



FISCAL YEAR IN REVIEW

- 4 Medic: At A Glance
- 6 Response and Transport
- 8 Strategic Objectives
- 10 Our Patients
- 12 Our People
- 14 Clinical Measures / Research
- 16 Innovation
- 18 Community Engagement
- 20 Our Stewardship
- 22 Board of Agency Commissioners



1978

County authorizes funds to start service

1988 - 90

Medic assumes responsibility for the entire county and begins to operate at the Paramedic level

1993

911 Emergency Medical Dispatch comes to Medic

1996

Restructure with oversight by Mecklenburg County, Carolinas Medical Center and Presbyterian

2018

Completed new state of the art headquarters, located on Wilkinson Blvd.



OUR MISSION

To save a life, hold a hand, and be prepared to respond in our community when and where our patients need us.

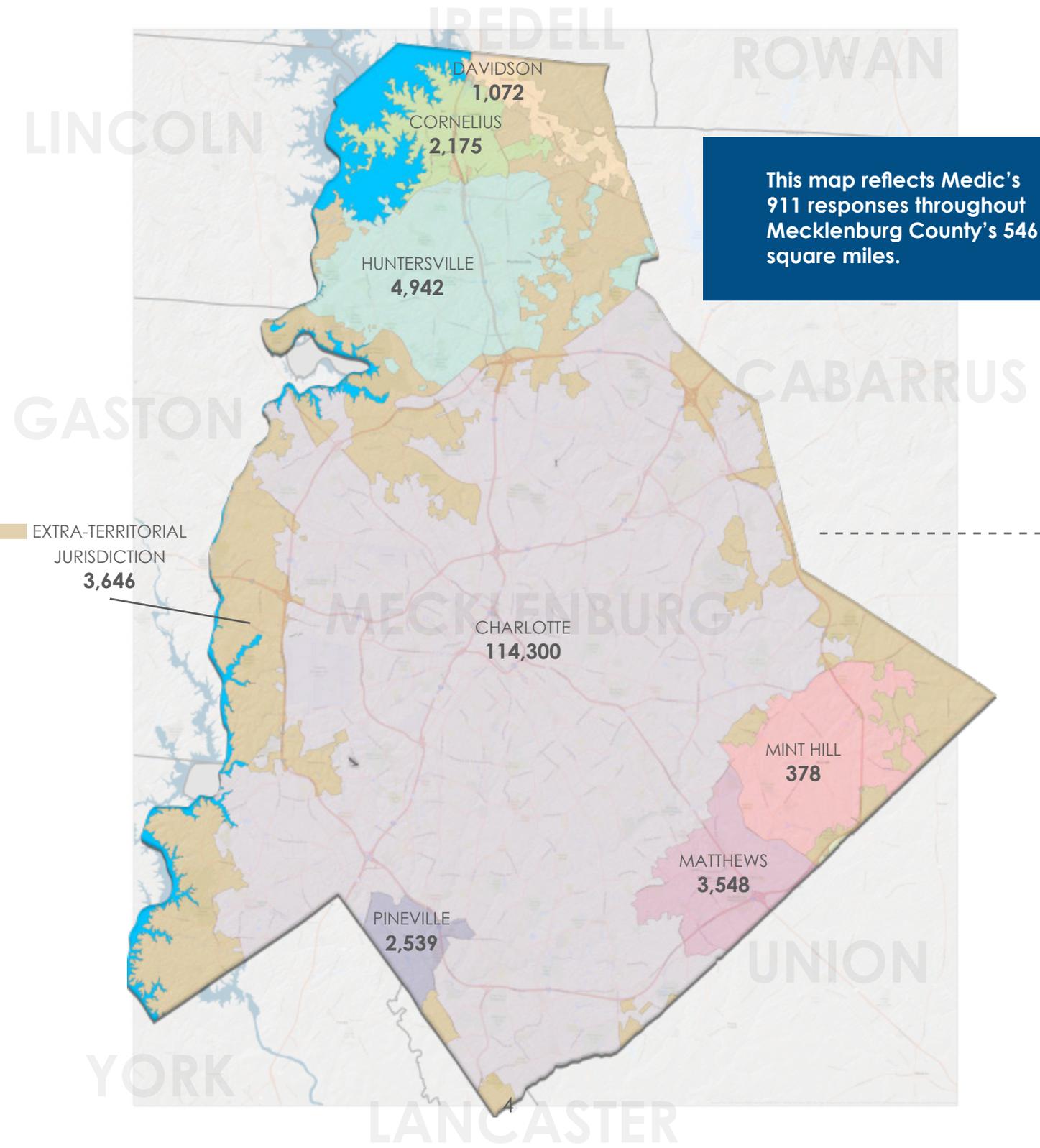
This year Medic focused on increasing value to our patients, identifying waste reduction methods, and improving the employee experience at our new headquarters. As a result, the Agency continued to perform exceedingly well, maintaining our place among the best in the nation for cardiac care.

Medic joined forces with both hospital systems to launch a new initiative aimed at further improving cardiac arrest survival rates in Mecklenburg County. Innovation was also key this fiscal year; idle reduction methods were tested and we predict a 20% reduction in fuel consumption over the next 12 months. The 911 Communications Center deployed RapidSOS, a new technological advancement that enhances our ability to locate callers and patients.

And there are exciting things on the horizon; the healthcare landscape continues to evolve, including NC Medicaid transitioning to a managed care model and Medicare's ET3, which provides select EMS agencies the opportunity to offer more care options to patients. Our footprint has also expanded as we became the exclusive ambulance service provider to the Town of Mint Hill and surrounding unincorporated areas.

This is an exciting time for Medic, and I hope you enjoy reading and learning more of how Medic's journey has progressed this year. As always, thank you for your valued support as we all serve our community together.

