



Annual Report 2024



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Note from the Executive Director

The past four years have been the most challenging of my 24-year EMS career. The impact of COVID-19 is still being felt across the EMS industry, but we are back on the rise with increasing staffing levels and day-to-day operations beginning to normalize. Our staff here at Medic have persevered through these challenges, and through it all, their commitment to our patients and community has never wavered.

These are heroes in the true sense of the word.

Every member of the Medic community has selflessly committed themselves to our mission, which is to save a life, hold a hand, and be prepared to respond when and where we are needed. This is a responsibility that our team believes in, and we strive to ensure equitable care and ambulance response throughout Mecklenburg County. It is the reason the Agency exists.

This passion for service to our community is fueled by innovation. Medic is an industry leader in how we respond to calls. Our cardiac arrest survival rates are some of the best anywhere in the country. The response configuration changes made in 2023 are award-winning with recognition this year by the Academy of International Mobile Healthcare Integration. Our dedication to performance improvement and innovation is on the leading edge and I am very excited to have the opportunity to lead the Agency into the future.

I would like to thank our Agency Board of Commissioners, our Agency Management Committee, our Finance Committee and the Medical Control Board for their commitment and support of Medic, which is crucial to fulfill our mission and vision for the future. In addition, the support of Mecklenburg County allows Medic the ability to be an innovative, top-tier EMS Agency.

In closing, I would like to say a special thank you to those who have retired from Medic this year (and beyond). Many of whom have given 30+ years of service to our community.

Thank you for your many years of service to this noble profession!

In Storan



J. Peterson



FY '24 Highlights









These Strategic Objectives have informed Medic's improvement work the past two fiscal years, and will continue to do so through FY '25 when our 'currently under development' strategic objectives will be implemented.

Improve workplace safety & health of Medic workers

New automated Stryker stretchers and power load systems were installed in all 72 ambulances and four airport UTVs. In FY '23, 48% of on-the-job injuries were lifting-related and resulted in 1,175 days of work lost. In FY '24, this dropped to 39% and only 421 days lost.

Implement a Medic DEI platform (including internal policies, procedures, and plans) to create supportive inclusion and dismantle structural barriers

Medic's internal teams worked to remove barriers within hiring processes by implementing interview best practices training, restructuring physical ability assessments, and creating a survey for employees to identify preferred pronoun use.

Create a sustainable and competitive strategy for maintaining critical staffing levels

A new Accelerated Paramedic Pathway program was launched, which compensates EMTs while they attend Paramedic school and decreases the amount of time it takes to reach certification. The first classes of this program include 33 students who are current Medic EMTs and are projected to graduate by August 2025.

Reduce Medic's carbon footprint In FY '24, Medic's headquarters underwent the first stages of solar panel implementation to support energy return to the County grid. Medic has also completed the installation of Zero RPM idle reduction systems, which significantly decreases idle time, carbon emissions and fuel usage.

Evolve Medic's response, care, and transport models to address the shifting community need and healthcare landscape

FY '24 marked the first full year that Medic operated under its new response configuration, which redefined how Medic responds to calls, what type of resources go to calls, and response time targets for non-emergent calls. Results from FY '24 saw a decrease in unnecessarily responding with lights and sirens by 71%, a decrease in Medic-involved traffic accidents while responding with lights in sirens by 15% and decreased fire department EMS volume by 16%, better preserving their resources for response to fire or medical emergencies.



First Responder Coverage

Medic is the sole 911 emergency ambulance provider for over 1.1 million residents and visitors of Mecklenburg County, which covers 546 square miles. Medic deploys first response by 14 fire departments. Patients are transported to one of our 15 local emergency departments based on preference or most appropriate level of care.

