AAFP Backgrounder: EHR Inbox Burden

Physicians frequently cite workload increases due to electronic health record (EHR) messaging among the factors contributing to burnout, but the specific stresses exerted by the EHR inbox have received limited evaluation; studies to date have relied on anecdotal or self-reported measures.

Clearly, though, poor inbox usability leads to inefficiencies that prolong the time clinicians take to process information, leading to frustration and exhaustion. These inefficiencies also are associated with loss of situational awareness, which may cause physicians to miss critical findings such as abnormal test results.

Situational awareness, a concept first studied and applied in aviation, involves the ability to identify and understand information across four levels: perception of elements in the environment, comprehension of their meaning, projection of their status in the near future, and awareness of the best path to follow. Poor situational awareness among health care practitioners has been associated with delays in care and diagnostic errors.

One key study indicates that, of an average total EHR time of 3.5 hours, physicians spend more than one hour doing EHR inbox work, with patient messages accounting for most of the inbox work time. This research reveals three patterns of inbox work: that done mostly during work hours, that extending after hours mostly contiguous to work hours, and that conducted mostly outside work hours. Across these three patterns, the study indicates three periods when stress increases: in the first hour of work, early in the afternoon, and in the evening. Factors associated with daily stress duration include inbox work duration, the rate of EHR window switching (moving from one screen to another), the proportion of inbox work done outside work hours, inbox work batching, and the day of the week.

This study is among the first to demonstrate associations between electronic inbox work and physiological stress. Its results suggest that organizations seeking to reduce physician stress may consider system-based changes to reduce EHR window switching or inbox work duration or the incorporation of inbox management time into work hours.

A 2019 study, meanwhile, associated excessive inbox messages — particularly computer-generated messages rather than those originating from patients, staff, or other clinicians — with increased burnout symptoms among physicians. Complicating broad efforts to reduce inbox volume is the fact that many messages are important. Many physicians, meanwhile, have developed unique preferences regarding what messages they want to receive. Improving EHR inbox design and workflow would answer both of these factors, allowing physicians to more efficiently manage EHR workload without risking missed communications.