JOSEF (JOE) H. PENNER
Executive Director



FY' 19:



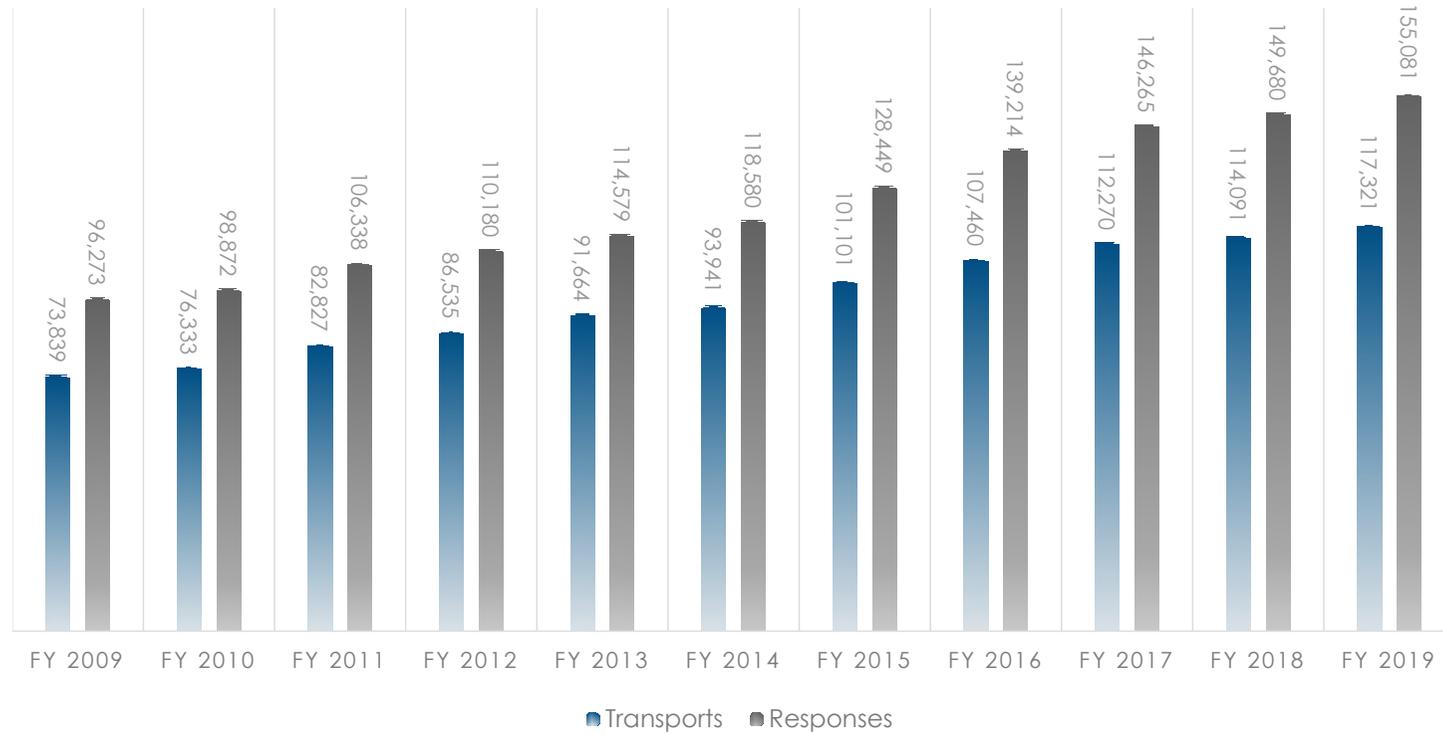
PATIENT
JOSEPH RAYMOND

CREW
PARAMEDIC
HEATHER TEAGUE & EMT HEBER DE PORTELA



PATIENT
CALVIN WALTERS

CREW
PARAMEDICS
CRAIG SOVINSKY & JACOB ABELL



RESPONSE TIME COMPLIANCE FOR LIFE-THREATENING CONDITIONS:

≥ 90%

GOAL OUTCOME:

MET

LIFE-THREATENING CONDITIONS:
91% COMPLIANT

POTENTIALLY LIFE-THREATENING CONDITIONS:
89% COMPLIANT

NON LIFE-THREATENING CONDITIONS:
91% COMPLIANT

MOST FREQUENT 911 CALL TYPES

1. SICK PERSON	41,880
2. TRAFFIC ACCIDENT	16,937
3. FALLS/BACK INJURY (TRAUMATIC)	15,984
4. BREATHING PROBLEMS	12,957
5. UNCONSCIOUSNESS/FAINTING	12,176
6. CHEST PAIN	9,452
7. UNKNOWN PROBLEM (MAN-DOWN)	8,568
8. PSYCHIATRIC/SUICIDE ATTEMPT	6,775
9. ASSAULT	5,589
10. OVERDOSE/INGESTION/POISON	5,482

DISPATCHED CALL TYPES

The following breakdown shows how the workload of our 911 Communications Center is distributed, resulting in nearly 189,000 dispatched emergency medical and fire resources in Mecklenburg County.

Medic	155,081
Mint Hill Fire and Rescue EMS	3,396
County First Responders EMS	21,348
County Fire and Rescue	8,914
Total FY '19 Dispatches	188,739

