Utilization, Barriers and Determinants of Emergency Medical Services in Mekelle City, Tigray, Ethiopia: A Community-Based Cross-Sectional Study

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Abstract: Background: Emergency medical services (EMS) are services that provide out-of-hospital emergency medical care to injured or ill peoples, and transporting to definitive care. EMS is an integral part of the emergency medical system and has been associated with decreased morbidity and mortality related to emergency cases. The aim of this study was to assess the utilization, barriers, and determinants of EMS in Mekelle, Ethiopia. Methods: A community-based cross-sectional study was conducted in selected sub-cities of Mekelle. A multistage sampling method was employed to recruit study participants, and data were collected by trained data collectors using an interviewer-administered questionnaire. Multivariate logistic regression analysis was used to examine the statistical association of the determinants of EMS utilization. Results: Half (50.5%) of the respondents had experienced or witnessed an emergency incident in the past year. The common means of transportations used were Bajaj’s (39.2%) and ambulances (22.7%). Majority (88.1%) of the respondents did not knew the EMS access phone number of an ambulance. As their preferred mode of transportation in case of emergency conditions, 42.2% of the participants reported an ambulance, followed by Bajaj 33.7%. Where participants who had gynecologic emergencies were 9.4 times (AOR=9.4, 95% CI: 1.04, 85, p=0.046), and those who knew any ambulance numbers were 3.6 times (AOR=3.6, 95% CI: 1.22, 10.8, p=0.02) more likely to use ambulance services in case of emergencies. Conclusion: The ambulance utilization level in Mekelle city was low and victims of emergency conditions were being transported mainly using public transports such as Bajaj’s and taxis. Even though the perception of the public towards EMS services is favorable, lack of awareness of EMS access, and lack of integrated EMS system in the city are the barriers that may have contributed to the low utilization. Actions to improve EMS access and integrating the system are warranted to promote the services utilization.

Keywords: emergency medical services, utilization, Mekelle, barriers

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