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Sepsis Bundle Compliance Initiative

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Walden University

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Executive Summary: Clinical Practice Guideline

Sepsis Bundle Compliance Initiative

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Summary

This Doctor of Nursing Practice project focused on the development and evaluation of a clinical practice guideline (CPG) designed to improve compliance with the Centers for Medicare & Medicaid Services (CMS) SEP-1 sepsis bundle at a 300-bed Level III trauma center serving a rural population in West Virginia. Sepsis remains a leading cause of morbidity and mortality nationwide, and rural hospitals face additional challenges related to delayed presentation, limited resources, and workflow variability. Inconsistent adherence to evidence-based sepsis bundle elements have been associated with increased mortality risk, prolonged length of stay, and financial penalties (Evans et al., 2021).

The purpose of this guideline development and evaluation project was to address identified gaps in standardized sepsis management by developing an evidence-based CPG and evaluating its quality using the AGREE II instrument. The AGREE II, is based on a 1-7 score on the Likert Scale, with 1 representing strong disagreement and 7 representing strong agreement. The practice-focused question guiding this project asked whether a rigorously developed sepsis CPG would demonstrate sufficient quality, clarity, and applicability to support adoption in an acute care hospital setting. Findings from expert review supported strong methodological rigor and clinical relevance, indicating readiness for organizational adoption and future pilot implementation.

Background

Sepsis presents a persistent and complex challenge to acute care organizations, particularly in rural settings where patients often present with advanced disease severity and multiple comorbidities. Internal quality data at the practice site demonstrated variability in SEP-1 compliance related to documentation inconsistencies, delays in

antibiotic administration, and lack of standardized interdisciplinary workflows. National guidelines from the Surviving Sepsis Campaign and CMS emphasized (Evans et al., 2021) early recognition and timely bundle completion as critical factors in reducing mortality.

The evidence supporting standardized sepsis bundles is strong, with systematic reviews and international guidelines demonstrating improved outcomes when protocols are consistently followed. This project addressed a critical practice gap by developing a structured CPG to support nurses and providers in delivering timely, evidence-based sepsis care (Oh et al., 2022).

Clinical Practice Guideline Development

The sepsis CPG was developed using current peer-reviewed literature, national regulatory standards, and professional guidelines. An expert panel of seven members was convened, including bedside nurses, nurse leaders, a hospitalist physician, a clinical pharmacist, and a quality improvement specialist.

Panel members were selected based on clinical expertise, leadership roles, and familiarity with sepsis management and quality metrics. The guideline was evaluated using the AGREE II instrument, which assesses quality across six domains: scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability, and editorial independence. Panelists independently reviewed the guidelines and provided Likert-scale ratings and qualitative feedback (Seymour et al., 2017).

Results

AGREE II evaluation results demonstrated high overall scores across all six domains, indicating strong guidelines, quality and usability. The AGREE II Sepsis

Evaluation results are displayed below (Table I). The highest ratings were observed in the domains of scope and purpose and clarity of presentation, reflecting clear clinical objectives and well-defined recommendations. Applicability scores supported feasibility within the rural acute care setting, particularly due to alignment with existing electronic health record workflows and interdisciplinary practices. Stakeholder feedback emphasized improved clarity, reduced ambiguity in sepsis management, and enhanced nursing confidence in bundle execution. Limitations included evaluation at a single site and absence of outcome data, as implementation was beyond the scope of this project. Despite these limitations, reviewers noted that the guideline was transferable to similar acute care organizations (Rhee et al., 2019).

Table 1

Sepsis Evaluation Tool

AGREE II Domain	Mean Score (1–7)
Scope and Purpose	6.6
Stakeholder Involvement	6.2
Rigor of Development	6.4
Clarity of Presentation	6.8
Applicability	6.3
Editorial Independence	6.5

Note. Scores represent the mean Likert-scale ratings from expert panel members using the AGREE II instrument.

Conclusions

This guideline development and evaluation project demonstrated that a rigorously developed sepsis CPG can meet established quality standards and address key gaps in SEP-1 compliance within a rural acute care hospital. Adoption of this guideline has the potential to improve standardization of care, enhance nursing workflow efficiency, and support equitable sepsis management for a diverse patient population. Future recommendations include pilot implementation, monitoring of SEP-1 compliance metrics, and evaluation of patient outcomes following guideline adoption. Integration of the guideline into electronic health record decision-support systems is also recommended to promote sustainability. This project contributes to nursing practice advancement and positive social change by supporting timely, evidence-based care and reducing disparities in sepsis outcomes across rural communities.

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