155,081
TOTAL RESPONSES

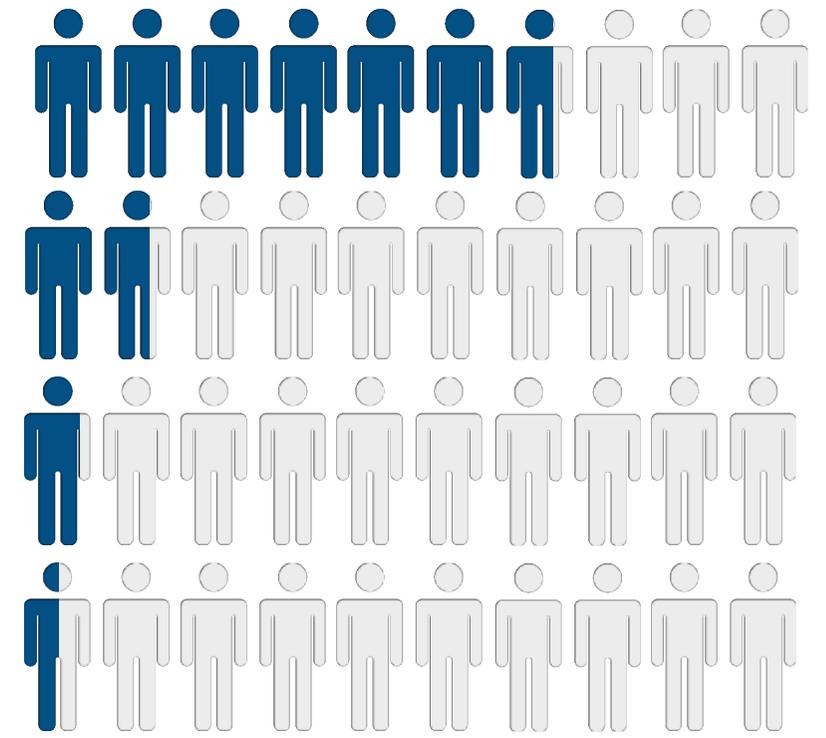
117,321
TOTAL TRANSPORTS

68%
NON LIFE-THREATENING

18%
NON EMERGENCY SCHEDULED

9%
POTENTIALLY LIFE-THREATENING

5%
LIFE - THREATENING



ADAMO RIASCOS
ASST. OPERATIONS SUPERVISOR



During FY '19, Medic's improvement work targeted three major strategic objectives aimed at quantifying the value Medic provides to our patients, waste reduction methods, and utilizing our new headquarters with our employees' needs at the forefront. These objectives, and the projects that followed, were carefully selected during Medic's strategic planning process involving employee input.

1.

Quantify the value Medic provides to our patients and improve the value of 911 non-emergency transport and service delivery by 3% in 24 months

First Responder Only Response
For service requests most likely to be canceled prior to EMS arrival, this protocol allows first responders to arrive and verify that a patient exist who needs medical assistance. The aim was to reduce unnecessary ambulance responses and retain valuable resources in place for high acuity patients. A total of 2,086 unnecessary EMS responses were safely avoided in FY '19, a figure that is expected to grow as the program fully matures.

STATUS: **COMPLETE**

Expanding Paramedic's Ability on Scene
After extensive research, testing and training, select care providers were given the ability to engage eligible patients in conversation about their care options. This change creates an opportunity to involve patients in their care decisions, providing them an option other than ambulance transport to a hospital emergency department. To date, 320 patients were engaged through this program and 173 patients were diverted from the ED.

STATUS: **IN PROGRESS**

2.

Identify and utilize waste reduction methods to reduce the 2020 budget by 1% as compared to the 2019 actual budget to reinvest in improvement efforts

New Hire Assessment Center
LEAN waste reduction methods were utilized to improve new hire assessment centers. By improving workflow, this project reduced the time required to assess field candidates by 20%.

STATUS: **COMPLETE**

Advanced Scheduling
To eliminate ineffective field labor costs, a project is underway addressing scheduling practices. The aim is to reduce overall cost in producing the schedule by 2% in 4 months.

STATUS: **IN PROGRESS**

Idle Time Reduction
The idle time reduction project identified options in idle mitigation technology to reduce fuel usage and emissions. The ZERO RPM system was chosen to test and if implemented, it is estimated to reduce fuel by 20% and extend the life expectancy of our fleet beyond the current 7 years.

STATUS: **IN PROGRESS**

3.

Utilize workspace to improve employee experience and ability to do their work at Medic headquarters in the next 12 months.

Employee Needs & Workflow
Needs analyses were conducted to assess how our employees interact with their spaces. Results have prompted improvements in logistics workflow, traffic patterns, employee storage and parking options on the Agency's property.

STATUS: **IN PROGRESS**

“They were outstanding, just totally excellent all around, I see the care they gave, it wasn't just a job.”

They sincerely cared.
- Michael C. (Patient)



When her patient asked for a song, **EMT Danielle Walcott** jumped at the chance to brighten her day and join in a rendition of *Amazing Grace* with musical therapist Mason Swimmer at Atrium Health's Mercy.

Danielle has exemplified compassionate care over her 12 years of experience at Medic and reminds others to "take every moment without rushing and just appreciate every little thing that you can."

PATIENTS WHO RATED THEIR OVERALL QUALITY OF CARE AS "EXCELLENT"

66%

GOAL OF $\geq 65\%$:

MET

AVERAGE PRIORITY ONE TRAUMA PATIENT SCENE TIME

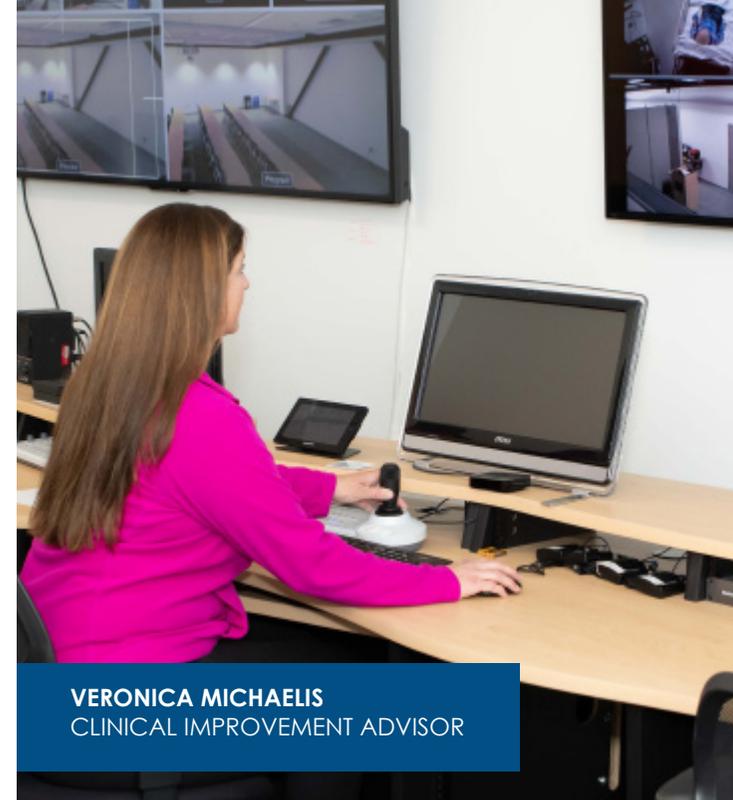
07:55

GOAL OF $\leq 10:00$:

