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## Predictive Analytical Model for Early Detection of Sepsis

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# **Predictive Analytical Model for Early Detection of Sepsis**

## ***Completed Research Paper***

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### **ABSTRACT**

This paper proposes the development of a machine-learning model for the early detection of sepsis. This model uses clinical parameters such as vital signs, laboratory values, demographics, and additional information to predict sepsis in patients. The model was trained and tested on data from a U.S. hospital and was found to be effective in detecting sepsis onset and mortality. The study findings suggest to use a random forest algorithm due to its superior performance in predicting sepsis; this can help healthcare workers quickly recognize high-risk patients and provide timely treatment, potentially improving patient outcomes.

### **Keywords**

Sepsis, early detection, machine learning, and healthcare.