Concerning Medical Care Feedback in Emergency Medical Services

BACKGROUND

- Feedback to healthcare providers regarding the medical care they have provided may lead to improved patient care and outcomes.
- In the prehospital setting, there is some evidence that this feedback is not provided regularly. Little is known about prevalence of medical care feedback and factors associated with receiving this specific type of feedback in the prehospital setting.

OBJECTIVES

- Describe the prevalence of medical care feedback in the prehospital setting.
- Identify characteristics associated with receiving medical care feedback.

METHODS

- Study Design & Setting: A cross-sectional census survey was administered in October 2014 to nationally-certified EMS providers concerning feedback received in the previous 30 days.
- This is a sub-analysis of specifically medical care feedback from the larger project assessing several types of prehospital feedback.
- Inclusion Criteria: Currently practicing patient care providers (Emergency Medical Technician [EMT] or higher) in non-military and non-tribal settings.
- Data Analysis: Descriptive statistics were calculated and a multivariable logistic regression model was constructed to assess the association between receiving medical care feedback and demographic/agency characteristics.

RESULTS

- Responses from 32,114 EMS providers were received (response rate = 10.4%) with 15,766 meeting inclusion criteria.
- 45% of respondents reported receiving no medical care feedback in the previous 30 days.
- The final multivariable logistic model included:
  - Minority status
  - Certification level
  - Years of EMS experience
  - Agency type
  - Service type
  - Weekly call volume
- Model displayed good calibration (Hosmer-Lemeshow Goodness-of-Fit Test: $\chi^2 = 13.35, p = 0.10$)

REFERENCES

- BLS = basic life support (EMT).
- Significant factors denoted with asterisk (p<0.05).
- Odds ratio (OR) estimates displayed with 95% confidence intervals. OR to the left of the red line favor the referent, while those that cross the red line are non-significant.
- Abbreviations: ALS = advanced life support (Advanced EMT, paramedic); BLS = basic life support (EMT).

LIMITATIONS

- Bias from self-reported data possible.
- The content of feedback and resulting practice changes were not assessed.
- Non-response bias: a non-responder survey showed no significant differences with regards to receiving feedback among respondents and non-respondents.

CONCLUSIONS

- Almost half of EMS professionals did not receive any medical care feedback in a 30 day period.
- Disparities in receiving feedback exist with different provider levels and service settings.
- Those providing air medical services had a three-fold increase in odds of receiving medical care feedback, whereas those providing medical transport/convalescent services had a 52% decrease in odds.
- ALS-level respondents had increased odds of medical care feedback.
- Minority EMS professionals had decreased odds of receiving medical care feedback.
- Odds of receiving medical care feedback decreased with years of experience in EMS.
- Higher call volumes were associated with increased odds of receiving medical care feedback.

Figure 1: Forest plot of odds ratios for factors associated with receiving medical care feedback among nationally-certified EMS professionals. Odds ratio (OR) estimates displayed with 95% confidence intervals. OR to the left of the red line favor the referent, while those that cross the red line are non-significant. Significant factors denoted with asterisk (p<0.05).

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