

2014 Gage Awards

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| Reference # | 7489315 |
| Status | Complete |
| Name of hospital or health system | Santa Clara Valley Medical Center/Santa Clara Health and Hospital Systems |
| Name of project | Quality Improvement in Sepsis Care |
| CEO name | Rene Santiago |
| CEO approval | Check here to confirm that your CEO approves of this project being submitted for a 2014 Gage Award |
| Submitter name (first and last) | Olivia Lee |
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| Within which of the two categories does your application best align? | Quality |

1. Provide a brief description of the project. (This section should resemble an abstract for a poster presentation or an abstract for a peer reviewed journal. Include an objective, data sources, study design, findings, and conclusions.)

Sepsis can harm and kill patients if not treated effectively and efficiently. It is associated with significant morbidity and mortality. Approximately a quarter of patients with severe sepsis or septic shock die in public hospitals.

Since the publication of the Early Goal Directed Therapy by Dr. Emmanuel Rivers in 2001, there has been close to a decade of various efforts, such as the Surviving Sepsis Campaign and IHI's Saves 100,000 Lives Campaign, to decrease the overall mortality and morbidity associated with sepsis. Santa Clara Valley Medical Center has committed itself to the continual improvement of sepsis care since 2011.

Objective: To assess whether dedicated institutional efforts on education and promotion of early sepsis detection and treatment can lead to increasing bundle compliance and decrease in overall mortality in severe sepsis and septic shock.

Design: Single center retrospective study at a teaching public hospital. Charts are independently coded as per hospital coding department. A list of charts that include the following inclusion criteria is compiled: sepsis plus any organ dysfunction, severe sepsis, or septic shock. Thirty charts are selected each month at random for detailed chart review by our sepsis coordinator to elucidate whether all bundle elements were initiated in the proper timeframe. Bundle elements include: 1) serum lactate, 2) Blood cultures before antibiotics, 3) Antibiotics 3 hours from the time of emergency room triage or 1 hour for patients who develop sepsis while as an inpatient, and 4) initiation of IVF at a minimum of 20mL/kg or 1000mL. Compliance measurement is all or nothing. Mortality rate is calculated based on all severe sepsis and septic shock patients per month.

Since initiation of our project in July 2011, hospital-wide educational efforts have been underway to educate all healthcare professionals who may encounter a patient with sepsis. Adoption of specific institutional practices, such as sepsis rapid response alert, pyxis ready antibiotics and RN screening program every 8 hours, have strengthen the foundation of our program. We have also involved physician and nursing champions in various specialties to further our goals. Routine quarterly education through conferences, seminars and workshops have been the mainstay in our educational program.

Findings: Our baseline data (January 2011-June 2011) was 19% compliance and 15% mortality prior to initiation of our sepsis program. The general trend of our bundle compliance has been steady increasing since 2011. The most recent data from July 2012 to June 2013 showed an average compliance of 55% with an average mortality of 10.75%.

Conclusions: Dedicated institutional efforts on education and promotion of early sepsis detection

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| | and treatment can lead to an increase in bundle compliance and decrease in overall mortality in severe sepsis and septic shock. |
| 1A. Attachment, if applicable (Applicable examples include a peer reviewed journal article, other content published in the literature, or a presentation at a national meeting) | GAGESepsisGraph12-12-13.pdf (143k) |
| 2. Describe the methods use in this project. Include where, why, and how the project was accomplished. | <p>The hospital-wide educational program involves the following:</p> <ol style="list-style-type: none"> 1) Strong administrative support 2) Establishing a core sepsis team to plan and execute via PDSA methodology to promote sepsis education and tailor our program to our institution's workflow. 3) Continual hospital wide education on evidence-based practices for sepsis care 4) A RN based screening program for sepsis for ED and inpatients 5) Pyxis ready antibiotics to allow for efficient initiation of therapy 6) Sepsis alert rapid response team with dedicated sepsis RN to facilitate rapid detection and treatment 7) Dedicated sepsis RN coordinator and data analyst who track and collect our data 8) Monthly and quarterly sepsis stakeholders meeting to discuss and improve our program 9) Continual conferences and workshops on sepsis care for hospital staff |
| 3. Describe the results of the project. What data was used to support improvement results? | <p>Our baseline data (January 2011-June 2011) was 19% compliance and 15% mortality prior to initiation of our sepsis program. The general trend of our bundle compliance has been steady increasing since 2011. The most recent data from July 2012 to June 2013 showed an average compliance of 55% with an average mortality of 10.75%.</p> <p>With dedicated institutional efforts on education and promotion of early sepsis detection and treatment, SCVMC has demonstrated that these efforts are associated with improvement in sepsis bundle compliance and decrease in overall sepsis mortality.</p> |
| 4. Describe what happened as a result of the project. Was the improvement related to the intervention? Can the project be duplicated by other organizations? | As a result of the project, we have raised the awareness of early sepsis detection and treatment. The improvement is related to the initiation of our sepsis program, which can be duplicated by other organizations that have the same priorities. |
| 5. Describe how patients, families, and if appropriate, community was included in the work. | Not Applicable |
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