When Less is More: Optimizing Prescription Alerts under Fatigue

Michael Li
Harvard Business School
United States
mili@hbs.edu

Hossein Piri
University of Calgary
Canada
hossein.piri@ucalgary.ca

Abstract

Computerized Provider Order Entry (CPOE) systems are vital in healthcare but often lead to alert fatigue due to excessive notifications. This research presents an adaptive alert management strategy using a fluid optimization model to dynamically adjust alert thresholds based on pharmacists' cognitive capacity. By tailoring alert presentation to reduce non-critical notifications, the approach aims to balance the trade-off between minimizing alert fatigue and maximizing patient safety. This strategy leverages real-world hospital data to refine decision thresholds, reducing the alert burden while maintaining clinical relevance. The findings offer a pathway to more efficient, effective, and sustainable alert management in healthcare systems, improving workflow and decision support.

Keywords
Optimizing, Prescription, Fatigue