

EMERGENCY RESPONSE AND TRAFFIC CONGESTION: DISPATCHERS' PERSPECTIVES

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Problem Statement

- Traffic congestion is a primary concern during major incident and evacuation scenarios and can create difficulties for emergency vehicles attempting to enter and exit affected areas
- Many of the dispatchers who are responsible for directing the movements of emergency response units during emergencies have not been trained to cope with severe congestion nor have they been given the tools that would allow them to consider traffic congestion in the dispatching process.



Alabama Case Study-Ongoing

- University of Alabama at Birmingham (UAB) on behalf of the UAB-University Transportation Center
- A **statewide survey** of emergency **dispatchers** to assess their training and current practices with respect to traffic congestion.



Literature and State-of-Practice Review Findings

- While many computer aided dispatch (CAD) systems have the capability to incorporate real-time traffic data into their dispatch algorithms, few agencies nationwide actually use this feature.
- An informal survey of emergency response agencies in the Birmingham, Alabama area found that **traffic conditions are typically not considered when dispatching a response unit.**



Project Objective

- Better understand how traffic congestion impacts emergency response and to develop practical measures that can help to reduce those impacts.



Questions to Be Addressed

- To what degree do emergency dispatchers believe traffic congestion impacts response times and how does this compare with the actual experiences of the emergency responders in the field?
- To what degree, if at all, do emergency dispatchers consider traffic conditions when selecting a unit to dispatch?
- Whether or not emergency dispatchers receive training to cope with traffic congestion, and
- What tools would be most useful to dispatchers to enhance the current dispatch process?



Approach

- A survey was developed and conducted to obtain feedback from EMS dispatchers in Alabama on
 - current practices,
 - positive and negative experiences,
 - preferences, and
 - perceptions on the use of computer aided dispatch to help optimize emergency response and transport times.
- A parallel study on EMS responders perceptions is also on-going

Methodology

- Initial meetings
- Survey development
- Survey protocol
- Surveys response solicitation
 - Listservs; phone; e-mail
- Collection and summary of findings



- Available at:

<http://spreadsheets.google.com/viewform?formkey=dDM2VzdmeXhWbVc4UDZoa3I5Z2xHWkE6MA>

Information Solicited

- Employing agency, type of area served (urban or rural), typical volume of calls handled
- Dispatcher duties, typical work shifts, types of dispatching equipment used
- Dispatcher experience and training
- Views of congestion and its impact on response times
- Tools available to cope with congestion
- Suggestions for improving the dispatch process





Preliminary Results-1

- Training
 - 100% received some type of training to prepare them to serve as dispatchers, but
 - Less than 20% received training on ways to cope with traffic congestion.
- Impacts of Congestion

Congestion impacts emergency response		
	Sometimes	Rarely/never
Urban	53%	47%
Rural	45%	55%



Preliminary Results-2

- Congestion Perceived as a Problem?

Is Congestion A Significant Problem?		
	Yes	No
Urban	40%	60%
Rural	22%	78%

- Considering Traffic Conditions during Dispatching
 - Less than 15% of dispatchers do
 - Only 1 agency receives real-time traffic info
 - Agencies are unaware of CAD ability to provide traffic info

Preliminary Results-3

- Suggestions for Improving Dispatching
 - Improved caller location info
 - Installation of AVL to track location of emergency units
 - Only 5% identified real-time traffic info as important





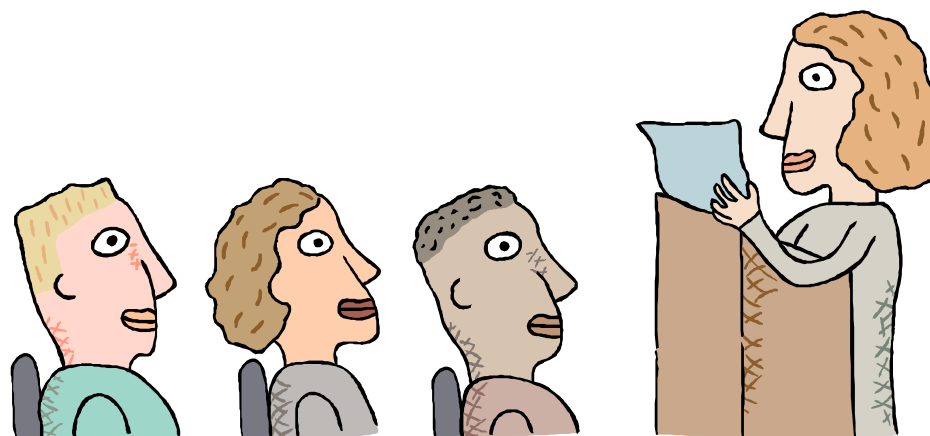
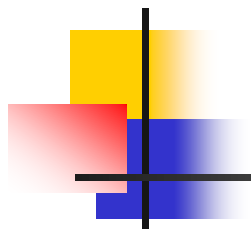
Preliminary Conclusions

- Among dispatchers who responded so far:
 - Majority do not view congestion as a major impediment to emergency response
 - Vast majority disregard traffic conditions when dispatching a unit
- There appears to be a disconnect between views of dispatchers and responders
- Dispatchers do not have the tools and procedures in place to cope with traffic congestion



Future Work

- Completion of dispatcher survey
 - Completion of emergency responders survey
 - Comparison and contrast of the responses
 - Development of recommendations
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- Additional surveys are needed to assess actual and perceived impacts of congestion on dispatching and countermeasures to reduce them



QUESTIONS AND COMMENTS