

# ASHC 2023

## Title

### Bloodstream Infections in Adults with Sickle Cell Disease: Single-Center Study

## Authors

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## Introduction

Sickle cell disease results in the formation of sickled red blood cells. People with SCD are more susceptible to bloodstream infections (BSI). Several factors contribute to this heightened risk, including the auto-splenectomy. Previous studies have mostly focused on BSI in pediatric populations, this research aims to fill the gap in knowledge concerning bloodstream infections in adult sickle cell disease patients.

### Objectives:

1. To measure the **rate of bloodstream infections** among adult sickle cell patients.
2. To determine **the source of bloodstream infections** among adult sickle cell patients.
3. To identify the **causative organisms of bloodstream infections** among adult sickle cell patients.

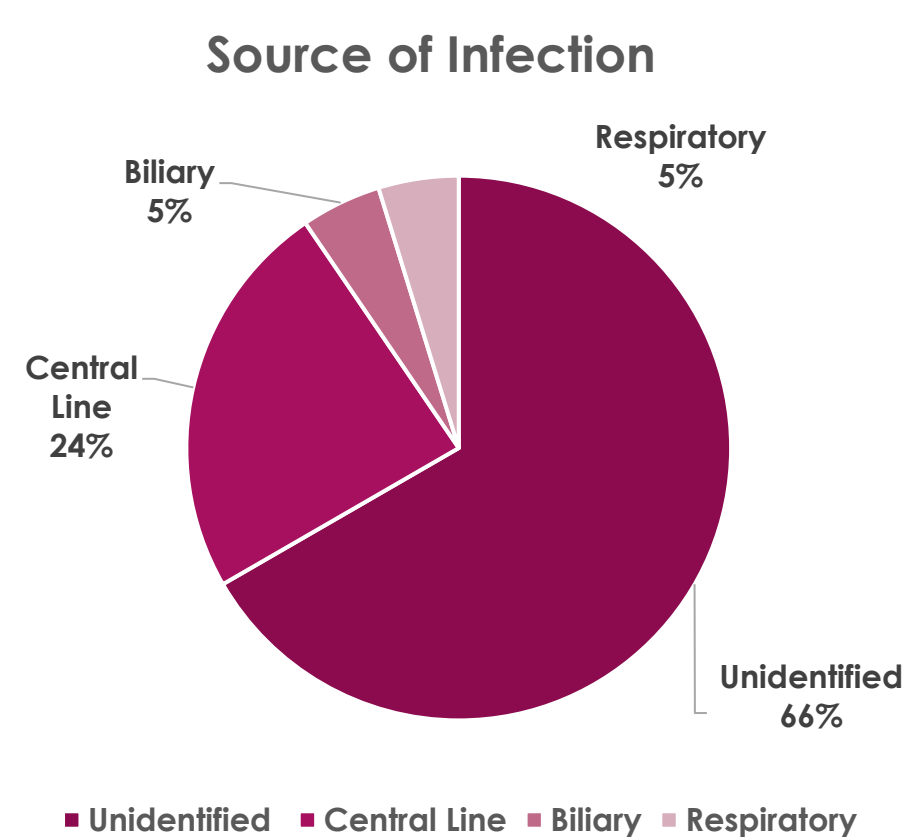
## Methodology

A retrospective cohort study was conducted in KAMC-J. charts of patients known to have SCD between January 2016 and December 2020 were reviewed. A non-probability consecutive sampling method was used. Sample size was 215 patients.

