

# Spotlight on the Safety Net

*A Community Collaboration  
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## Mecklenburg Emergency Medical Services Agency

*Mecklenburg Emergency Medical Services Agency, better known as Medic, provides emergency and nonemergency paramedic level medical services to the citizens of Mecklenburg County. Medic is part of a unique partnership between Mecklenburg County, Carolinas HealthCare System, and Presbyterian Health Care/Novant Health. Since fiscal year 1997, Medic has reduced ambulance response times, implemented higher clinical standards, and reduced the taxpayer subsidy per call by half. The agency will answer more than 85 000 calls for medical help this year. Medic also conducts frequent community education programs on health, safety, injury prevention, and emergency-related issues.*

In 1996, the Mecklenburg Board of County Commissioners and the county management staff worked closely with emergency medical services (EMS) management and leaders in both the medical and business communities to address the needs of the county's EMS department. Together, they were committed to meeting future needs in the ever-growing Charlotte-Mecklenburg community. The goal was and continues to be enhancement of Mecklenburg's emergency medical services to create a high-performance EMS system. A joint plan was also received by the community's two major hospital systems—the Carolinas HealthCare System and the Presbyterian Health Care System. In the fall of 1996, the Mecklenburg Board of County Commissioners decided to form a partnership with the two hospital systems to provide prehospital emergency medical care and transportation.

Medic maintains its own communication center known as Central Medical Emergency Dispatch (CMED). Central Medical Emergency Dispatch's 3 primary responsibilities are to: (1) prioritize and dispatch 9-1-1 requests for service and coordinate all EMS resources within Charlotte-Mecklenburg; (2) dispatch all Mecklenburg County volunteer fire departments; and (3) serve as the central warning point for two nuclear power facilities or other disasters that may occur. All requests for emergency services are handled via an enhanced 9-1-1 system. All 9-1-1 calls for Medic and/or county fire are routed to CMED by the Charlotte-Mecklenburg Police Department, which serves as the primary public safety answering point (PSAP). Central Medical Emergency Dispatch serves the community as the backup PSAP should there ever be a problem with the primary PSAP communications center. Efficient use of emergency medical resources is achieved by a state-of-the-art Computer Aided Medical Priority Dispatch System, global positioning satellite tracking equipment, onboard mobile status terminals, System Status Management programs, and nationally-certified emergency medical dispatchers who prioritize incoming calls and provide prearrival medical instructions to all 9-1-1 callers. Medic's CMED received national accreditation from the National Academies of Emergency Dispatch as a Center of Excellence in 2002.

At present, there are approximately 170 full-time and approximately 32 part-time field employees working at the paramedic or emergency medical technician (EMT) levels. There are also education and quality improvement staff, logistics team members, fleet maintenance workers, and human resource and financial staff. Medic currently responds to greater than 90% of all requests for emergency services within 9 minutes and 59 seconds. During any given 24-hour period, 150 to 300 calls are dispatched. Mecklenburg Emergency Medical Services Agency is the busiest EMS provider in North and South Carolina. In 2002, Medic units responded to over 70 000 calls (all responses) and conducted over 48 000 transports.

A new and innovative division at Medic is the Education and Simulation Center. Under the direction of Kevin Staley, Medic's Medical Services director, a state-of-the-art medical simulation center has been

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developed which includes multiple sound stages, high-fidelity mannequins, control rooms, digital reproduction capabilities, and review rooms. This resource affords EMTs and paramedics a unique and progressive methodology for their continuing education. Multiple scenarios have been developed and adopted that enhance the provider's ability to deliver evidence-based emergency medical care. Similar training is currently being adopted at medical universities and nursing schools across the country. A human gross anatomy lab has also been included in this center to enhance each provider's understanding of the anatomical relationships in the human body. Medic is in partnership with the Center for Prehospital Medicine at Carolinas Medical Center which provides full-time EMT-paramedic and EMT-basic courses of instruction throughout the year. These courses are open to the public as well.

The field of emergency medical service is rapidly evolving. The Mecklenburg Emergency Medical Services Agency is mirroring the larger changes being experienced throughout the medical marketplace as a whole. This model has been designed to ensure high quality clinical care, provide efficient and reliable EMS services at a reasonable cost to consumers, and provide the community with an operationally and financially stable system. Prehospital emergency medical care is in essence the provision of health care to those afflicted by unexpected illness or injury. While EMS is considered a public service, many will debate the notion of EMS being a component of public safety. Regardless, incorporating EMS into both health care systems and county oversight in the community strengthens the concept of health care delivery and ensures that citizens and visitors in the Charlotte-Mecklenburg community receive the highest level of quality patient care possible. As such, Medic is modeling a new design for the future of EMS.

*Contributions from Tom Blackwell, MD, FACEP,  
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