Savings in Sepsis

The Implementation and Impact of the Q-linea ASTar System within Mersey and West Lancashire NHS Teaching Hospitals Trust

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Background

Sepsis is a life-threatening disease associated with prolonged hospital stays.

Approximately 36-40% of sepsis cases in the UK are caused by Gram-negative bacteria [1], with 16,868 cases in the financial year of 2023-2024 [2].

Automated RAST methods can reduce laboratory turnaround times, which may improve patient pathways.

STANDARD OF CARE:
VITEK2
MIC STRIPS
MBD

THE Q-LINEA ASTAR SYSTEM:
BC G- KIT

Aims

1. Reflect on validation data and how performance of the ASTar compared to the previous SoC.
2. Assess differences in turnaround times between the ASTar and the previous SoC.
3. Perform a cost-benefit analysis to ascertain the potential cost savings the NHS could achieve due to the impact of reduced turnaround times on patient pathways.

Results

>95%

Mean accuracy, sensitivity and specificity of validation data.

1.73

Reduction in mean turnaround time in days.

5.51×10^{-7}

P-value of reduction in turnaround time (hours).

~£2mil

Mean estimated annual cost saving per trust.

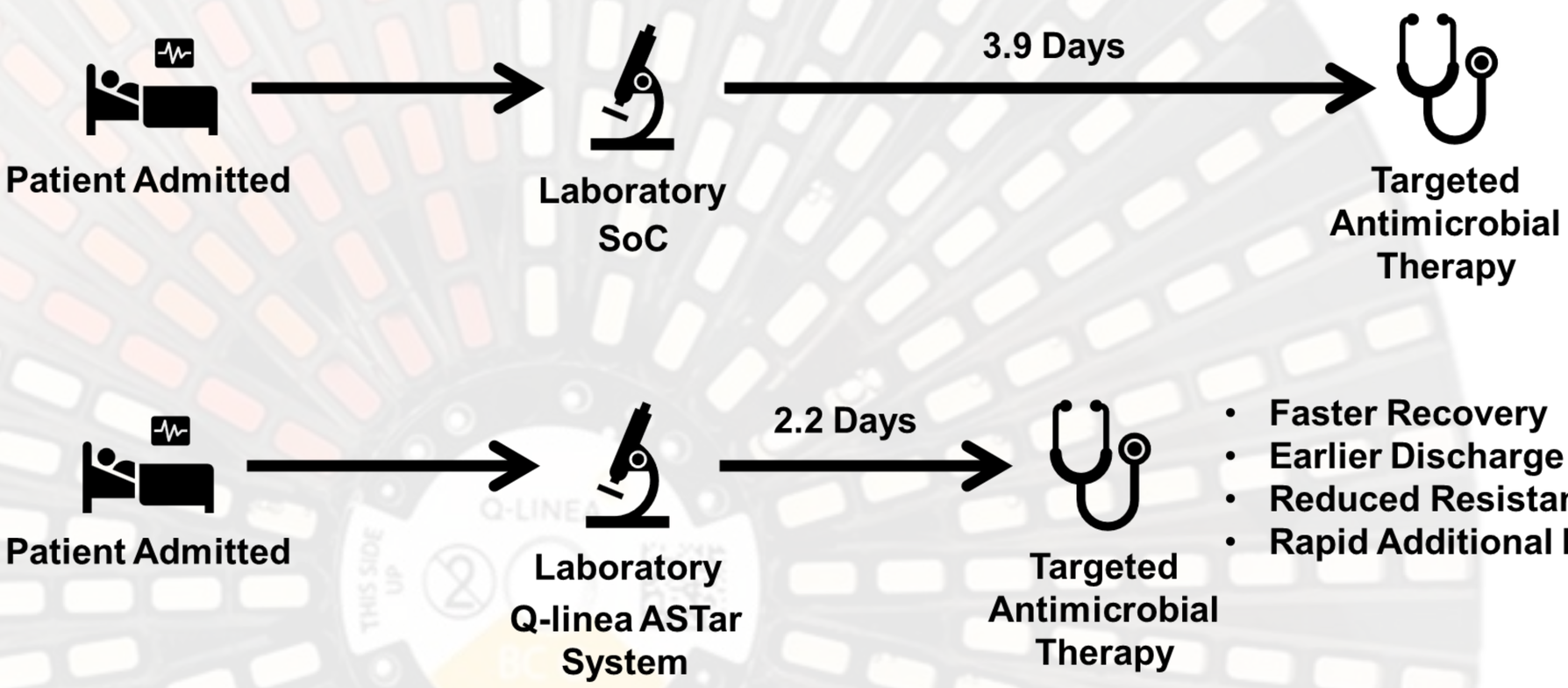
Limitations

MICROBIOLOGY RESPONSE

WARD RESPONSE

PHARMACY FULFILMENT

Potential Improvements to Patient Pathways due to Reduced Turnaround Time



References: [1] Wilson J, Elgohari S, Livermore DM, Cookson B, Johnson A, Lamagni T, et al. Trends among pathogens reported as causing bacteraemia in England, 2004–2008. Clinical Microbiology and Infection. 2011 Mar;17(3):451–8.
[2] Hospital Admitted Patient Care Activity, 2023-24: Summary Tabes [Internet]. NHS England. 2024 [cited 2025 Feb 16]. Available from: https://files.digital.nhs.uk/09/D3BF1B/hosp-epis-stat-admi-summary-tabs-2023-24.xlsx