First Responder Area	Average First Responder Response Time	First Responder Medical Incidents
Carolina	6m 24s	151
Charlotte*	Unknown	Unknown
Cooks	5m 57s	442
Cornelius	5m 9s	1,688
Davidson	5m 6s	790
Huntersville	5m 49s	3,953
Idlewild	5m 26s	1,313
Long Creek	6m 5s	659
Matthews	5m 55s	2,463
Mint Hill	5m 56s	1,550
Pineville	5m 54s	1,761
Robinson	6m 13s	469
Steele Creek	6m 19s	834
West Meck	6m 16s	1,088

^{*} Data not available at time of publish



Medic's new response configuration decreased the amount of fire department responses to EMS calls by 16%, better preserving their resources for response to medical and fire emergencies

Medic: At a Glance

157,121 Total Medic Responses













911 Response Time Performance By Priority

- Priority 1 = Emergent
- Priority 2 = Urgent
- Priority 3 = Non-Emergent
- Priority 4 = Non-Emergent
- Priority 11 = Transportation Only

	Response Time	FY '24 Average	% of Total
Priority	Goal	Response Time	Responses
1	10m 59s	9m 2s	19%
2	15m	14m 17s	33%
3	30m	19m 19s	21%
4	60m	30m 49s	14%
11	90m	60m 36s	1%
			12%*

All 911 calls are triaged by highly trained telecommunicators in Medic's Central Medical Emergency Dispatch center (CMED) using national standards through the Medical Priority Dispatch System (MPDS). All telecommunicators are Emergency Medical Dispatch (EMD) and Emergency Fire Dispatch (EFD) certified, allowing them to provide life-saving instructions and fire dispatch. For an EMS call center to have this level of creditialing is rare and Medic has it. CMED is an Accredited Center of Excellence (ACE) through the International Academies of Emergency Dispatch (IAED).

*12% accounts for nurse advice line, poison control, and first responder only

9,668

Total # of

Total # of Medic **Incidents**

157,121

Canceled **Before Arrival**

10,535

Arrived on Scene

146,586

Patients Transported

113,768

11,377 / 10%

6,826 / 6%



81,913 / 72%



13,652 / 12%

Medic's Central Medical **Emergency** Dispatch

Medic operates a Public Safety Answering Point (PSAP) and is responsible for all EMS 911 calls in Mecklenburg County and all fire-related calls that occur outside the city limits of Charlotte.



26,829

County Fire Incidents

17,161

County Fire

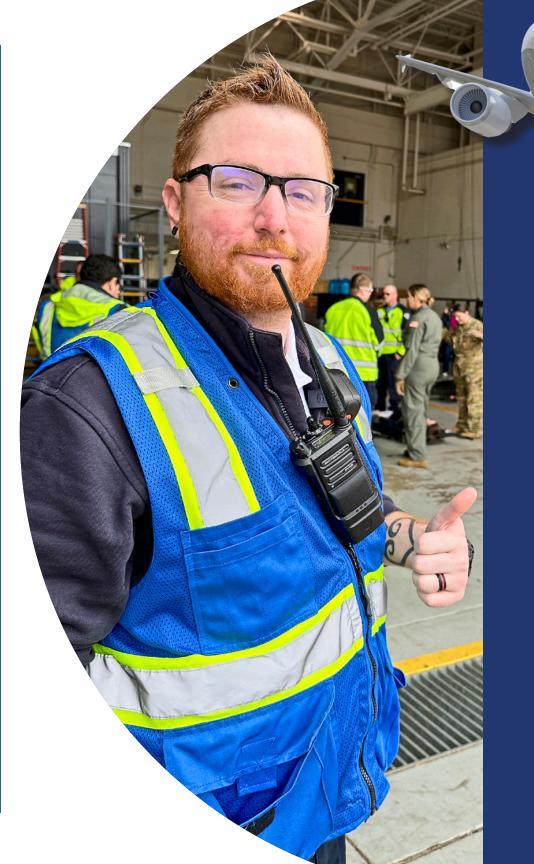
EMS

Responses

*Can include multiple calls for one incident

Top 10 Call Types – All 911 Calls FY '24

- General Illness
- 2 Breathing Problems
- Traffic Accident
- Falls/Back Injury
- 5 Unconsciousness/Fainting
- Chest Pain
- 7. Psychiatric
- Overdose/Ingestion/Poison
- Convulsion/Seizure
- Hemorrhage/Laceration



Airport Stats

Medic provides dedicated on-site 911 coverage daily inside the Charlotte-Douglas International Airport. Through this strategy, Medic avoided 2,349 unnecessary ambulance responses to the airport, preserving those units to respond to emergencies across Mecklenburg County.