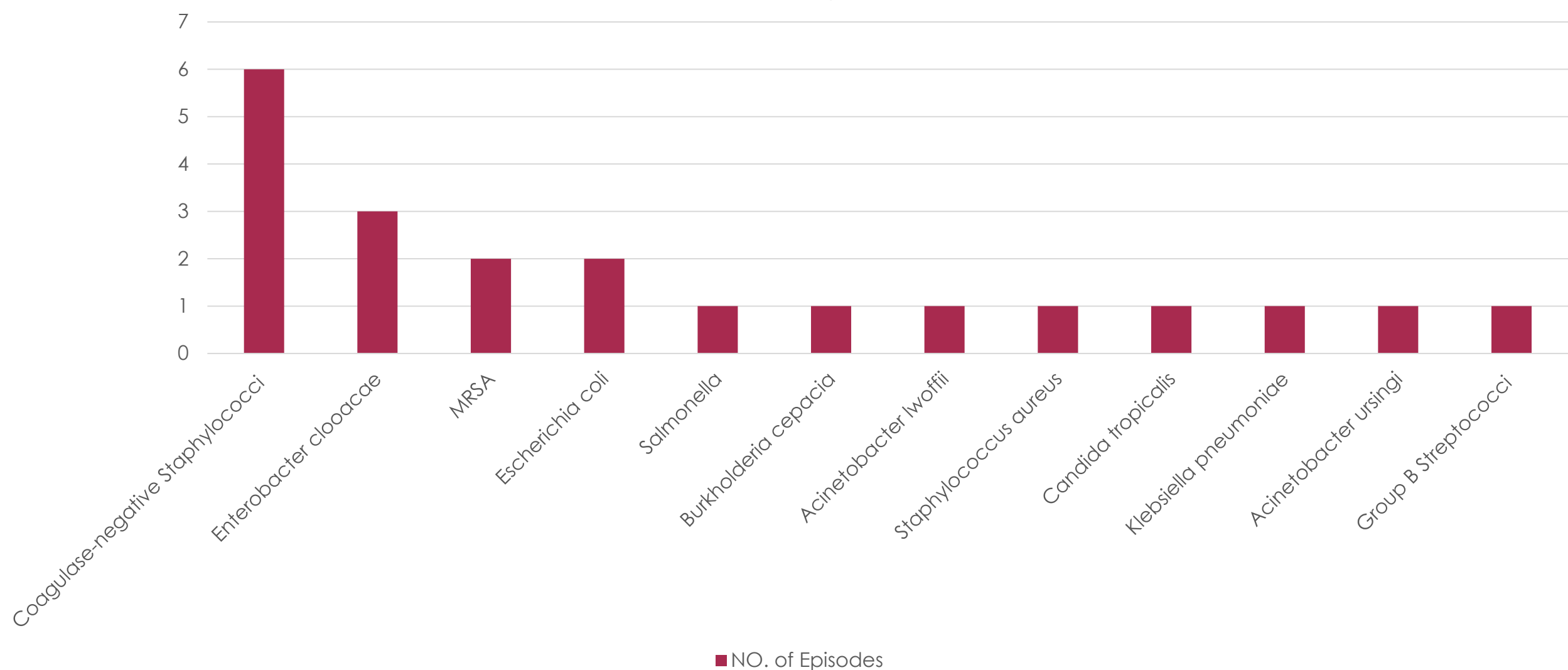
## Results

Of 215 SCD patients, 11 (5.2%) had Blood Stream Infections:

Clinical features in BSI	BSI Ruled out (N = 204)	N % of cases (N = 11)
SCD genotype SS	148 (73%)	11 (100%)
Pneumococcal vaccine	134 (66%)	5 (45%)
Meningococcal vaccine	130 (64%)	4 (36%)
H influenza and HBV vaccine	17(8%)	0 (0%)
Hydroxyurea	177 (89%)	10 (90%)
Chronic blood transfusion (>2)	84 (41%)	6 (55%)
Iron overload (MRI)	37 (18%)	4 (36%)
Asplenia	97 (45%)	4 (1.86%)



### causative organisms



## Conclusion

The results suggest that vaccination status, genotype, iron overload, blood transfusions play significant role in the development of BSI. The findings highlight the importance of vigilant monitoring, infection prevention strategies, and early intervention to improve outcomes and reduce the burden of BSI in this vulnerable patient population.

## Recommendation

By addressing the identified risk factors and implementing targeted interventions, healthcare professionals can work towards reducing the incidence and impact of bloodstream infections, ultimately improving the quality of life for adults living with this condition.