FY 2023-2024 BUDGET QUESTION

Response to Request for Information

DEPARTMENT(S): Emergency Medical Services

CBQ NO.: 155

REQUESTED BY: Pool

DATE REQUESTED: 07/27/2023

DATE POSTED: 08/04/2023

REQUEST: Are there strategies being developed to respond to the needs of this growing area over the coming years?

RESPONSE:

Yes, EMS has strategies to respond to the needs of all growing areas in the City of Austin and Travis County. Below are the steps ATCEMS is taking to identify under-served areas.

The first step in the analytical process is to gather the data. Several years of data are loaded into a geographic information system. Then, powerful geoprocessing tools are run on the data to determine hot spots based on time and geography. Areas of growth are identified, and further analytics are run against the data to determine if the area is properly served or needs additional resources.

The second step in analyzing service levels is to develop a simulation model of call volume and ambulance responses. ATCEMS has a discrete event simulation model built by a company in New Zealand that is a leader in EMS analytics. It allows ATCEMS to do “what if” analytics. In this case, what if the call volume increases in an area of the City? The model uses advanced mathematics to account for the road network, lights and sirens driving speeds, ambulance locations and time of 911 calls. The model then provides output showing response times, ambulance workload, unit hour utilization of trucks and spatial coverage. The simulation results are analyzed and if additional resources are determined to be necessary, management provides input on potential solutions.

In this iterative process, the third step is to use guidance from management to place resources in the study area. The simulation is run again with this new resource and a before and after picture emerges. How do response times and ambulance work-load change when a resource is added to the system? Quantitative results are presented to management and decisions are made based upon facts and statistics.