MET

NUMBER OF UNSOLICITED COMMENDATIONS SUBMITTED FROM PATIENTS

1,825

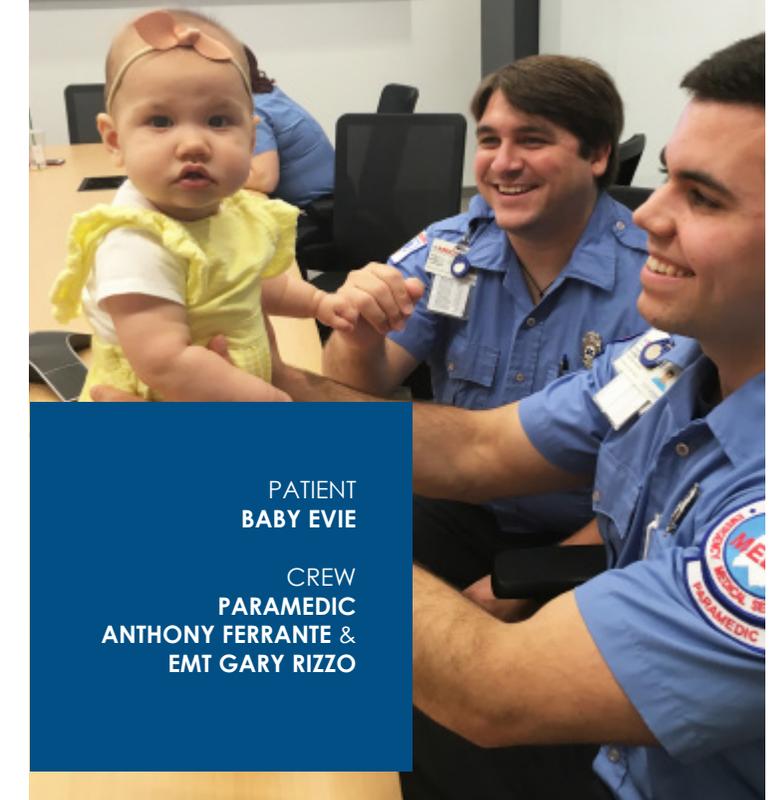


VERONICA MICHAELIS
CLINICAL IMPROVEMENT ADVISOR

COMBATING HUMAN TRAFFICKING

According to the National Human Trafficking Resource Center, Charlotte ranked #1 in North Carolina and #29 among cities in the United States for confirmed cases of human trafficking in 2018. EMS professionals are in a unique position to identify potential victims of human trafficking while also connecting them with resources to provide a safe exit strategy.

With this goal in mind, Medic's team of Education Quality Specialists utilized the Agency's state-of-the-art simulation center to create a training for detection of environmental factors and behavioral indicators for human trafficking situations. Simultaneously, a Human Trafficking Protocol was developed and implemented in June 2019. In partnership with public safety and healthcare systems, the protocol equips care providers with safe steps for appropriate care and referral services when potential victims are identified.



PATIENT
BABY EVIE

CREW
PARAMEDIC ANTHONY FERRANTE & EMT GARY RIZZO

PATIENT STORY: HALEY JOCK AND BABY EVIE

Haley Jock was scheduled to deliver baby #4 the next day, but baby Evie had other plans.

Haley went into active labor before quickly delivering Evie in the couple's kitchen. Thankfully, she received calm assurance and direction from Medic **Emergency Medical Dispatcher Jacob Lowe** on the other end of the phone. **Paramedic Anthony Ferrante** and **EMT Gary Rizzo** quickly arrived on the scene and provided care to mother and child.

The Jock family's experience was so memorable and their care from Medic so professional, they soon arranged a patient reunion with their crew and thanked them for the unforgettable birth story. Each year dozens of patients like the Jock family reach out to Medic and reunite with their everyday heroes, which is truly a highlight for our caregivers.

STAR OF LIFE RECIPIENTS
CYNTHIA JEFFERSON
JUSTIN ROWE &
JOSH BAUN



From the care providers on scene, to the voice on the other end of the phone giving life-saving instructions and those helping to navigate insurance and billing; each of our 602 employees plays a part in fulfilling Medic's mission.

In this section, meet a few of many standout Medic employees and learn about their accomplishments and commitment to the community we serve.



STARS OF LIFE: **CYNTHIA JEFFERSON, JUSTIN ROWE & JOSHUA BAUN**

Each year, the American Ambulance Association celebrates contributions of EMS professionals who have gone above and beyond the call of duty.

BURNETTE - NOBLES: **ANNA BALDWIN**

Recognized for actively working to improve her community by volunteering with various charities and promoting positive changes and impact within the Agency, Anna is known for her outstanding rapport with patients, receiving 22 commendations in just 1 year and 8 months of working at Medic.

TOP CALL: **THEODORE ELIAS, IRINA KERUSENKO AND DON SHUE**

A Russian-speaking 911 caller was having trouble verbalizing her problem. Luckily, Medic employee Irina Kerusenko also spoke Russian and was dispatched to the scene. Irina, her partner Theodore, and Supervisor Don Shue not only helped her through a family member passing away, they personally assisted her with resource referrals and made sure she had food and a clean home to come back to; truly going above and beyond their call of duty.

