

Case Study

Paramedics with Chicago Fire Department Enhance Response Times with Segway® PT

FIRE/EMERGENCY RESPONSE

Chicago Fire Department, EMS Division

In June 2005, former Fire Commissioner Cortez Trotter of the Chicago Fire Department developed a Segway Personal Transporter (PT) emergency response team that provided paramedic support during special events in the city's downtown and lakefront area. This first responder program was so successful that in October 2005 Commissioner Trotter expanded the initiative to form an Advanced Life Support (ALS) Segway team that would patrol the city's central business district – also known as the "Loop" – on a daily basis.

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- Deputy Chief Paramedic
Mark Linse
Chicago Fire Department,
EMS Division

Deputy Chief Paramedic Mark Linse with the EMS Support and Logistics Division and Commander Sean Flynn, formerly of the Fire Commissioner's Office spearheaded the development of the ALS Segway program, and according to Linse the program has been very successful. "Stories trickle back to me from the ALS Segway Team and I know of occasions when they have been first on the scene and have been instrumental in saving lives. We're very proud of them."

The Chicago Fire Department has four Segway PTs in the EMS division, and during the special events season in the summer and fall they utilize these units to provide emergency medical services. "They patrol the central business district in teams of two consisting of a paramedic-in-charge and a fire paramedic," says Linse. "They run in tandem

with each of the Segway PTs carrying specific medical equipment to make the team fully ALS equipped."

Emergency Response Indoors and Out

The Segway PT has developed a unique role in the Emergency Medical Services (EMS) urban environment. With its battery powered operation, non-marking tires and no emissions producing silent propulsion, the Chicago Fire Department has found this combination to be "building friendly" as they access elevators in high rise buildings, while responding to emergency calls.

"As far as I know we're the first fire department in the U.S. to use ALS capable Segway PTs for medical responses, and it is due in large part to the vision of Commissioner Trotter who is a paramedic himself," says Linse. "His vision was instrumental with coming up with ways to better provide fire and emergency services to the citizens and visitors in Chicago. When the weather does not allow the comfortable use of the PTs on the streets, the units are then deployed in the underground pedway system beneath the central business district. The pedway system takes them close to the incident where they then come up to street level and provide patient care. It is has proven to be an incredibly effective system."

First on Scene with Essential Equipment and Medicine

"Each unit is equipped with an Automated External Defibrillators (AEDs) which give the paramedics the opportunity to defibrillate a patient who's in cardiac arrest."

In addition to an AED, the ALS Segway teams in Chicago carry a variety of pharmaceuticals, advanced airway supplies, intubation equipment, IV initiation supplies, patient assessment equipment such as blood pressure cuffs, stethoscopes and blood sugar testing, plus oxygen, wound care equipment, trauma supplies and an OB kit for delivering a baby. All of this equipment is divided among the six cargo bags on the paired ALS Segway PTs.

The Chicago ALS Segway teams work in a tiered response fashion. They monitor the radio and are often the first to respond to incidents in the Loop. An ALS ambulance

Executive Summary

THE CHALLENGE

- Provide quick response to medical emergencies in dense urban, pedestrian environments
- Provide more in-depth emergency medical care

THE SOLUTION

- Acquire four Segway PTs and pair them in teams of two
- Equip each team of two Segway PTs with a range of life-saving equipment and supplies to make them Advanced Life Support (ALS) capable
- Assign ALS Segway Teams to patrol the city's central business district and monitor radio calls to initiate response
- Use ALS Segway Teams to provide emergency medical service during large-scale events along the city's lakeshore

BENEFITS TO THE CUSTOMER

- Quicker response times to medical emergencies in the Loop
- Able to provide advanced life-saving treatment to patients before an ambulance arrives
- Improved sightlines and maneuverability to provide emergency care during large events
- Ability to access high rise buildings and elevators

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SEGWAY
Simply moving

and/or engine also responds to these calls to provide additional manpower and equipment as well as patient transport. Each member of the ALS Segway Team works 4 days on, four days off, for a 10-hour day. Each month, two teams are on patrol and every 60 to 90 days these paramedics are rotated back to an ambulance while other paramedics are assigned to the ALS Segway Team.

Immediate Patient Access at Crowded Events and Pedestrian Areas

The new Fire Commissioner, Raymond Orozco, is also an advocate of the use of ALS Segway Teams in large-scale events in the city's Grant and Millennium Parks, and at the North Avenue Beach during the massive Air & Water Show each summer.

"What's nice about the Segway PTs during events is that first of all you're higher so you're able to see over the crowd," says Linse. "In addition, you are very maneuverable and able to zip in and out of the crowd. When we get a call for a patient having difficulty breathing, the ALS Segway team gets there quickly, assesses the patient and is able to initiate care immediately. We then have our ALS Med Carts follow them to pick up the patients and

transport them to a perimeter location where an ambulance can be waiting. During the Taste of Chicago and other large special event venues, this is one of the most effective ways for immediate patient access, treatment and transport.

According to Linse, the paramedics and the public love the ALS Segway Teams. "The public sees the ALS Segway Team as an example of our innovation and they are always asking if they can have their pictures taken with the paramedics," says Linse. "Imagine that you're visiting the Chicago Loop from another country and up rolls the Chicago Fire Department's ALS Segway Team. Not only is it very cool, but it is also very effective as a medical resource and has the added benefit as a positive public relations tool." ■

Note: In May 2006, Fire Commissioner Cortez Trotter retired from the Chicago Fire Department and accepted a position as the Chief Emergency Officer for the City of Chicago.

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