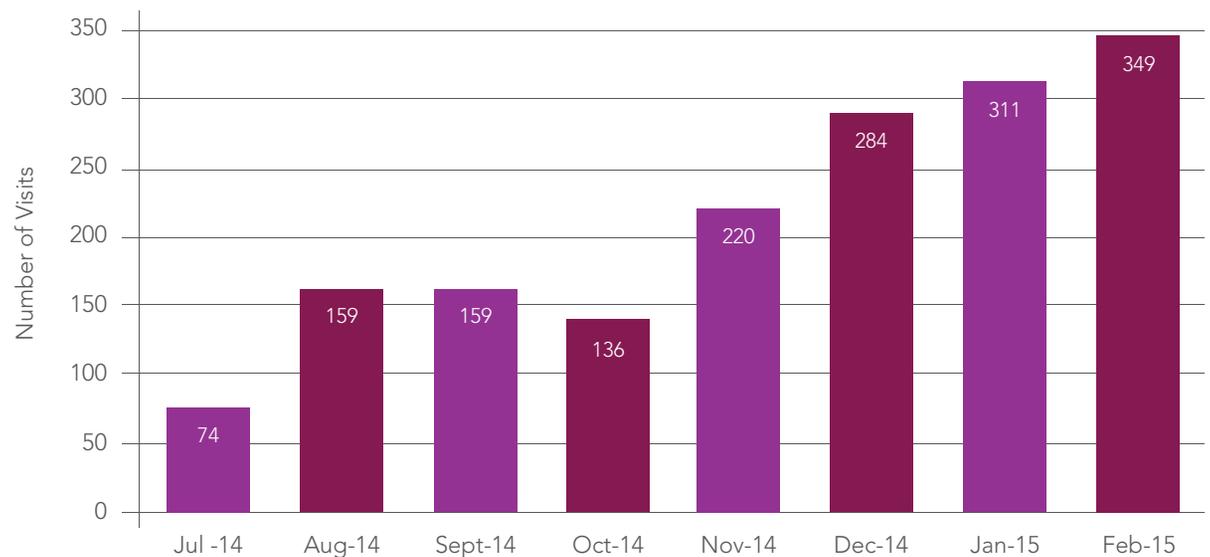
## Short-Term Goals of a New Care Model in Anson County

- Increase number of people who use primary care once every 18 months
- Decrease use of emergency department per capita
- Increase number of wellness visits for high-risk, high-cost patients
- Increase number of community engagement activities, such as:
  - Prediabetes and Type 2 diabetes screening events
  - Nutrition classes
  - Mental Health First Aid training
  - Smoking cessation education

## Long-Term Goals

- Decrease number of people who are: diabetic, obese, or hospitalized for heart disease
- Decrease Medicare spending

## INCREASE IN "MEDICAL HOME" VISITS IN ANSON COUNTY



Most significantly, we've seen a steady increase in number of patients who, after being triaged in the hospital, are referred for a "medical home" visit in lieu of emergency care.

**These referrals validate the efficiency of the care model developed in Anson.**

“We knew change was coming. And we not only supported that change; we wanted to be part of it. Since committing to opening a hospital here, Carolinas HealthCare System has worked with us every step of the way to determine what would make the biggest impact on the health of our families.”

**MICHAEL H. FREEMAN**

*Superintendent for Anson County Schools.*



### Carolinas HealthCare System's impact in Anson County:

**Emergency department visits decreased** nearly 5 percent from August 2014 to January 2015, compared to the same time frame the previous year.

**Primary care visits increased** 247 percent.

**Nearly 800 screened** at mobile community health screenings across Anson.

**16 certified Mental Health First Aid trainers** provided training in 10 area churches and to more than 70 school principals, administrators and staff.

**14 faith community health promoters trained** to deliver wellness education in the community.

**3,900 students** reached through athletic trainers placed in Anson high schools.



# COMMUNITY PRE-D CHALLENGE

Through an effort called the Pre-D Challenge, Carolinas HealthCare System and the YMCA of Greater Charlotte set the bold aim of reducing the rate of diabetes in the community.

**The challenge was to engage 50,000 people to complete a risk assessment within one year,** with a goal of identifying 10,000 at risk for developing prediabetes or Type 2 diabetes.



**27,000+ WERE IDENTIFIED AT RISK FOR DEVELOPING PREDIABETES OR TYPE 2 DIABETES.**



**53,000+ PEOPLE TOOK THE PREDIABETES RISK ASSESSMENT TO DETERMINE RISK FOR TYPE 2 DIABETES.**

Carolinan HealthCare System



# CARE MANAGEMENT



“I feel empowered because of the knowledge I have and comforted because I trust nurse Sarah. And I think everybody should have a Sarah.”

