

Northern Westchester Paramedics

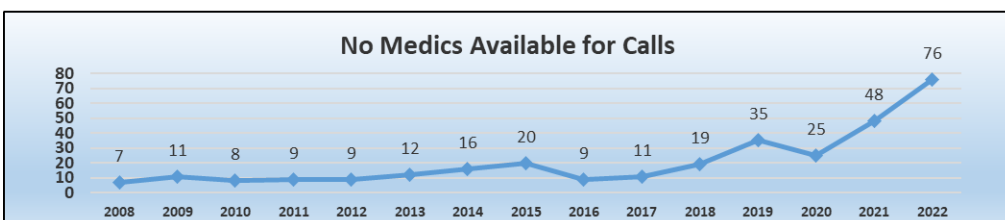
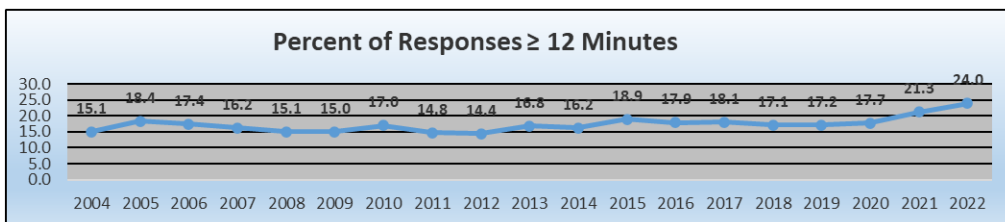
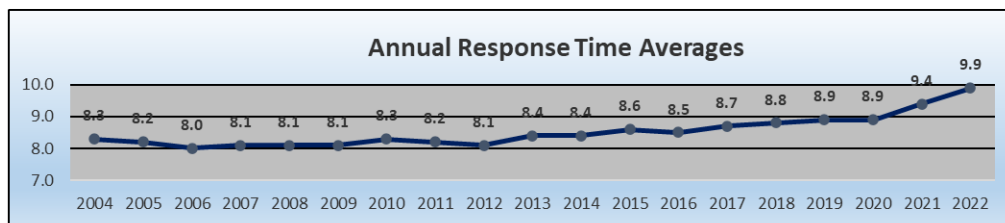
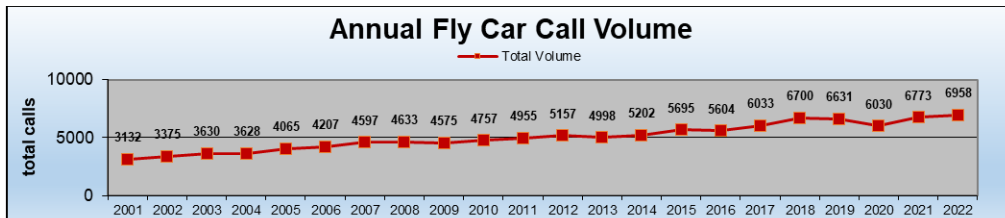
Service delivery analysis and recommendation