4,757

Medic Airport Utility Task Vehicle Responses

2,408

Ambulance Responses to the Airport

1,578

Total Ambulance Transports from Airport

2,349

Total Ambulance Responses Avoided

Fire + Police Standby Support

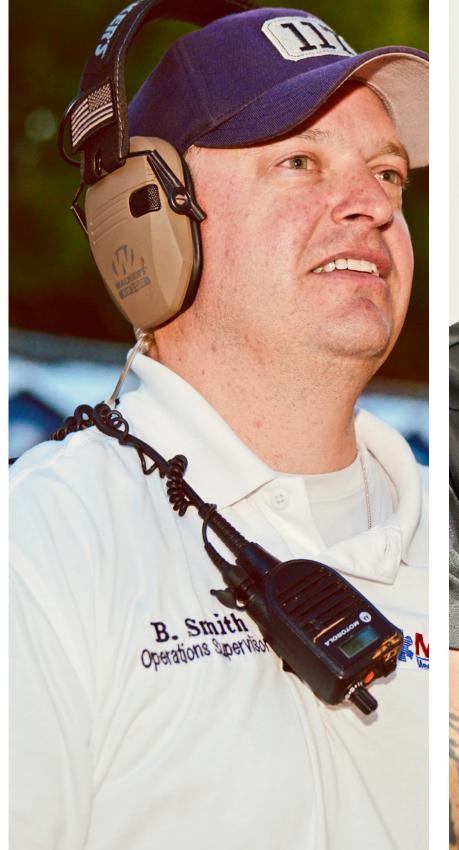
When requested, Medic provides standby support for high risk incidents in the event that medical attention might be needed for our first responder partners, such as working structure fires or SWAT calls.

451

Number of Fire Department and Police Department support standbys



Research +
Clinical
Performance







Note from Dr. Swanson, Medical Director

In the past, Medic has maintained its excellent clinical performance and continues as a national leader in clinical care.

Medic continued its outstanding performance for the sickest patients. This is, in part, noted in Medic's achievement of return of spontaneous circulation (ROSC) in 72% of patients sustaining a witnessed cardiac arrest in which the presenting heart rhythm is responsive to electrical therapy. Those patients discharged home from the hospital in Mecklenburg County is nearly 50% greater than the national average per the Cardiac Arrest Registry to Enhance Survival (CARES) database. Additionally, our recognition and care of patients suffering from a heart attack (or MI) continues to provide exemplary results well ahead of established national guidelines. Similarly, patients experiencing major trauma, stroke, and severe medical illnesses continue to receive outstanding prehospital care and system performance.

These results are made possible only through the commitment of professionals throughout the agency. This begins with the Clinical Education and Clinical Improvement departments and continues through our Logistics department. Medic's Central Emergency Medical Dispatch (CMED) center continues these efforts, ensuring patients receive the optimum response and are provided pre-arrival care instructions. This full coordination of activities is what provides the foundation for the excellent clinical care our patients receive.

The past year has also seen a tremendous effort on the part of Medic personnel to contribute to the science of optimizing prehospital patient care, which will lead to the benefit of all patients, locally and nationally, in the future and we cannot thank our crews enough for their efforts.

Clinical Research

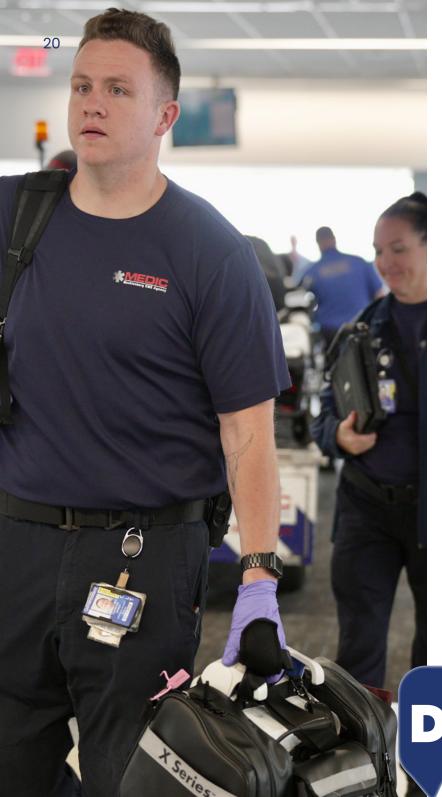
Meck

Led by Medic's industry-leading Performance Improvement team, Medic is currently participating in six clinical research initiatives, each one contributing to improving patient outcomes nationwide.

