

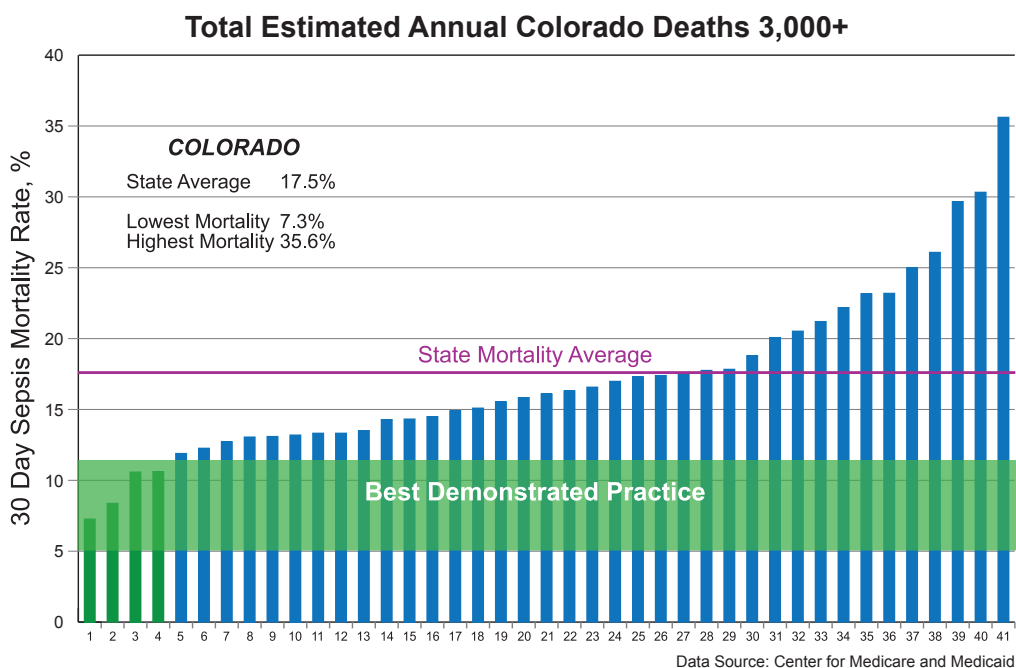
Colorado Sepsis Survival Study

The **Coalition for Sepsis Survival (C4SS)** is a Colorado-based, nonprofit organization whose mission is to significantly reduce sepsis mortality and morbidity by leading state initiatives to build sepsis awareness and best practice treatment. Current publicly available data reveals that sepsis mortality rates across 41 leading Colorado hospitals vary from as low as 7.3% to as high as 35.6%. A key objective for C4SS is to conduct a statewide hospital study to determine the factors behind this wide variance and to identify practical solutions that individual hospitals can cost-effectively implement to reduce sepsis mortality and morbidity. Additionally, data from the study will be used in the development of a sepsis algorithm to identify and define standardized clinical parameters so that all hospitals are evaluated equally with respect to their sepsis mortality rates.

Purpose: To assess the variability in the primary diagnosis, treatment, and coding practices for sepsis cases. The study will explore and systematically evaluate compliance with the Surviving Sepsis Campaign guidelines in hospitals across Colorado in an effort to identify best practices and transferable implementation components.

Methodology: A research team will conduct a public data review, as well as, facility specific data analysis of the patient Electronic Health Record (EHR), along with provider interviews and facility assessments, with the goal of gathering information, insights, and recommendations for achieving best practices.

Hypothesis: Facilities with the lowest sepsis mortality rates implemented the Surviving Sepsis Campaign guidelines in a systematic, comprehensive approach, incorporating training on diagnosis and response, culture analysis, change management tools, and extensive patient data analysis.



Study Details

The primary goals of the study include five main areas:

Emergency Room Data

- Explore the incidence of patients arriving to the Emergency Room with a diagnosis of sepsis compared to the incidence of patients developing sepsis within the hospital setting.
- Explore the incidence of patients transferred from other facilities with sepsis.

In-Hospital Data

- Conduct a retrospective analysis of compliance with the Surviving Sepsis Campaign guidelines and the impact on patient morbidity and mortality, including medications administered and antibiotics used.
- Assess the variability in coding practices for sepsis cases (DRG 870, 871, 872) to determine the accuracy of publicly reported sepsis mortality rates with the goal of developing consistent and standardized coding guidelines for sepsis.
- Evaluate readmission rates associated with sepsis.
- Determine the financial impact of sepsis including average length of stay (LOS), direct cost, contribution margin, and reimbursement.
- Determine cost associated with intensive care unit (ICU) versus general medical unit.

Clinical Fund of Knowledge Assessment (Optional)

- Perform staff knowledge assessments to delineate the need for sepsis education programs.
- Determine gaps in current quality improvement initiatives.

Cultural Assessment (Optional)

- Conduct cross-sectional surveys and interviews with institution staff and leadership to assess hospital culture.

Sepsis Rating Algorithm

- Identify and define clinical parameters to establish a standardized clinical definition of sepsis.
- Develop a sepsis rating algorithm so that all hospitals report data in a consistent manner.

Data Collection

The study will be a retrospective analysis examining up to two years of patient electronic health records and will be conducted in compliance with HIPAA regulations.

Resources Required

C4SS will fund the general cost of the study. In order to complete the data analysis, very limited resources will be required by your facility. C4SS will work with your Information Technology department to ensure the data is downloaded in a compatible CSV file, or other compatible format. Clinical support will be minimal.

Reports

An abstract report will be made available to all participating hospitals. Detailed reports with analysis specific to an individual hospital will be available for purchase.