09/21/2023

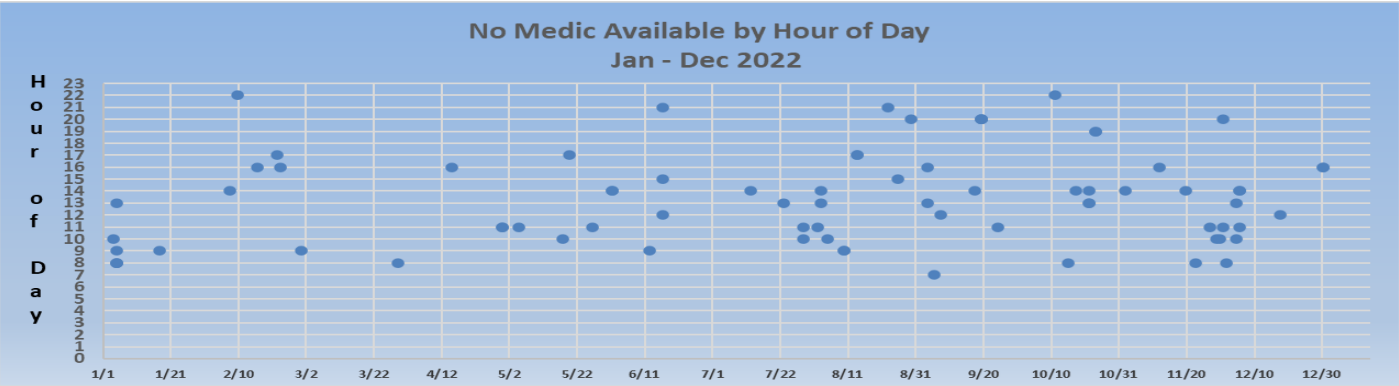
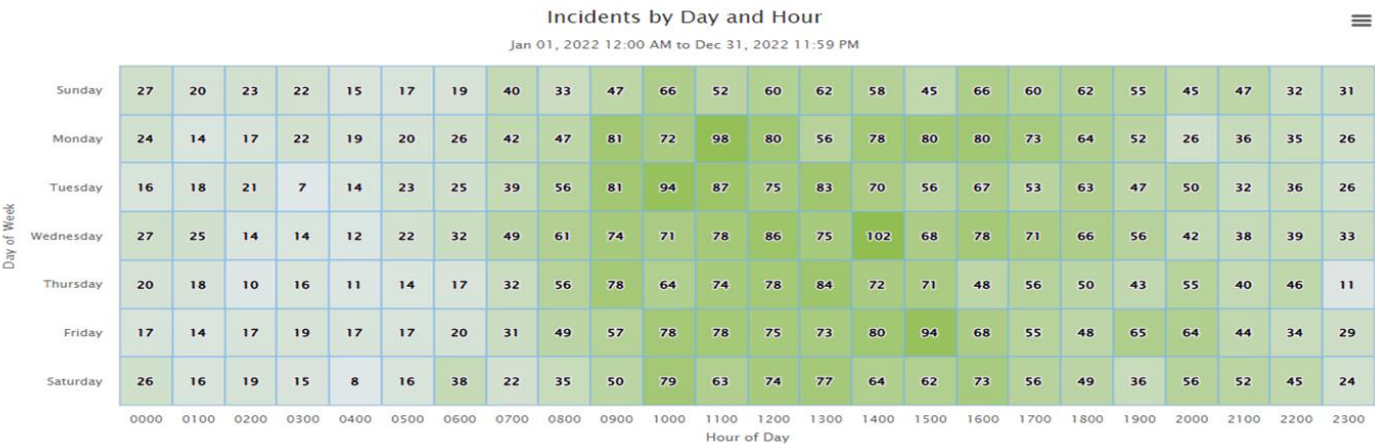
Westchester EMS (WEMS) is a not for profit 501(C)3 EMS agency that has been providing a shared 911 Paramedic Fly Car service to the 8 towns in the Advanced Life Support (ALS) Consortium in Northern Westchester since Sept 1, 2000. The service is provided via a break-even funding model, allocated proportionally to the 8 member towns. The annual budgets are approved by the member municipalities. The annual financial statements are subject to an audit by an independent accounting firm.

Through continuous monitoring of call volume and response time data, we have identified signs of demand exceeding resources. WEMS management has focused on optimizing utilization of resources by other means before recommending adding another unit, however, currently **WEMS management recommends the addition of a 12-hour unit, 7 days a week.**

Since the inception of service in 2000, three (3) 24/7 paramedic response units have serviced the 8 member towns. During the same period, call volume has increased 122% from 3,132 to 6,958 in 2022. The corresponding increase to response time with call volume is evident in the reported data. There are additional concerns with the rise of instances when all units are assigned to calls simultaneously leaving communities without any ALS paramedic resources. Below are reports that highlight these concerns.



Demand analysis demonstrates certain times of day experiencing increased response times and reduced availability by the ALS Fly-Car Paramedics. **It is the recommendation of the WEMS' management team to add targeted resources to best address these issues.**