**GWEN FRANK-ROBINSON**  
Patient

Carolinas HealthCare System’s Care Management model truly places patients in the center of their health and care. Patients who participate are assigned a team that helps them easily navigate details of their health, including scheduling appointments, helping with referrals to specialists and offering follow-up support.

**The team could include:**

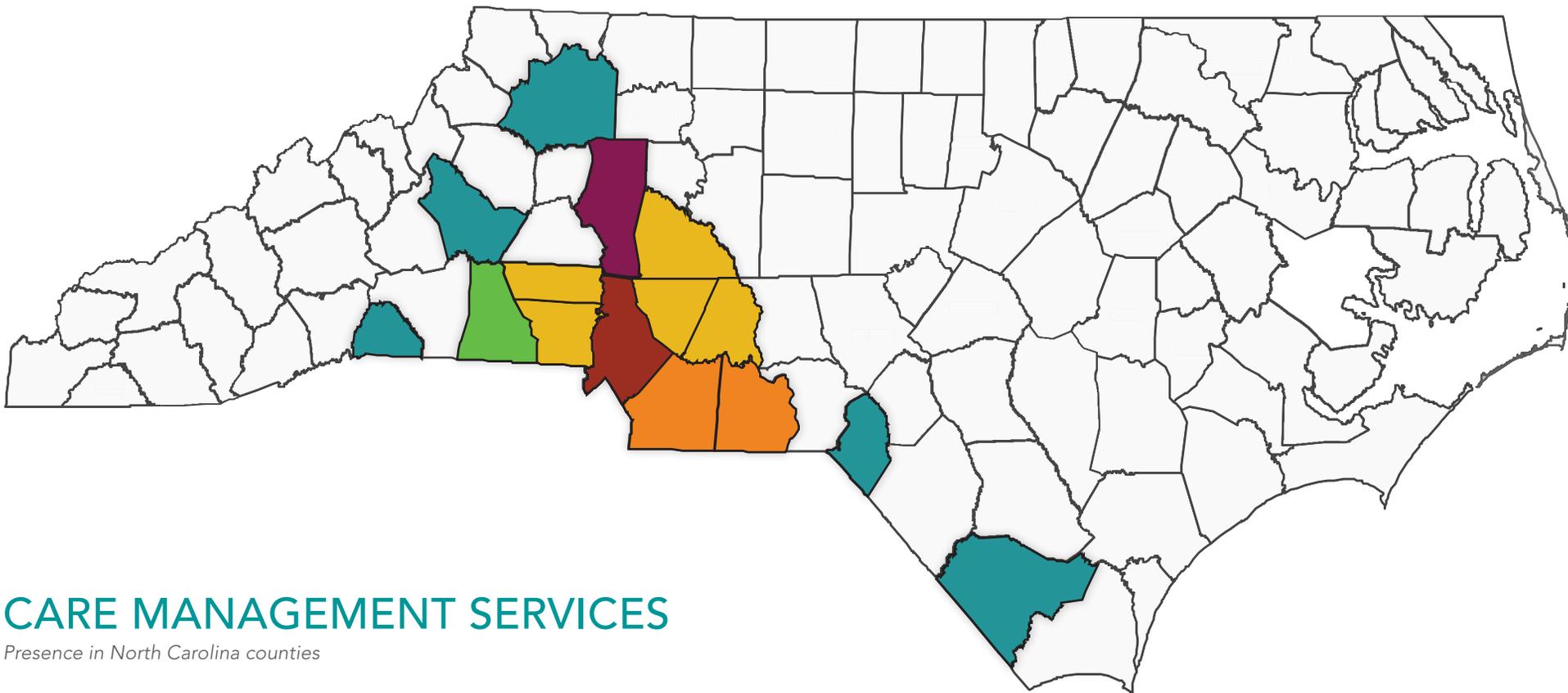
- A nurse care manager
- A behavioral health provider
- Community resources, like the YMCA, palliative care and hospice
- A pharmacist
- A health advocate

Our Advanced Illness Management (AIM) program is one that has helped patients like **GWEN FRANK-ROBINSON** better manage their health and kept them out of the hospital. Gwen was among 246 patients who **lowered their total number of hospital and emergency department visits from 567 to 264 – a 53 percent reduction.**

Gwen has chronic, complex conditions that require her to see seven doctors and take 19 medications. Because of her many conditions and potential complications, she would visit the emergency room several times per year. “If I had a particular problem, my recourse was to go to the hospital because there’s nothing else to do if you’re not feeling well,” said 71-year-old Gwen.

That was until Carolinas HealthCare System’s AIM program matched her with nurse Sarah Lacy. Sarah created a personalized plan for Gwen to help her take better control of her health and was Gwen’s main point of contact for any medical questions or needs. With Sarah’s support, Gwen did not return to the hospital for more than six months.