RACECARS – Randomized Cluster Evaluation of Cardiac Arrest Systems

Duke Clinical Research Institute
FY '24 marks the second year of Medic's
participation in RACECARS, a five-year trial
aimed at improving cardiac arrest survival
rates nationwide. As part of this trial, Medic
held its first annual Cardiac Arrest Survivors
luncheon, where 14 survivors (including Doug
Lape and his wife Anne, pictured left) gathered
to learn about current initiatives, advocacy
opportunities and to discuss resources for their
journey after survival.

This year Medic also expanded work on developing a Heart Safe Workplace program that assists local businesses prepare for cardiac emergencies, including incorporating CPR training and AED placement plans. To track the true impact of these efforts in Mecklenburg County, Medic is championing a Cardiac Arrest Task Force of stakeholders, including local hospital systems and non-profits, to create a CPR training database.



PAIN – Prehospital Analgesic Intervention trial Atrium Health Trauma Care

Medic providers are evaluating the efficacy of using fentanyl vs. ketamine for treating patients experiencing compensated shock. This study, estimated to begin in January of 2025, has completed a community consultation phase, with training for providers expected to go live in November 2024.

In-Air U.S. National Science Foundation Division of Computer and Network Systems (CNS), University of North Carolina (UNC)

UNC recently received \$75,000 in grant funds to collaborate with Medic on exploring the feasibility and benefits of delivering AEDs to bystanders via drones during cardiac arrest incidents. Early bystander CPR and defibrillation shock can greatly improve survival rates. Preliminary work for this study is slated to begin in October 2024 and projected to last six months.

Medic restarted a heartbeat in 295 patients in FY '24.

As a participant in Pediatric Emergency Care Applied Research Network (PECARN), Medic is often chosen to participate in EMS related research. Active studies include:

- PediDOSE Pediatric Dose Optimization for Seizures in EMS. Since launching in 2022, data from 191 pediatric patients experiencing seizures have been collected for this study, which evaluates a new agebased dosing protocol that could reduce the length of time a patient is actively seizing. This study is active through 2026.
- PEDI-PART Pediatric Prehospital Airway Resuscitation Trial. Beginning in June

2024, Medic began comparing the efficacy of utilizing a bag valve mask or iGel device (a tube that is inserted into the airway) for pediatric patients experiencing severe airway management issues. Patient data will be collected from EMS agencies from 10 different cities across the US through August 2028.

T-RECS – Treating Respiratory
 Emergencies in Children Study. This
 pilot study evaluates pediatric patients
 suffering from severe respiratory distress,
 primarily due to asthma. This study ends
 in March 2025 in anticipation of a larger
 study in the future.

81%
Heart Attack (STEMI)

Prehospital
Determination

Goal of ≥ 85% Not Met 90:08

Heart Attack (STEMI) Time From Received 911 Call To Cath Lab Intervention

Goal of ≤ 90:00 Not Met 67%

Patients In Cardiac Arrest Who Achieve ROSC* Utstein Template

Goal of <u>></u> 40%

Met

*Return of Spontaneous
Circulation

Our People + Our Community





Award Winning Employees

Stars of Life

Since 2012, Revenue Cycle Manager Shelly
Miller has become an industry leader
alongside other top executives at the American
Ambulance Association. Shelly's tremendous
efforts focused on helping to educate others
and offering resources, including being a 2023
expert covering the CMS Ground Ambulance
Cost Collection Requirements.

Paramedic Crew Chief Heather Teague has been serving her community with Medic for over 26 years. Heather is a sought-after preceptor educating new Paramedics and is known for her knowledge and scene management skills in the field. Her nominations describe Heather as "approachable even on the worst days, caring, and the one that you want taking care of your loved ones".

Medal of Valor

Paramedic Crew Chief Ryan Schott and Operations Supervisor Gabe McGaha went above and beyond the line of duty during a tragic shooting incident on April 29, 2024. Despite risk to their personal safety, they exhibited the utmost courage and clinical excellence that proved to be life-saving under extraordinary circumstances.

Ryan is a double award winner this year. Besides the Medal of Valor, he also being awarded the Star of Life.



