

# **Reducing Interruptions During Emergency Medicine Provider Handoff**

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## **Abstract**

### **Introduction:**

ED handoff serves to convey critical patient information from outgoing to incoming clinicians at shift change. Interruptions during handoff can be detrimental to patient safety by causing pitfalls in communication which can lead to medical errors. The objective of our study was to identify common interruptions occurring during handoffs and implement interventions aimed at reducing the average number of interruptions per handoff by half.

### **Methods:**

Emergency clinicians were observed during handoff periods in two high volume pods at a level 1 trauma center. Data collected included total number of interruptions, type and frequency of interruptions observed, and duration of handoff periods. Interventions were implemented to increase departmental awareness of handoff periods through overhead pages, as well as encouraging diversion of non-urgent tasks and questions to non-handoff clinicians. Observational data was recollected after one month for comparison. A convenience survey was later emailed to ED staff to assess opinions on interventions and their impact on handoff.

### **Results:**

A total of 90 and 34 handoffs were observed during the preliminary and post-intervention phases of the study, respectively. The most frequent observed interruptions included department noise levels, staff interruptions, and portable communication device (Vocera) interruptions. The average total number of interruptions per handoff decreased from 7.9 to 6.4. The greatest reduction was seen in general noise (3.5 vs 2.6) and staff member interruptions (3.5 vs 2.6). An increase in average duration of handoff was noted (11.8 vs 12.1 min). Of the 99 individuals that responded to the survey, 66.67% felt that the handoff process improved following interventions.

### **Conclusion:**

Though a reduction in the total average number of interruptions was observed following our interventions, we were unable to achieve our target reduction and found handoff duration had slightly increased. Despite this, we were able to further characterize common interruptions occurring during handoff and introduced ideas on how to reduce them, which were overall viewed favorable by ED staff. Future studies may consider addressing some of

the challenges we faced such as finding interventions that can maintain staff adherence over time and potentially having handoff in a more secluded environment.