

## Giving Right-of-Way to Emergency Ambulances: Attitude and Behavior of Road Users in Developing Countries

**Authors :** Mahmoud T. Alwidyan, Ahmad Alrawashdeh, Alaa O. Oteir

**Abstract :** Background: Emergency medical service (EMS) providers, oftentimes, use the lights and sirens (L&S) of their ambulances to warn road users, navigate through traffic, and expedite transport to save lives of ill and injured patients. Despite the contribution of road users in the effectiveness of reducing transport time of EMS ambulances using L&S, there is a lack of empirical assessments exploring the road user's attitude and behavior in such situations. This study, therefore, aimed to assess the attitude and behavior of road users in response to EMS ambulances with warning L&S in use. Methods: This was a cross-sectional survey developed and distributed to adult road users in Northern Jordan. The questionnaire included 20 items addressing demographics, attitudes, and behavior toward emergency ambulances. We described the participants' responses and assessed the association between demographics and attitude statements using logistic regression. Results: A total of 1302 questionnaires were complete and appropriate for analysis. The mean age was 34.2 (SD± 11.4) years, and the majority were males (72.6%). About half of road users (47.9%) in our sample would perform inappropriate action in response to EMS ambulances with L&S in use. The multivariate logistic regression model show that being female (OR, 0.63; 95% CI = 0.48-0.81), more educated (OR, 0.68; 95% CI = 0.53-0.86), or public transport driver (OR, 0.55; 95% CI = 0.34-0.90) is significantly associated with inappropriate response to EMS ambulances. Additionally, a significant proportion of road users may perform inappropriate and lawless driving practices such as crossing red traffic lights or following the passing by EMS ambulances, which would, in turn, increase the risk on ambulances and other road users. Conclusions: A large proportion of road users in Jordan may respond inappropriately to the EMS ambulances, and many engage in risky driving behaviors due perhaps to the lack of procedural knowledge. Policy-related interventions and educational programs are crucially needed to increase public awareness of the traffic law concerning EMS ambulances and to enhance appropriate driving behavior, which, in turn, improves the efficiency of ambulance services.

**Keywords :** EMS ambulances, lights and sirens, road users, attitude and behavior

**Conference Title :** ICEM 2022 : International Conference on Emergency Medicine

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** August 16-17, 2022