Shelly MillerRevenue Cycle Manager



Heather TeagueParamedic Crew Chief and
Field Training Officer



Ryan SchottSpecial Operations Paramedic and Field Training Officer

Academy of International Mobile Healthcare Intergration Award Winners

Medic was recently announced as the winner of two Excellence in EMS Awards from the Academy of International Mobile Healthcare Integration (AIMHI) for the Agency's industry-leading work in updating its response configuration that launched in April 2023. The response configuration project redefined how Medic responds to calls, what type of resources go to calls, and response time targets for non-emergent calls, aiming to improve Medic's ability to

preserve resources for patients in need of a rapid response.

Medic received The Excellence in Value Demonstration or Research award for demonstrating the value impact of the services provided to Mecklenburg County, and The Excellence in Public Information or Education award for the implementation of a public information campaign designed to encourage the public to utilize healthcare resources more effectively.



Gabe McGahaOperations Supervisor





Brent CailParamedic Crew Chief



Morgan JamisonOperations Assistant



Abby JohnsRevenue Cycle Operations
Support Analyst



Dustin Morrow EMT



Gracey Rapp EMT



Unsung Hero

Paramedic Crew Chief Brent Cail has been with Medic for 21 years, throughout which he has been a consistent example to his peers of professionalism and accountability. Brent's nomination for this distinction highlights that Brent displays a "natural sense of calmness, spirit of confidence, self-actualization and a relentless drive to help others."

Revenue Cycle Operations Support Analyst Abby John has been with Medic for nearly 12 years. Her ongoing projects and innovative ideas have been described as "pivotal" by her coworkers in ensuring the department runs as efficiently as possible. Abby is also known for her willingness to assist her colleagues without hesitation, often going above and beyond without recognition.

Though only with Medic for three years,

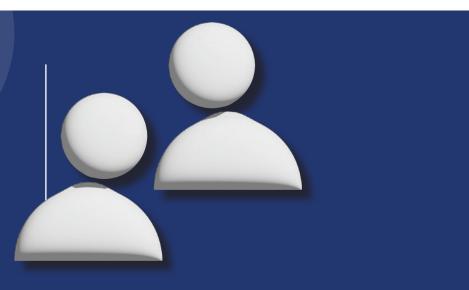
Operations Assistant Morgan Jamison is
the first face everyone sees before they clock
in. She has a consistent positive attitude, is
professional, courteous, and naturally good
hearted. A nomination submitted by a peer
states that "Morgan inspires everyone to start
their shift with the same positive attitude she
herself has".

Top Call

On December 26, 2023, **EMT Gracey Rapp** and **EMT Dustin Morrow** were dispatched as the closest unit to a cardiac arrest, along with **Operations Supervisor Gabe McGaha**. The patient regained and maintained a pulse throughout their care, and the patient was later discharged with a positive outcome. Though not typically dispatched to this level of call, the crew worked together with the Supervisor to provide exemplary clinical care and use of resources, ultimately saving the patient's life.

Employees rated their job satisfaction with Medic as good, very good or

excellent



Reimagining Recruitment in EMS

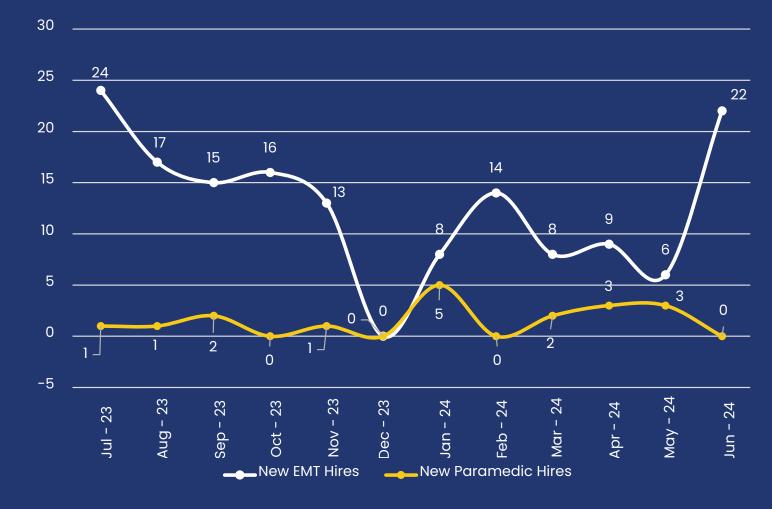
Medic continuously pursues alternative strategies to improve staffing for frontline providers:

Paramedics: A new Accelerated Paramedic Pathway program was launched at the end of FY '24, which compensates Medic EMTs while they attend Paramedic school. The program decreases the amount of time it takes to reach certification and breaks down barriers that prospective Paramedics encounter, since they are not required to work EMT shifts full-time while completing rigorous class work.