UNSUNG HERO: **KACEY CLINE, SHARI LAMBETH AND DEANNA VANDEVENTER**

For embodying a positive attitude, being patient driven, and lifting up other employees; these Unsung Heroes are humble leaders and contribute to Medic's mission consistently.

DISTINGUISHED SERVICE: **DON OVERCASH AND STEVE VANDEVENTER**

For demonstrating outstanding performance and unmistakably exceptional service over the last three decades working at Medic.

KATIE LEWIS
 PARAMEDIC



EMPLOYEE-DRIVEN RESOURCES: STRESS MANAGEMENT

To support our employees who face unimaginable stressors each day, a stress management improvement project team was created to identify resources that improve overall employee well-being. The team gathered feedback and elected to launch the Crew Care app and an enhanced Employee Assistance Program, which is designed specifically for the first responder industry.

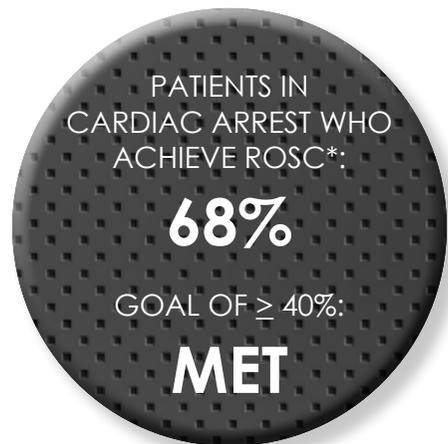
INDUSTRY LEADING CARDIAC CARE
 Every year, the Cardiac Arrest Registry to Enhance Survival (CARES) compiles out-of-hospital cardiac arrest data from across the country.

In FY '19, Medic continued to rate above the national average for comparable sized agencies in:

 **15.1% overall cardiac arrest survival rate (all cases)**

 **49.5% of patients survive to hospital discharge (Utstein template)**

 **92.3% of patients who survive have good neurological outcomes (Utstein template)**



*ROSC: Return of Spontaneous Circulation - Utstein Template



HAKIYM ROACH
 EMT

PEDIATRIC RESEARCH GRANT RENEWED

In 2013, Medic became a research site with the Pediatric Emergency Care Applied Research Network (PECARN), an entity focused on conducting research on the prevention and management of illnesses and injuries in children.

Research efforts have included the development of a screening tool to assist EMS professionals in identifying pediatric patients who require a pediatric-specialized healthcare facility. Medic's participation in PECARN was renewed this fiscal year to support an additional five years of innovative pediatric research. The grant value totals 2.8 million dollars, the results of which have potential to impact the quality of prehospital care provided to children nationwide.

RESEARCH DRIVEN PROTOCOLS

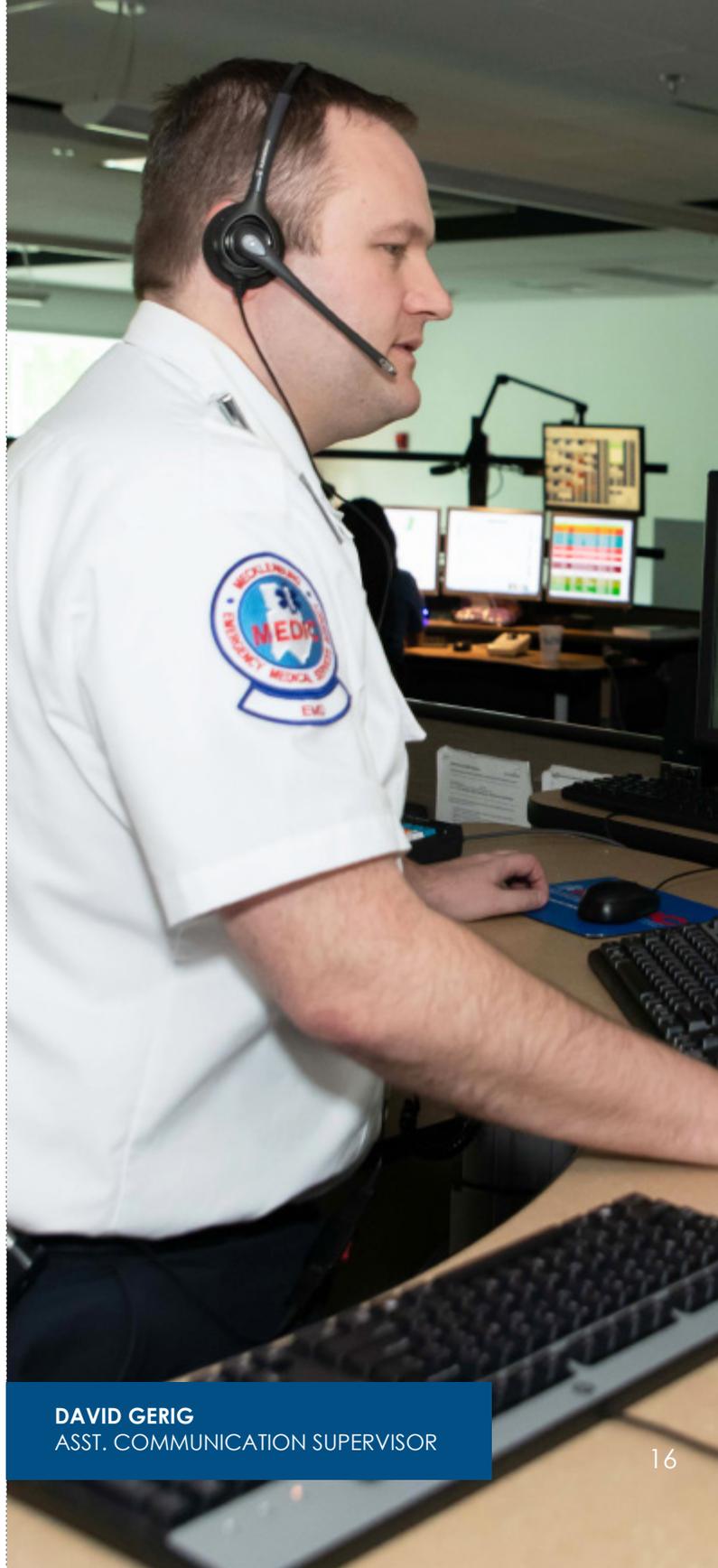
The ability to accurately assess patients in the prehospital setting is a necessary link to timely, appropriate care for our patients. Medic prioritizes research to continuously improve the skills of our caregivers. New protocols in the process of evaluation this year include:

