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THE EFFECT OF THE UTAH MEWS ALERT SYSTEM ON THE DETECTION OF SEPSIS AT THE UNIVERSITY OF UTAH HOSPITAL

Emilie Ungricht (Devin Horton, MD; Kencee Graves, MD)

Department of Bioengineering

Abstract— Sepsis is the leading cause of death at the University of Utah Hospital and one of the leading causes of death in the United States. Early detection of sepsis is critical for effective treatment. The University of Utah Hospital has developed an electronic warning system to detect decompensating patients, including those with sepsis. This system, the Utah Modified Early Warning System (mEWS) uses changes in the patients' vital signs to alert health-care providers that the patient needs medical attention and could have sepsis. It is hypothesized that this system effectively identifies septic patients. After treating the patient who had a mEWS alert, the health-care provider records the suspected cause of the mEWS Alert. These suspected diagnoses were confirmed or rejected through retrospective chart review, providing a confirmed diagnosis. Overall, the mEWS Alert system and health-care providers correctly identify the cause of the alert 71 % of the time. Approximately half of these correct diagnoses were due to sepsis. Sepsis was not identified at the time of the alert 25% of the time. The majority of cases where sepsis was not identified resulted from the varying backgrounds of the health-care providers and how often these health-care providers see sepsis in their daily practice. The mEWS Alert system successfully identifies septic patients. Improvements are being made to the mEWS Alert System to help health-care providers identify sepsis more successfully. Continued improvements to this alert system will help identify decompensating and septic patients earlier, allowing for rapid treatment and improved patient care.