The first class of the new program began school in August 2024 and will graduate in August 2025, while the second will start in October 2024 and graduate in May 2025, with an estimated 33 total new paramedics.

EMTS: During FY '24, 23 students graduated from Medic's internal EMT pathway program in partnership with Central Piedmont Community College. Graduates will be onboarded in June, July and August 2024. Medic plans to continue this program in FY '25.

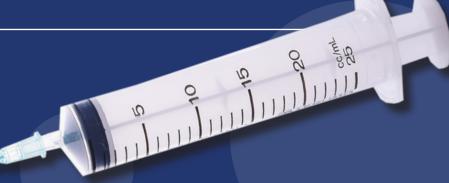
Recruitment Strategies: Medic's Public Relations and Human Resources departments re-envisioned recruitment strategies to include increased social media engagement and implementation of a virtual candidate assessment process for Paramedics, removing an obstacle for out-of-state applicants.



The above chart shows the significant increase in EMT hires and the incredible success of Medic's new internal EMT program in FY '23. Paramedic hiring remains a challenge that Medic tackled FY '24 with the Paramedic Pathway Program (see opposite page).

152

Paramedics Hired



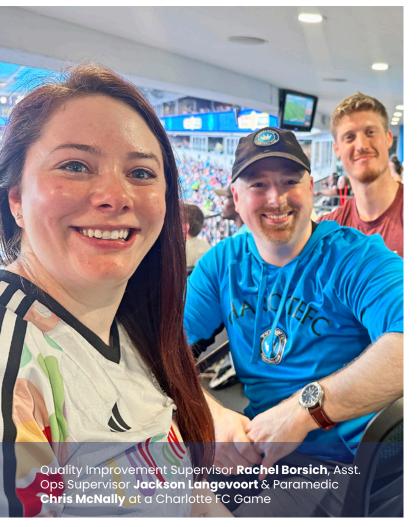
















Employee Engagement

Medic prioritized employee engagement initiatives throughout the year, including employee nights out, a seven-day celebration of food and family fun during EMS Week, and Night of Honor, an annual recognition event to honor awardees and celebrate each other's accomplishments.



Community Engagement

In early 2024, Medic created a new Community Engagement team to expand Medic's capacity to engage with Mecklenburg County visitors and residents. The team is comprised of 24 current employees that are trained in community engagement best practices and bystander CPR training techniques.

The Community Engagement team has now been fully integrated in Medic's public relations efforts, resulting in a significant increase in the number of events either attended or hosted (89 in FY '24 vs. 49 in FY '23) and the number of citizens trained in bystander CPR (3,715 in FY '24 vs. 1,596 in FY '23).



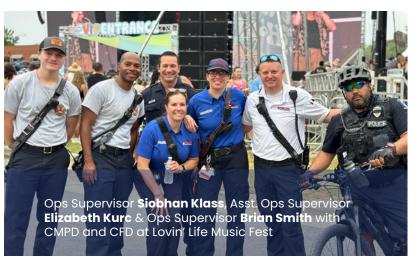
Medic equips our community with life-saving skills by offering free bystander CPR and AED training for groups of 15 or more. To learn more or to schedule a training, email PR@medic911.com.

PARAM

Community Events

3,715 Citizens Trained in Bystander CPR







Community Engagement

Medic aims to have meaningful connections with our community, whether it is providing bystander CPR trainings to groups, showing our youth the value of a career in EMS, speaking on how 911 in Mecklenburg County works, or providing medical standby coverage at large-scale events such as concerts, sports games and music festivals.











Our Patients

It is a privilege when patients contact
Medic to meet their care providers and
thank them for giving them another chance
at life. Medic hosted six patient reunions in FY
'24, here are two of their stories.