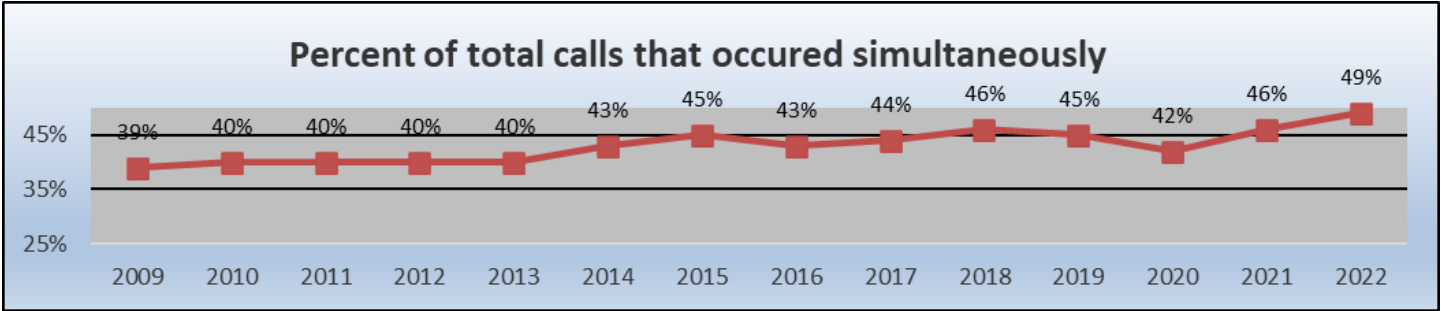


Call Volume Impact on Response Times

Average Response Times increase significantly as medics are assigned calls.

System Status	Responses	Average response time	Response times ≥12 min
All Cars in Service optimal condition	3551 (51%) (58%*)	9.6 mins (avg 8.4*)	780 (22%) of these responses were ≥ 12 mins
1 car on call leaving 2 available	2355 (34%) (31%*)	10.1 mins 5% increase (avg5%*)	623 (26%) of these responses were ≥ 12 mins
2 cars on calls leaving 1 available	917 (13%) (10%*)	10.8 mins 13% increase (avg17%*)	277 (30%) of these responses were ≥ 12 mins
3+ cars on calls Added units if available	135 (2%) (2%*)	12.1 mins 26% increase (avg37%*)	30 (22%) of these responses were ≥ 12 mins

01/01/2022–12/31/2022 data * = 14-year average



WEMS' Paramedics and your local volunteer agencies respond to 7,000 medical calls a year. The Advanced Life Support Fly-Car system services 8 towns in a shared service model with (3) three 24/7 response units. These calls can vary from motor vehicle crashes to someone having a heart attack or stroke. When the volunteers arrive, they stabilize the patient and begin basic care. Once the paramedics arrive, they work together, and the paramedics perform advanced assessment and care as they begin transport in the ambulance to the appropriate hospital. Below are some real-life examples of calls that made a difference.

71-year-old women is out for a walk when suddenly she begins feeling weakness to her left side. She continues on but then falls to the ground when she loses the ability to walk. WEMS Paramedics arrive and notice she has obvious facial droop and is unable to form words. The Paramedic completes his assessment and determines the patient is suffering from a stroke. As the patient is being loaded into the ambulance, the Paramedic calls the Emergency Room to alert them to the pending arrival of an acute stroke patient. The Emergency Room prepares for her arrival by alerting their Stroke Team. In the ambulance, the Paramedic initiates IV access, performs a 12 lead EKG and obtains blood sugar levels. Upon arrival at the ER the patient is immediately assessed by the physician and sent to the Cat Scan. Thanks to the early notification from the Paramedic and the prehospital care provided, this patient receives clot busting medication within 30 minutes of ER arrival and under 1 hour from the time the stroke began. Because of this, the patient experienced a complete resolution of the Stroke and was discharged with no lasting deficits.

There's a saying in emergency medicine that "time is muscle", muscle in this case was the brain, the time is in minutes.

There was a motor vehicle crash on a winding road involving an automobile versus a school bus. The occupants of the automobile sustained serious life-threatening injuries. Upon arrival on the scene, the paramedic unit and several volunteer BLS ambulance and fire agencies found several occupants ejected from the automobile. They were unconscious and in imminent traumatic cardiac arrest. The driver of the automobile was trapped and unconscious in critical condition. All 3-paramedic fly-cars and a supervisor paramedic unit were assigned to the call. The patients' airways were secured with advanced endotracheal tube placements and rapid IV fluids were started. The patients were all rapidly transported to Norther's Westchester and Westchester Medical Center. After a lengthy stay in the intensive care units the patients survived.

Serious trauma care is about the time it takes to get the patient to the operating room, this is known as the "golden hour", the clock starts ticking from onset of injury and every minute matters.

The ALS Paramedic Fly-Car service is an essential lifesaving resource in the EMS system. When service demand starts to outpace acceptable delivery standards, we must consider adding resources. Increasing capacity will increase availability of the paramedic units, increasing availability will decrease response times.