Original

Investigating the Effect of the Presence of the Rapid Response Team on the Rate of Intubation and Cardiopulmonary Resuscitation in Patients Admitted to Namazi Hospital, Shiraz Iran

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Abstract

Background: In many hospitals, the rapid response team (RRT) is specialized in monitoring critical symptoms and timely intervention. The purpose of this study is to investigate the impact of RRT implantation (including reducing cardiorespiratory resuscitation and intubation rate) in adult patients admitted to Namazi Hospital in Shiraz.

Methods: This cross-sectional study was conducted in Shiraz Namazi Hospital on 15,448 patients over 18 years of age hospitalized in the emergency room and selected internal wards from April 2019 to January 2022. This study was divided into three periods. The trend of clinical outcomes (cardio-respiratory resuscitation and intubation) in the first and third periods (before and after the RRT implementation) was analyzed using Joinpoint Regression analysis.

Results: The mean monthly cardiorespiratory resuscitation showed a significant decrease (p-value < 0.001) in the third period in the emergency department. Also, the mean intubation rate decreased by 10 units (p-value: 0.1). According to the results of Joinpoint Regression Analysis, the monthly percentage changes (MPC) of cardiorespiratory resuscitation in the emergency department before the establishment of RRT had a positive upward slope of 7.4%, while after the implementation of RRT, MPC was 2.9% with a negative slope.

Conclusion: Implementing the rapid response team can reduce cardiorespiratory resuscitation and intubation rate by screening at-risk patients with warning signs, using trained staff and early intervention, and indirectly reducing the complications caused by cardiac arrest.

Keywords: Cardiorespiratory resuscitation, Emergency medicine, Hospital rapid response team, Mortality