FALLS RISK ASSESSMENT

In partnership with Atrium Health's Musculoskeletal Institute, Medic developed a tool to assist EMS providers in identifying environmental factors within a patient's home (i.e., rugs, cords, cluttered floors) that increase the patient's risk of a fall. Efforts in FY '20 will include incorporation of this tool into the patient care record, allowing intervention by specialists with the hospital system to identify at-risk individuals prior to a fall. Data from the tool will inform any future changes.

FAST-ED STROKE SCALE

This research study conducted by Medic and stroke experts from both Atrium Health and Novant Health aims to improve early recognition of patients suffering from large vessel occlusion strokes. These strokes require high-level care; identifying these types of emergencies may improve patient outcomes by decreasing time to intervention. Data is currently being gathered to assess if an official protocol will be developed in the future incorporating the FAST-ED Stroke Scale.



DAVID GERIG
ASST. COMMUNICATION SUPERVISOR

As the healthcare landscape and the needs of our patients constantly evolve, Medic uses innovative strategies to continuously advance the quality of care for the citizens of Mecklenburg County.

RapidSOS

This fiscal year, Medic's 911 Communication Center launched RapidSOS, a breakthrough technology for EMS that pinpoints and tracks the exact GPS coordinates of a person calling 911 from a mobile phone throughout the progression of a call. Previously, telecommunicators were only able to use cellular towers to obtain a mobile caller's general location within a limited radius. The new technology is extremely beneficial in locating patients when they are not able to verbalize their address or if they are moving during the call, such as while driving or boating.

RapidSOS also partners with third party systems to provide more information to 911 call centers. For example, Medic Alert members give RapidSOS permission to automatically send their health profile information to telecommunicators.

RapidSOS is an excellent tool adding to the efficiency and quality of care provided to the community we serve.

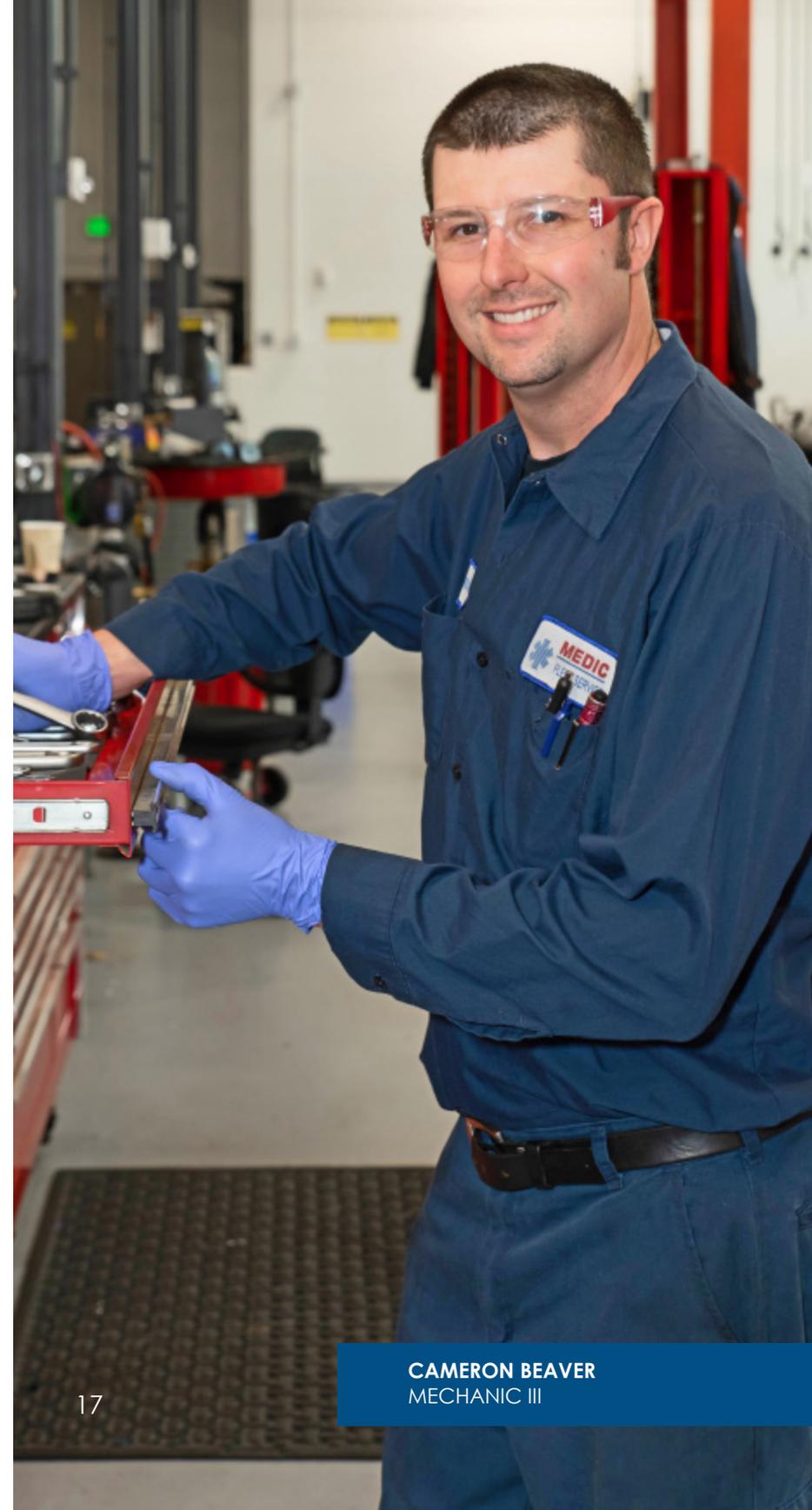
IDLE REDUCTION TECHNOLOGY

Medic's Fleet Department is committed to finding ways to reduce the amount of idle time that occurs among the Agency's fleet. Excessive idle time wastes fuel, increases wear on engine parts and results in additional air pollution.

