Severe sepsis is a major cause of mortality, killing 250,000 people in the US each year. Consistent implementation of best evidence interventions may lead to a 25% reduction in mortality from severe sepsis and septic shock. Early identification and intervention is vital to improved outcomes in patients with severe sepsis and septic shock.

AIM: Develop a standardized and reliable system of identifying at risk patients with severe sepsis and septic shock.

Hypothesis: Use of an electronic surveillance system and an enhanced culture of safety will help facilitate early intervention and decrease mortality in patients at risk of a poor outcome.

**PLAN OF ATTACK**

We conducted a collaborative cohort study across various general medical/surgical inpatient units at MedStar WHC.

The study intervention targeted 2 key evidenced based practices:
- Surviving Sepsis Campaign to promote early goal directed therapy (EGDT) in patients with severe sepsis and septic shock, and
- Early recognition and risk stratification of high risk patients with severe sepsis and septic shock

The process was tested through multiple PDSA cycles before wide-spread hospital implementation.

Bedside nurses were trained to review alerts and empowered to obtain lactate levels in patients in whom infection is known or suspected.

Physicians were notified of patients with lactates > 2.1, >= 2.6, and >= 3.5.

A standardized and reliable system of identifying at risk patient populations was achieved via alerts from an electronic surveillance system.

A standardized and reliable system of identifying at risk patient populations was achieved via alerts from an electronic surveillance system.

**MISSION ACCOMPLISHMENTS (GETTING THERE)**

The analysis included a 22 month period prior to study intervention, a 20 month period of staged intervention and a 2 month period post interventions.

The median mortality rate decreased from 40.47% at baseline to 36.98% during the period of study intervention, with a further decline to 29.9% at 2 months post study intervention. This results were statistically significant.

The AKWDA test showed a decrease in mortality rate from baseline with mortality rates decreasing from 40.7% (± 5.4) at baseline to 36.9% (± 4.5) during study intervention with a further decline to 30.3% (± 7.6) at 2 months post implementation of the study intervention.

**ENEMY INVASION**

Severe sepsis is a major cause of mortality, killing 250,000 people in the US each year. Consistent implementation of best evidence interventions may lead to a 25% reduction in mortality from severe sepsis and septic shock. Early identification and intervention is vital to improved outcomes in patients with severe sepsis and septic shock.

AIM: Develop a standardized and reliable system of identifying at risk patients with severe sepsis and septic shock.

Hypothesis: Use of an electronic surveillance system and an enhanced culture of safety will help facilitate early intervention and decrease mortality in patients at risk of a poor outcome.

**PLAN OF ATTACK**

We conducted a collaborative cohort study across various general medical/surgical inpatient units at MedStar WHC.

The study intervention targeted 2 key evidenced based practices:
- Surviving Sepsis Campaign to promote early goal directed therapy (EGDT) in patients with severe sepsis and septic shock, and
- Early recognition and risk stratification of high risk patients with severe sepsis and septic shock

The process was tested through multiple PDSA cycles before wide-spread hospital implementation.

Bedside nurses were trained to review alerts and empowered to obtain lactate levels in patients in whom infection is known or suspected.

Physicians were notified of patients with lactates > 2.1, >= 2.6, and >= 3.5.

A standardized and reliable system of identifying at risk patient populations was achieved via alerts from an electronic surveillance system.

A standardized and reliable system of identifying at risk patient populations was achieved via alerts from an electronic surveillance system.

**MISSION ACCOMPLISHMENTS (GETTING THERE)**

The analysis included a 22 month period prior to study intervention, a 20 month period of staged intervention and a 2 month period post interventions.

The median mortality rate decreased from 40.47% at baseline to 36.98% during the period of study intervention, with a further decline to 29.9% at 2 months post study intervention. This results were statistically significant.

The AKWDA test showed a decrease in mortality rate from baseline with mortality rates decreasing from 40.7% (± 5.4) at baseline to 36.9% (± 4.5) during study intervention with a further decline to 30.3% (± 7.6) at 2 months post implementation of the study intervention.

**LESSONS LEARNED FROM THE FIELD**

Initially, every patient was screened twice daily using a paper form which was not sustainable. By using an electronic tool which is capable of integrating clinical information from the medical record and sending alerts warranting further screening and assessment is essential to improving outcomes of patients with severe sepsis and/or septic shock.

**IT TAKES A VILLAGE: MWHC SEPSIS PI TEAM**

Team Leaders: Sarumi, Molade MD & Garner, Barry RN, BSN, MBA

Quality: Gutierrez, Sally RN, MSN

Outcomes: Mary-Wichael Brown, DNP RN/Anne Simenauer, RN/McKernic Hall, MHSA

Laboratory: Berihun Taye, MS, MLS (ASCP)

Clinical Informatics MI2: Rappaport, Hank MD

Emergency Department: Jeff Dubin, MD/Emily Siegel, MD/Erin Hama, MD/Genice Lamaro, HD

Nursing/Education: RRT: Renikema, Angela RN/Parlmaord, RN/Eileen Montemayor, RN/Tara Griff, RN/Susan Young, RN/Marilyn Evans, RN/Lee Hicks, RN/Barbara Brune, RN/Molly Ambir, RN/Amanda Jones, RN/Kehinde Fadojutimi, RN/Incere, Patricia RN, MSN/Kingan, Michael, DNP, RN

Pharmacy: Anne Breakenridge, PharmD

ID Fellow: Alex Bagaria

Director Hospitalists: Uzma Vaince, MD