The Impact of Sleep on In-Training Examination Scores among Emergency Medicine Residents

Kristin Weeks, MD; Michael Takacs, MD, MPH; Christian DeFazio, MD; Joelle Borhart, MD

Learning Objectives: understand the impact hours of sleep the night before the In-Training Examination (ITE) has on examination scores and consider possible interventions to resident work schedules leading up to the ITE.

Background: Sleep deprivation is a fundamental challenge of shift work and has been shown to impact emergency medicine physician-residents’ performance and coordination. It is not known if sleep deprivation impacts performance on the in-training emergency medicine examination (ITE). We hypothesize that more sleep the night prior to the examination is associated with higher examination scores.

Methods: We administered a cross-sectional 12-question electronic survey to physician-residents in emergency medicine residency programs in the United States in April 2020. Our sampling frame was residents of program directors (N=366) receiving the Council of Residency Directors in Emergency Medicine (CORD) listserv. We constructed a multivariable logistic regression model of scoring at least 70% on the ITE by hours of quality sleep the night before the examination.

Results: 286 (90%) respondents who completed the survey reported hours of sleep and were included in the analysis. Independently of sex, year in residency, rotation and hours off clinical duties before the examination, each additional hour of sleep (range <1 to 9 hours) received the night prior to the ITE was associated with 1.25 greater odds (95% confidence interval (CI) 1.01-1.55) of scoring greater than 70% on the examination. The adjusted odds of scoring greater than 70% on the ITE were 7.22 times (95% CI 2.85-18.27) greater for third- and fourth-year residents (versus first and second) and 3.26 times greater (95% CI 1.02-10.43) for residents who had been off-service for 19-24 hours prior to the examination (versus 0-6).

Conclusion: Increased hours of sleep were significantly associated with higher ITE scores. Attention should be given to shift work prior to the ITE, and physician-residents should be given time-off clinical duties the night prior to the ITE to allow for greater hours of sleep. Residents should be educated about fatigue mitigation and the importance of maximizing sleep off-duty.

The Landscape of Pediatric Training in Emergency Medicine Residencies

S35

Learning Objectives: 1) To describe the landscape of pediatric training in EM residencies; and 2) to evaluate the confidence Program Directors (PDs) have in their graduating trainees’ ability to care for pediatric patients.

Background: Several studies have demonstrated that Emergency Medicine (EM) providers are uncomfortable caring for pediatric patients relative to caring for adult patients. Pediatric training in EM residents has not been evaluated since 2000.

Objectives: 1) To describe the landscape of pediatric training in EM residencies; and 2) to evaluate the confidence Program Directors (PDs) have in their graduating trainees’ ability to care for pediatric patients.

Methods: We conducted a survey study of EM PDs. PDs were identified from the American Medical Association