Patient Story: Harrison Johnson

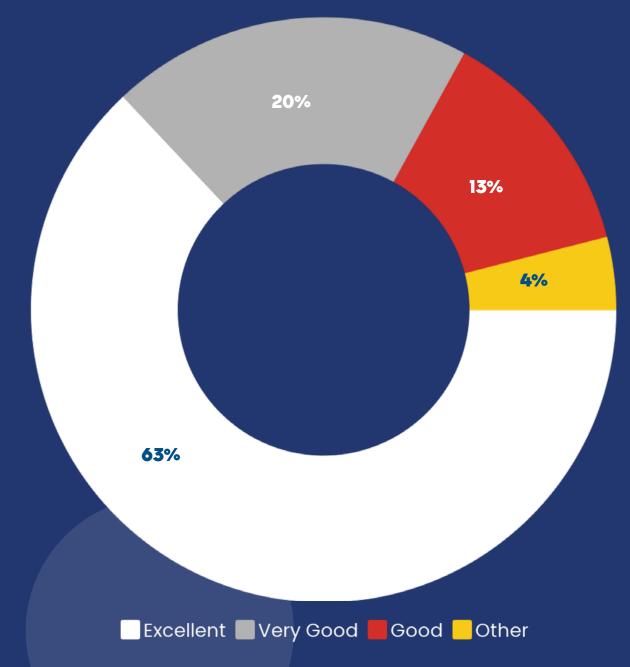
In September of 2022, Harrison Johnson was involved in a horrific traffic accident on I-485, resulting in him being ejected from the vehicle and suffering from serious traumatic injuries. Almost two years later in April 2024 Harrison was ready and able to meet Paramedic Tyler Mitchell and Paramedic Antonia Macklin to thank them for their excellent, lifesaving clinical care on a day he will never forget.

Patient Story: Latifah Jordan

MOM

Latifah Jordan found herself in serious respiratory distress in February of 2024. Ms. Jordan decompensated quickly, and with the care of the Charlotte Fire Department, EMTJoshua Reynolds and Paramedic Chad Kennedy, she received the lifesaving care she needed and was excited to meet her heroes.

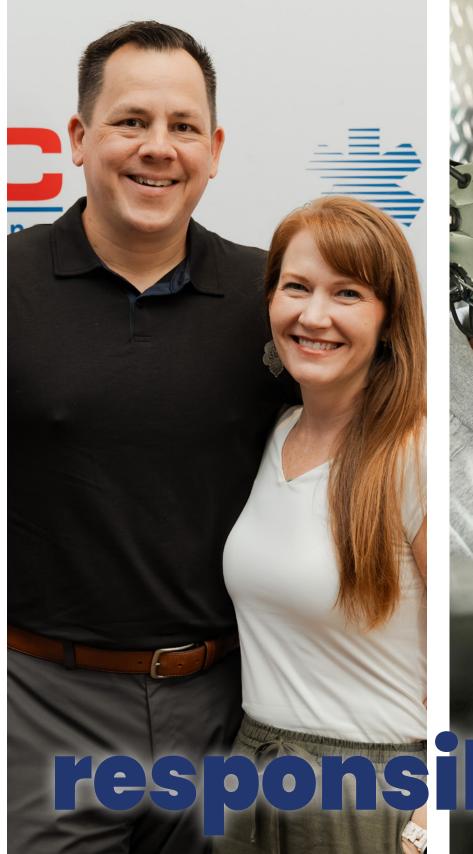
Patient Satisfaction



96% of surveyed patients rated their experience with Medic as good, very good or excellent in FY '24

Financial Performance + Leadership







FY '24 Modified Accrual Financial Statements Adjusted for Encumbrances

	Adopted Budget	Actual
Revenue		
User Fees	\$46,363,940	\$47,955,820
County Funding	\$22,450,687	\$22,450,687
Medicaid Cost Report	\$3,265,845	\$3,210,430
Debt Setoff Revenue	\$2,265,042	\$2,642,451
One-Time Funding	\$8,804,724	\$7,607,102
Grants/Other Revenue	\$2,854,558	\$5,462,779
Fund Balance Appropriated	\$1,268,275	\$0
911 Surcharge	\$485,722	\$382,834
Total Revenue	\$87,758,793	\$89,712,103
Expenditures		
Labor and Labor Related	\$61,885,501	\$62,928,353
Operating	\$15,633,780	\$18,012,532
Capital	\$10,239,512	\$7,153,922
Total Expenditures	\$87,758,793	\$88,094,807



