



ADVANCED LIFE SUPPORT RESPONSE TIMES

Countywide Data Analysis Report & Findings
September 11, 2015

ABSTRACT

Findings from the Camden County Communications Center review and analysis of Advanced Life Support ambulance response times for all Camden County municipalities, January 1, 2012 through July 7, 2015.

On July 13, 2015 Camden County received a request from a local media outlet for information from the Camden County Department of Public Safety for Advanced Life Support (ALS) response times in the City of Camden. Specifically, the requestor wanted to know if ALS services are provided in an acceptable timeframe in the City.

The Camden County Communications Center, a regional Public Safety Answering Point, providing Emergency Medical Service call taking and dispatch services for all 37 Camden County municipalities, including Advanced Life Support and Basic Life Support Services was responsible for gathering the requested information and conducting the County's CAD data analysis.

As background, all Communication Center CAD records are date/time stamped when incident activities are entered into the system, including the date and time a call is received, dispatched and when an ALS dispatched unit arrives on scene. They cannot be altered. Arrival time information is not always present in the data, as an ALS paramedic may fail to enter an arrival time in Mobile Data Terminal located in the ALS unit, or a unit may be called off due to another unit arriving on scene. CAD records that did not include an arrival time were excluded and not used in presenting ALS response time data in the County's July 24, 2015 report (attached).

Consistent with the original Camden City data review and analysis, the Communications Center applied an 8-minute response time as the baseline for its expanded, countywide analysis. Given the absence of a State of New Jersey ALS response time recommended standard, the 8-minute response time was applied based on the recommendations of several nationally known public safety associations and publications, including the International Association of Fire Fighters (IAFF), the National Fire Protection Association (NFPA), the Journal of Emergency Medical Service, and EMS World. Discarding all records that did not include an arrival time, the County's initial data review measured all ALS response times in the City of Camden at 8 minutes and under, an over 8 minutes.

It should be noted that NFPA Standard 1710 recommends "arrival of an ALS company within an eight-minute response time to 90% of incidents."¹ Media reports from Pittsburgh, PA²³, Atlanta, GA⁴, and Bradenton, FL⁵ all reference the 8-minute response time standard in stories regarding EMS response time deficiencies in local communities.

¹ Gary G. Ludwig, MS, EMT-P, "EMS Response Time Standards", April 1, 2004,

<http://www.emsworld.com/article/10324786/ems-response-time-standards?page=2>

² Rick Earle, "Pittsburgh EMS Response Time Below National Standard", May 16, 2007,

<http://www.wpxi.com/news/news/pittsburgh-ems-response-time-below-national-standa/nGnd6/>

³ Robert Zullo, "Audit urges Pittsburgh EMS to improve response times", October 29, 2014, <http://www.post-gazette.com/local/city/2014/10/29/Audit-urges-Pittsburgh-EMS-to-improve-response-times/stories/201410290182>

⁴ Mike Petchenik, "Ambulance service under fire over response times", May 30, 2013,

<http://www.wsbtv.com/news/news/local/ambulance-service-under-fire-over-response-times/nX7GS/>

⁵ Claire Aronson, "Parrish ambulance to reduce response times in northern Manatee County", September 13, 2015, http://www.bradenton.com/2015/09/13/5987319_parrish-ambulance-to-reduce-response.html?rh=1

ALS arrival time data during the initial January 1, 2015 through June 17, 2015 time period revealed that 26.6 percent of ALS response times in the City of Camden were over the 8-minute threshold. Given the results and the limited timeframe for which this data was collected, the Department of Public Safety expanded its review of ALS response times to include the entire County and individual municipalities from January 1, 2012 to July 7, 2015 in order to test the validity of the original findings over a longer period and to compare ALS response times across all municipalities, not just the City of Camden.

The data contained in the expanded analysis revealed that on average, for the selected time period, 48.2 percent of countywide ALS response times were over the identified 8-minute response time threshold. ALS response times for individual municipalities during this time period ranged between 10.7 percent (Woodlynne) and 90.7 percent (Pine Hill) over the 8-minute threshold.

James Rhodes, Deputy County Administrator for the Department of Public Safety provided the results of the analysis (Blaker memo July 24, 2015, attached) to County Administrator Ross Angilella. In order to assure the accuracy of the findings, and to confirm the validity of the methodology and standard employed to conduct the analysis, Administrator Angilella directed DCA Rhodes to seek a third party, independent review of the County's findings.

The Department of Public Safety issued the following solicitation of quotations:

County of Camden seeks a technical audit/review of Camden County Advanced Life Support (ALS) dispatch data (years 2012, 2013, 2014 & 2015 to date) and methodology to evaluate accuracy and analysis. Included in this technical audit/review should be a random sample audit of a percentage of the total ALS calls for service during the aforementioned time period. Consultant must have experience in and be recognized as regional and/or national expert in emergency communications and operations. Consultant must provide timely review of dispatch data provided to them. Deliverable to be a report to Camden County on the accuracy and analysis provided to the consultant. Report must be provided within 21 days of receipt of data.

- *Approximate average of 32,000 total ALS dispatches per year*
- *Approximate average of 16,000 ALS no arrival on location per year*
- *Approximate average of 16,000 ALS arrivals on location per year*
- *Data broken down each year Countywide and 37 individual municipalities showing total number of response times 8-minutes and under, and response times over 8-minutes; with accompanying percentages*

Of the three firms solicited for quotations (IXP of Princeton, NJ, CRA, Inc. of Alexandria, VA, and CSI Technology Group of Keasbey, NJ), only two provided quotes. The County selected IXP, which provided the lowest quote to conduct the independent analysis.

All three of the firms solicited for quotations have much experience in the emergency communications field. Concerning IXP, the company includes among its clients the City of New York, the University of Michigan and Johns Hopkins University Medical Center, providing the expertise required for this project. Of particular benefit for the requested independent analysis, the company has extensive experience in planning, designing, implementing and managing 9-1-1 dispatch operations.

To assist in its analysis, IXP was provided the County's ALS Response Times report (Blaker memo), the CAD data file used for the County's analysis (all ALS calls for the January 1, 2012 through July 7, 2015 time period), and the County's aggregate and individual municipality ALS response times data file. The county's methodology for conducting its analysis was provided to IXP. IXP conducted its review and provided its findings to the County on August 27, 2015.

Amongst its findings, IXP concluded the following (report attached):

- IXP requested a random generated sample of 96 incidents. ***With this information, IXP is able to state with 95% certainty that the data used in the Camden County report is accurate and true to the CAD data.***
- Regarding the validity of the County's use of the National Fire Protection Association standard to conduct its ALS data analysis: ***Based on our experience in the field, IXP believes this is an appropriate standard for the county's ALS response time comparison.***
- IXP concluded in its findings: ***IXP can confirm that Camden County used accurate data to provide information on the responses of ALS units based on industry standards. Issues with the CAD database resulted in minor discrepancies between the IXP report (Appendix A) and the county-provided reports. However, these discrepancies are not statistically significant and the county's reports should be considered accurate and valid.***

This information was provided to the County Administrator who has instructed that this information be provided to any and all individuals, elected officials and entities who have requested to see the County's findings. Relevant documents attached. The raw CAD data file is available upon request.

Attachments

- July 24, 2015 Blaker Memo
- ALS Data Summary Spreadsheet
- ALS Data Graph
- IXP Report