Research conducted by Medic identified the ZERO RPM idle reduction technology as a viable option worth testing. A ZERO RPM system was installed in one ambulance and tested for a period of six months. Data demonstrated a significant reduction in all measurable emission products, a 20% reduction in fuel consumption, and an increase of the average miles traveled per-engine hour. Early analysis suggests that in addition to the previously mentioned benefits, successful implementation of idle reduction technology could result in expanded lifespan for Medic's ambulances.

With this knowledge, Medic partnered with Mecklenburg County's Land Air Quality Department to secure a Clean Fuel Advanced Technology grant from the NC Clean Energy Technology Center valued at \$500,000. The grant will be utilized in FY '20 to install ZERO RPM in 22 of Medic's Dodge 5500 SLT 4x4 ambulances.

» **“The way they handled it, kept me calm and under control. I felt safe.”** «
- **Jim P. (Patient)**



CAMERON BEAVER
MECHANIC III



GABBY PURICK
KTB PROGRAM ADMINISTRATOR



PARAMEDIC AND HR GENERALIST
ZEKE SMITH TRAINING CHARLOTTE PRIDE
ATTENDEES ON BYSTANDER CPR AND
THE LIFE-SAVING CAPABILITIES OF THE
PULSEPOINT APP.



Medic's connection with the community this fiscal year applied a pioneering approach to improve cardiac arrest survival rates, recruitment of high quality employees, and education in the community. Each opportunity to engage with the citizens of Mecklenburg County was prioritized based on audience size and demographics to maximize available resources and reach a diverse population across the county.

MECKLENBURG COUNTY KEEPS THE BEAT (KTB)

For each minute that a cardiac arrest patient goes without CPR, their chance of survival decreases by 10%. Those precious minutes are in the hands of bystanders that witness the cardiac arrest. To empower these bystanders to save a life, Medic collaborated with Atrium Health and Novant Health to launch Keep the Beat. The program offers free bystander CPR training sessions to local groups in Mecklenburg County.

Additionally, Medic's 911 call center integrated the PulsePoint Respond mobile application, which alerts users if someone nearby is having a cardiac arrest in a public place and may need CPR. The app also directs citizen rescuers to the exact location of the closest AED. From January through June of 2019, a total of 5,487 Mecklenburg County citizens were trained in lifesaving bystander CPR and 3,012 people downloaded the PulsePoint app.

EMS EXPLORERS

In September 2018, Medic collaborated with the Boy Scouts of America and Charlotte-Mecklenburg Schools to reinstate an Explorer's Post based at Medic's headquarters. The program introduces an EMS career pathway to local youth and inspires development of career goals and further education. Explorers at Medic become CPR certified and participate in patient care simulations, ride-a-longs, and interview preparation sessions. Medic currently has 28 explorers, 12 of which already have plans to enroll in EMS programs at community colleges in 2019.

COMMUNITY NALOXONE DISTRIBUTION

In April of 2018, Medic began distributing Naloxone, an effective antidote to opioids, when they encounter individuals who are at high risk for opioid overdose. As of August 1, 2019, Medic has distributed 1878 doses, which were donated from Cardinal Health and the NC Office of EMS. In FY '19, there were 66 instances of bystander Naloxone administration prior to EMS arrival. The Agency is currently pursuing additional opportunities to further the program in FY '20.

» **“The communication was excellent, trying to calm me down. Let me know it was going to be alright. It was excellent care.”** «