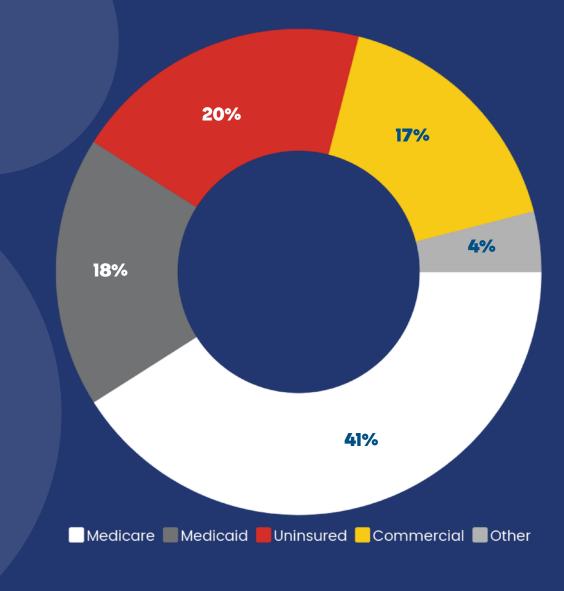
Medic wrote off \$4,535,036 in charges in FY '24 for patients who qualified for charity. In addition, a total of \$26,912,966.92 is outstanding for unpaid invoices for FY '24.

Medic Budget

Medic is a Joint Government Agency, **NOT** a for-profit entity. The Agency's budget is funded by fees-forservice from patients (61%), county subsidy (25%) and a state 911 surcharge and grant funding (14%). Medic's FY '24 cost per transport is \$774 vs. \$752 in FY '23 (the actual amount of money it costs to operate Medic on a per transport basis) and Mecklenburg County's funding per transport (County subsidy) is \$197 vs \$179 in FY '23.

Despite the increase in costs, Medic continued to rank among the lowest cost EMS systems in the state of NC. Only 19 out of 96 agencies have transport costs lower than Medic, according to the NC Centers for Medicare and Medicaid Services.

FY '24 Payor Mix





National EMS Memorial: Honoring Mark Hayes

May of 2024 marked one full year since the passing of late Paramedic Crew Chief Mark Hayes. Mark was honored throughout the year by a National EMS Memorial bike ride event, culminating with a National Weekend of Honor in Arlington, VA with leadership and Mark's family in attendance.

Pictured L to R is Executive Director JP Peterson, Mark Hayes' wife Taryn Hayes, Ops Supervisor Drew Smith and Ops Supervisor Luis Barerra at the National Weekend of Honor.

Medic Leadership



John PetersonExecutive Director



Damian GonzalesDeputy Director



Jeff KeithDeputy Director



Africa OtisFinance Director



Doug Swanson, MDMedical Director



Sharon TaulbertDeputy Director



Gary Little, MD - Chair Atrium Health

Agency Board of Commissioners



Michael Bryant, MPA Mecklenburg County



David Calloway, MD Atrium Health



Jonathan Collier Atrium Health



Saad Ehtisham, DHANovant Health



Sid Fletcher, MDNovant Health



Michael VaccaroNovant Health

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NON-VOTING MEMBERS Africa Otis - M JP Peterson - M Doug Swanson, MD - M

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NON-VOTING MEMBERS Africa Otis - M JP Peterson - M

AGENCY OFFICERS

Africa Otis - M JP Peterson - M Doug Swanson, MD - M

Medical Control Board VOTING MEMBERS

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Reginald Johnson, City of Charlotte Fire Dept
David Leath, Mint Hill Volunteer Fire Dept
JP Peterson - M
Doug Swanson, MD - M
Michael Vacarro - NH

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Lizzie Rossitch, MD - NH
Doug Swanson, MD - M

NON-VOTING MEMBERS Bonnie Coyle - MC Damian Gonzales - M JP Peterson - M Sharon Taulbert - M

LEGEND
Atrium Health - AH
Mecklenburg County - MC
Mecklenburg EMS Agency - M
Novant Health - NH