Nurses and social workers with the AIM program select patients through referrals from case managers and the electronic medical record (EMR). The EMR system identifies patients who are hospitalized more than two times in six months and who take medications for chronic conditions.



# CARE MANAGEMENT SERVICES

*Presence in North Carolina counties*

- **Acute Clinical Care Management**
- **Advanced Illness Management**
- **Community Care Partners of Greater Mecklenburg**
- **Community Relations and Wellness**
- **Community Care of North Carolina**
- **Faith Community Health Ministry**



# INNOVATIVE PARTNERSHIPS

Carolinas HealthCare System's Carolinas Medical Center was recently selected by General Electric (GE) as **one of only four hospitals across the country** to provide GE employees with hip and knee replacement surgery by way of a bundled payment agreement. Bundled payments allow companies to give employees access to high-quality, high-ranking medical centers that specialize in certain treatments and procedures. This is done at little or no cost to employees.



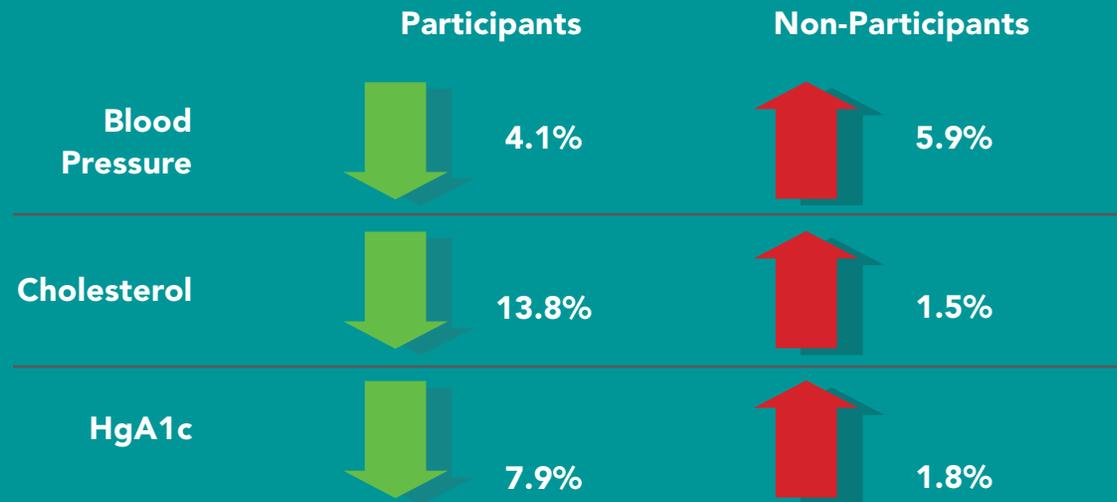
As one of the most comprehensive integrated healthcare networks in the country, Carolinas HealthCare System delivers quality care quickly and conveniently, creating value for patients, communities and payors. In recognition of that value, payor groups and employers choose the system as their healthcare provider through unique arrangements, allowing greater access to care for their constituencies.

We have expanded coverage through our partnership on innovative health insurance policies and emerged as a leader in the creation of value-based insurance products. We collaborate with insurance companies to market co-branded products, including in the Health Insurance Marketplace. Further expanding our value, we offer interest-free or low-interest payment plans – as well as coverage assistance and catastrophic/hardship options – to insured and uninsured patients. **Currently, 8,000 patients participate in our interest-free plans, which finance over \$10 million in balances.**

### HEALTHWORKS

Carolinas HealthCare System also partners with employers to offer employee health plans through our HEALTHWORKS program. We offer tailored lifestyle change programs, which include tobacco cessation and weight management. One employer with double-digit increases in healthcare spending year after year saw a 17 percent drop in overall claims during a 12-month period as a result of the program. **This resulted in savings of \$1.7 million for the employer.**

### CHANGES IN HEALTH INDICATORS FOR EMPLOYEE PARTICIPANTS AND NON-PARTICIPANTS OF A HEALTHWORKS PROGRAM



# AWARDS & RECOGNITIONS

In 2014, Carolinas HealthCare System was recognized locally and nationally for our commitment to delivering efficient, quality care across care locations. Year after year, we are recognized by many of the top opinions in the industry, including *U.S. News & World Report*, Truven and the National Research Corporation.

Our system continues being spotlighted for delivering high levels of patient safety and quality care across categories, ranging from best children's hospital to excellent patient experience. From system-wide HIMSS and Stage 7 status to facility-specific Magnet and Truven recognitions, care teams across our 900+ care locations are recognized for their achievements and contributions to the advancement of medicine and healthcare.

## Learn more about our many earned recognitions:

[CarolinasHealthCare.org/Awards-and-Accolades](http://CarolinasHealthCare.org/Awards-and-Accolades)





Celebrating Champions of Sepsis Awareness

