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An outcome based approach to enhancing EMS systems transport safety

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Use of lights and sirens (L/S) has been shown to increase hazards for EMS transport.

Objective: To determine response outcome of changing 'to scene' Emergency 'L/S' responses to Immediate 'no L/S' modality for a defined cohort of runs.

Methodology: Pilot study conducted in a 911 provider regional EMS system serving 100,000 people, using Medical Priority Dispatch System, a validated dispatch system, classifying runs by increasing severity: Alpha, Bravo, Charlie, Delta, Echo. Alpha trips were run 'no L/S' since 1992. The intervention, to change Bravo responses from 'L/S' to 'no L/S' responses, commenced in March 2005. Data was collected the last 6 months of 2004 and the last 6 months of 2005. A comparison of response category, run data and 'L/S' use was performed.

Results: During the study periods call distribution, weather, and demand factors were similar. In the 2004 period 2495 runs, and 2005 period 2780 runs, Bravo responses were 28% and 25% respectively. Changing Bravo 'to scene' responses to Immediate 'no L/S' resulted in the expected 25% decrease in 'L/S' responses and there was no increase in total 'from scene' 'L/S' transports. There was an 8% decrease in Emergency 'L/S' responses where there was no patient found or no transport.

Conclusion: A policy replacing potentially hazardous use of 'to scene' Emergency L/S responses in this cohort with Immediate 'no L/S' responses resulted in a substantial decrease in potential transport hazards. Generalizability would require a larger sample size. Defining response modalities is where prioritization of dispatch can pay safety dividends.

Learning Objectives:

- Identify hazards of Emergency Lights and Sirens ('L/S') responses.
- Discuss the change in dispatch mode from Emergency 'L/S' to scene responses to Immediate 'no L/S' to scene responses.
- Assess potential benefits and challenges of Immediate 'no L/S' to scene responses for the cohort of Medical Priority Dispatch System Bravo calls.

Keywords: EMS/Trauma, Quality Improvement

Related Web page: www.objectivesafety.net

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Any relevant financial relationships? No

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