



Electronic Bundle Worklist Increases Adherence with CMS Sep-1 Measures in the Emergency Department

Delfa S. Seto, MSN, RN, CEN, Lauren Bazzell, BSN, RN, Alicia Kim, RN, CEN, Marisol Fernandez-Lagunas, BSN, RN, Sadeeka Al-Majid, PhD, RN

MemorialCare Orange Coast Medical Center (OCMC), Fountain Valley, California

Introduction

- ❑ The 18-bed Emergency Department (ED) in our Community Magnet®-recognized Hospital receives approximately 100 patients per month with severe sepsis or septic shock.
- ❑ Evidence shows that implementing CMS-SEP-1 Early Management Bundle for severe sepsis/septic shock improves outcomes in this patient population.
- ❑ Only 69% of patients presented to our ED with severe sepsis or septic shock received all the elements of the CMS-SEP-1 Bundle.
- ❑ The use of a physical bundle worklist, in the form of a badge buddy, delineating the elements of the CMS-SEP-1 Bundle did not increase the percentage of patients receiving all elements of the bundle.
- ❑ In order to meet our goal of 75% of patients receiving all elements of the bundle, it was imperative to explore alternative and creative ideas to increase full implementation of the bundle.

Purpose

- ❑ The purpose of this performance improvement (PI) project was to increase the percentage of patients receiving all elements of CMS-SEP-1 bundle to surpass our goal of 75%.

Methods

- ❑ **Design:** Quality improvement before and after project.
- ❑ **Primary outcome:** Adherence of ED nurses to CMS-SEP-1 bundle, measured by percentage of patients with septic shock or severe sepsis receiving all elements of the bundle.
- ❑ **Sample and Setting:** All registered nurses (n= 75) working in the ED of our community Magnet®-recognized hospital.
- ❑ **Conceptual/Practice Model:** The Plan-Do-Study-Act (PDSA) Model guided this project (Table 1).

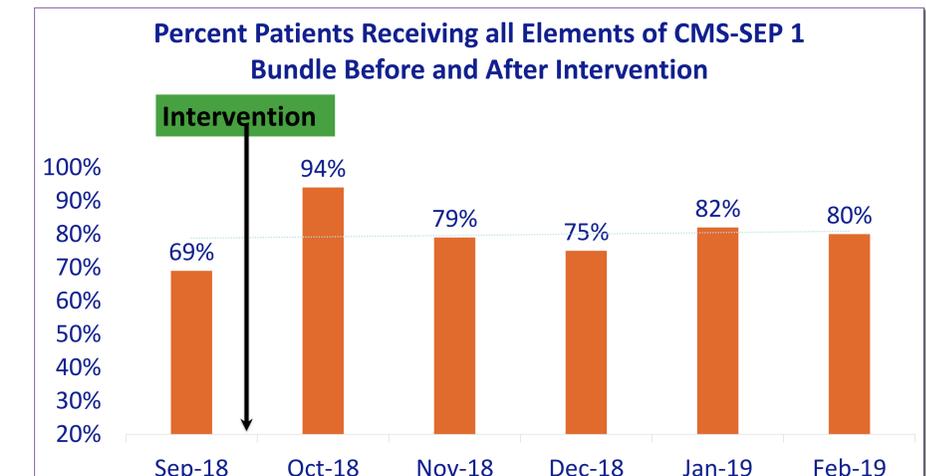
Methods - Continued

- ❑ **Intervention/procedures:**
We created and implemented the following:
 - ✓ **Standard work:** including training ED nurses to draw blood cultures, and implementing a blood culture log with a time stamp for accurate antibiotic administration.
 - ✓ **Electronic bundle worklist:** All nurses were given access to the electronic bundle worklist, and were trained on how to properly use it. The training included when to access the worklist, how to navigate through it, and most importantly, how to share the notes so that other nurses can also track care for the patient.

PDSA	Implementation Actions
PLAN How can we improve performance?	<ul style="list-style-type: none"> ✓ The low percentage of patients receiving all elements of CMS-SEP-1 Bundle was discussed during the monthly ED Multidisciplinary Sepsis Committee meeting. ✓ The Sepsis Committee discussed barriers to using the badge buddy bundle worklist as a guide, and identified the need for creating standard work. ✓ The committee discussed implementing an electronic bundle worklist that allows nurses to share and edit.
DO What did we do?	<ul style="list-style-type: none"> ✓ Created standard work & electronic bundle worklist ✓ Conducted one-on-one education and training of nurses
STUDY: How did we study our performance?	<ul style="list-style-type: none"> ✓ The Sepsis Committee conducted monthly reviews of fall outs and identified specific trends. ✓ Discussed missed opportunities and barriers.
ACT What did we do to address missed opportunities?	<ul style="list-style-type: none"> ✓ Worked with ED nurses to identify barriers that contributed to missed opportunities. ✓ Made modifications to address the barriers.

Results

- ❑ Percent of patients receiving all elements of CMS-Sep-1 Bundle increased from an average of 69%, prior to implementation in September 2018, to 94% post implementation in October 2018.
- ❑ Percent of patients receiving the bundle in the period from November 2018 through February 2019 was 81%, surpassing our goal of 75%.



Conclusion

- ❑ Implementation of standard work and the electronic bundle worklist increased the percentage of patients with severe sepsis or septic shock receiving all elements of the CMS-SEP-1 Bundle.
- ❑ The percent increase during the first month following implementation was higher than subsequent months, suggesting the need for refresher training.
- ❑ Currently, we are exploring potential correlations between the increase in bundle implementation and patient outcomes including morbidity and mortality.