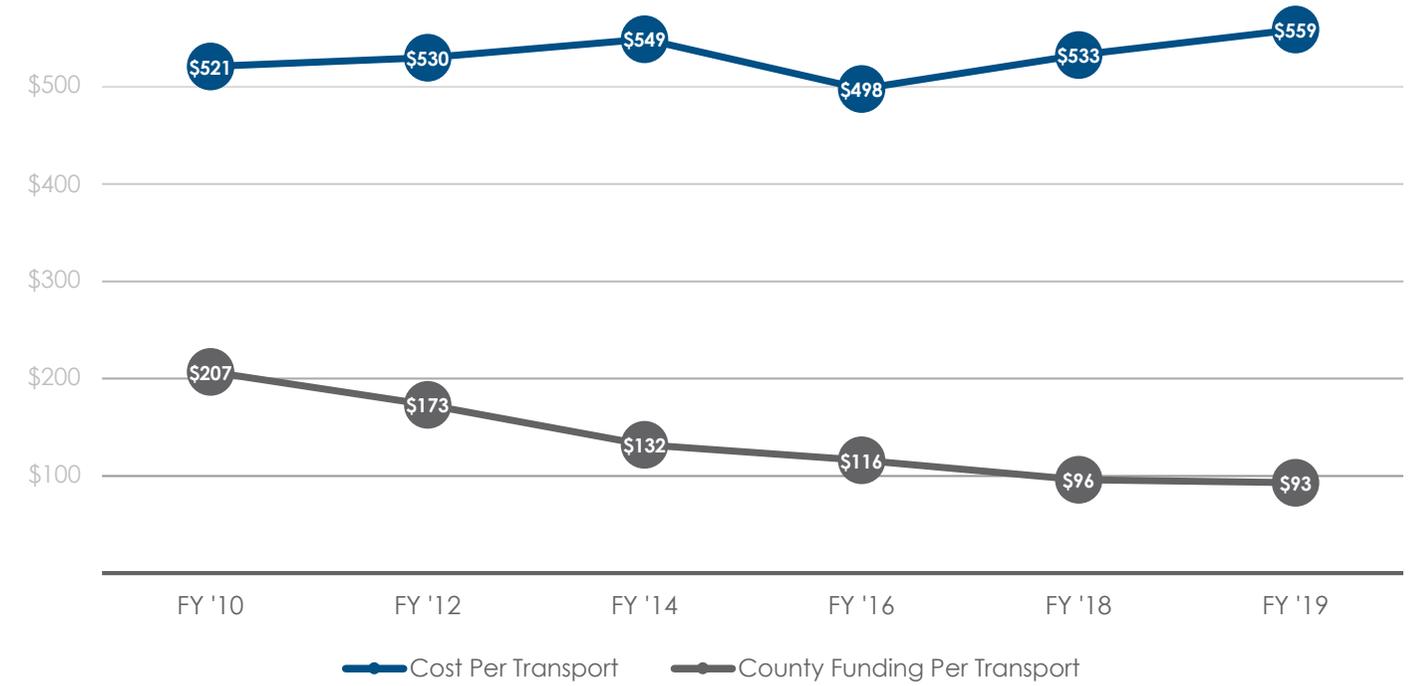
- **Peggy R. (Patient)**



NICOLE TYSON
REVENUE CYCLE CSR

Medic's FY '19 funding was comprised of fees for service (67%), Mecklenburg County tax subsidy (17%), fees for dedicated standbys/special event coverage and 911 surcharge funds paid by the state (16%). Fiscal stewardship is a key tenant of Medic's charge, evidenced by the numerous improvement efforts undertaken each year to reduce waste and increase value for tax payers. Medic's reliance on county subsidy was the lowest it has ever been in FY '19, and yet Agency performance and clinical outcomes were among the best in the entire country.

The Agency's Revenue Cycle department continued to improve collection performance in FY '19, driven in large part by changes to how merchant fees are processed, how the debt set-off process is managed and implementation of new strategies aimed at increasing payment received for services rendered. These efforts resulted in nearly \$200,000 in new revenue for FY '19 that would not have been generated without targeted change.



FY '19 MODIFIED ACCRUAL FINANCIAL STATEMENTS ADJUSTED FOR ENCUMBRANCES

	Adopted Budget	Actual
Revenue		
User Fees	\$41,466,232	\$41,308,206
County Funding	\$10,959,729	\$10,959,729
Medicaid Cost Report	\$4,818,985	\$5,120,341
Debt Set-off Revenue	\$2,384,102	\$2,111,193
Other Financing Sources	\$2,366,587	\$1,962,901
Encumbrances	\$1,792,924	\$1,792,924
Unassigned Fund Balance	\$1,253,578	\$1,253,578
Grants / Other Revenue	\$1,066,065	\$1,414,607
911 Surcharge Revenue	\$367,830	\$333,247
Total Revenue	\$66,476,032	\$66,256,726
Expenditures		
Labor and Labor Related	\$48,107,842	\$48,039,423
Operating	\$12,417,698	\$11,960,751
Capital	\$5,950,492	\$5,553,647
Total Expenditures	\$66,476,032	\$65,553,821

AGENCY BOARD OF COMMISSIONERS

As of June 30, 2019



Amy Vance, NH – Chair



Katie Kaney, AH – Vice Chair



Alisahah Cole, AH



Sid Fletcher, NH



Mark Foster, MC



Gary Little, AH



Paula Vincent, NH

AGENCY MANAGEMENT COMMITTEE

- Katie Kaney – AH
- Derrick Ramos – MC
- Amy Vance – NH

NON-VOTING MEMBERS

- Shelly Forward – Medic
- Joe Penner – Medic
- Doug Swanson, MD – Medic

FINANCE COMMITTEE

- Mark Foster – MC
- Bill Lyle – AH
- Peter Ostiguy – NH

NON-VOTING MEMBERS

- Shelly Forward – Medic
- Joe Penner – Medic

AGENCY OFFICERS

- Shelly Forward – Medic
- Joe Penner – Medic
- Doug Swanson, MD – Medic

MEDICAL CONTROL BOARD

VOTING MEMBERS

- Sid Fletcher, MD, Chair – NH
- Eric Eskioglu, MD – NH
- Mike Gibbs, MD – AH
- Sandra Giller, MD – NH
- Gary Niess, MD – NH
- David Pearson, MD – AH

- Bradley Thomas, MD – AH
- Catherine Waggy, DO – AH

NON-VOTING MEMBERS

- Kathy Haddix-Hill – NH
- Gibbie Harris – MC
- Reginald Johnson – City of Charlotte Fire Dept.
- David Leath – Mint Hill Volunteer Fire Dept.
- Joe Penner – Medic
- Doug Swanson, MD – Medic

QUALITY MANAGEMENT COMMITTEE

VOTING MEMBERS

- Thomas Draper – AH
- Mike Gibbs, MD – AH
- Eric Harkins, MD – AH
- Richard Jacoby, MD – NH
- Josh Loyd, MD – NH
- Suzie Rakyta, RN – NH
- Doug Swanson, MD – Medic

NON-VOTING MEMBERS

- Gibbie Harris – MC
- Joe Penner – Medic
- Jon Studnek – Medic
- Sharon Taulbert – Medic

LEGEND

Mecklenburg EMS Agency (Medic)
 Mecklenburg County (MC)
 Atrium Health (AH)
 Novant Health (NH)



MEDIC
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Mecklenburg EMS Agency

OUR PATIENTS. OUR PEOPLE. OUR STEWARDSHIP. OUR PURPOSE.

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