

# SEPSIS CODE: IMPROVING OUTCOMES FOR PATIENTS WITH SEPSIS

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## Background and Importance

Sepsis is a potentially life-threatening condition triggered by an infection. Early identification and appropriate management in the initial hours after the development of sepsis are crucial.



Code Sepsis (CS) includes standardized Surviving-Sepsis-Campaign management bundles meant to guide early recognition and prompt goal-directed therapy, in order to improve clinical outcomes.

## Aim and Objectives



To assess the impact of Code Sepsis implementation on clinical outcomes and antibiotic therapy.

## Materials and Methods



**MAIN OUTCOME**  
In-Hospital Mortality Rate (IMR)

### SECONDARY OUTCOMES

- Median length of hospital-stay (LOS)
- Intensive Care Unit stay (ICU-LOS)
- Severity criteria: ICU-admission (%)
- Mean length of antibiotic therapy: overall, antipseudomonal-carbapenemes, anti-Gram-positive (daptomycin, vancomycin, linezolid)

Quantitative variables: **median and interquartile range (IQR)**  
Trend analysis: **lineal-regression**  
**Significance level: 0.05**

## Results

**N= 422 CS ALERT**  
Corresponding to **402 patients**

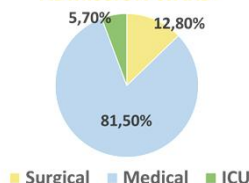
**Overall mortality rate was 20.6%**  
**Mortality rate was reduced in 53.8%**

### LENGHT OF STAY

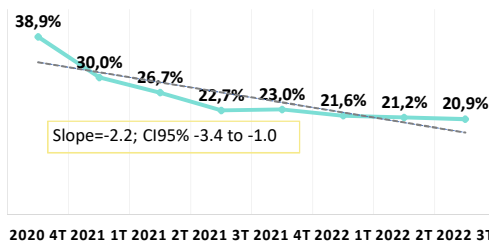
- Median LOS was 8 days (IQR=12); Negative trend (slope=-0.4; CI95% -0.7 to 1.02).
- Median ICU-LOS was 6 days (IQR=8.7); Decreasing trend (slope=-0.2; CI95% -0.6 to 0.2)
- ICU-admissions: 9% (slope=-0.2; CI95% -0.6 to 0.2)

- 61,6% males
- Median age 79 yrs (IQR=16)

### ADMISSION WARD



### IN-HOSPITAL MORTALITY RATE



### LENGHT OF ANTIBIOTIC THERAPY

- Overall antibiotics: 9.3 days; Negative trend (slope=-3.2; CI95% -0.9 to 0.2).
- Antipseudomonal-carbapenems: 4.2 days (slope=-2.2; CI95% -0.5 to 0.1)
- Anti-Gram-Positive: 5.4 days (slope=-0.1; CI95% -0.8 to 0.6)

## Conclusion and Relevance

- ✓ **The CS implementation was associated with a decrease mortality**, with an overall reduce by up to 50%.
- ✓ The downward trend in LOS and ICU-admissions suggests that an **early recognition of sepsis and optimized-treatment** are crucial in preventing complications.
- ✓ Daily patient surveillance and follow-up by a multidisciplinary team promoting antimicrobial de-escalation/discontinuation was associated with **shorter courses of antibiotics**, specially of broad-spectrum antibiotics, **without worsening clinical outcomes**.

