Intensive Care Society SOA25
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Research priorities for sepsis

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On behalf of

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Why sepsis?

- Global healthcare problem
  - UK mortality ≈ 45,000 annually; NHS costs ≈ £1.1B, wider society ≈ £10B[1]
- Long-term consequences; prognosis = multi-domain impairment[2, 3]
- Hospital readmission is common; increased risk long-term mortality[4]
- Many treatment uncertainties not addressed by existing research[5]
  - Research priorities incongruent between investigators, patients and carers, and clinicians; no systematic and inclusive dialogue
  - JLA priority setting partnerships (PSP) foster co-production between stakeholder groups to generate consensus on a shared research agenda

[1]Hex et al, 2017, http://allcatsrgrey.org.uk/wp/download/health_economics/YHEC-Sepsis-Report-17.02.17-FINAL.pdf, [2]Prescott et al, JAMA, 2018;319(1):62-75, [3]van der Slikke, eBioMedicine. 2020;61, [4]Shankar-Hari et al, ICM, 2020;46(4):619-636, [5]Crowe et al, Research Involvement and Engagement. 2015;1(1):2.

Aim

- To understand the priorities of survivors of sepsis, carers, and clinicians, via conducting a JLA PSP in sepsis research to identify the key treatment research uncertainties for the sepsis community

Summary of process

- Followed recognised UK JLA methodology[1]
- Readiness questionnaire approved by JLA
- Process overseen by independent JLA chair
- Funded by Sepsis Research FEAT (https://sepsisresearch.org.uk/)
- Formally published[2, 3]

[1]The James Lind Alliance guidebook, v10, 2021, Available at file:///C:/Users/3054772/Downloads/jla-gui
[2] McPeake et al, 2024, LRM, 12, 11, E68-69
[3] McPeake et al, 2025, Anaesthesia, https://doi.org/10.1111/anae.16634

Stage 1 – Initiation

- Convening of Steering Group
  - Diverse healthcare professional representation as well as patients and family members with lived experience
- Confirmation of PSP scope
  - Include all aspects of the management of sepsis in adults, focusing on susceptibility, diagnosis, diagnostic engineered tools, treatment (any therapy in hospital and longer-term), and outcomes (physical, psychological, social, and societal) including assessing impact and improving outcomes
- Full protocol published on JLA website[1]

[1] https://www.jla.nihr.ac.uk/priority-setting-partnerships/sepsis/sepsis.htm

Stage 2 – Identifying clinical uncertainties

- Consultation process via electronic survey
- Sept 2023 (World Sepsis Day) – Jan 2024
- Participants asked for 3 uncertainties or unanswered questions
- Optional demographic data
- Survey promotion and dissemination via multiple avenues
  - Clinical and patient networks
  - Professional organisations and Colleges
  - Social media, national broadcasting, Sepsis Research FEAT website
  - Centre for Research Equity (Oxford, UK) to facilitate promotion to under-represented communities

Stage 3 – Analysis and verification of uncertainties

- All submitted questions assigned unique code
- Reviewed by an independent information specialist and thematically grouped into categories
- Verified for representation by sub-group of the Steering Group
- Each summary question searched against existing literature to confirm novelty
- Summary questions ratified by Steering Group for interim prioritisation

Stage 4 – Interim prioritisation

- Second survey distributed Mar – Jun 2024 via same dissemination routes
- Randomly presented list of summary questions
- Participants asked for the top 10 questions they felt most important
- Resulting highly ranked 25 questions taken forwards for final prioritisation
- Source of each 25 questions reflected balance of clinicians and those with lived experience

Stage 5 – Final prioritisation

- Final face-to-face prioritisation workshop
- Attendees divided into 3 equally mixed groups and structured discussion facilitated by JLA to ensure all participants able to voice opinion
- Groups asked to rank the 25 questions
- Rankings across all 3 groups combined, groups mixed, and questions ranked a second time to produce a final rank order
- Collective group discussion and confirmation of final ranking with a focus on the top 10

Results

Initial survey

- 718 respondents
  - 447 people with lived experience
  - 218 clinicians
  - 53 multiple/other roles)
- 950 questions submitted → 53 summary questions

Interim prioritisation survey

- 941 respondents
  - 429 people with lived experience
  - 431 clinicians
  - 77 multiple/other roles

Workshop

- 27 participants representative of geographical diversity, ethnicity, age, role

Top 10 research priorities

1	How can the diagnosis of sepsis become faster, more accurate and reliable?
2	What are the long-term effects on the body from sepsis (sometimes called post-sepsis syndrome)? How are these long-term effects best treated and managed?
3	What is the role of treatments other than antibiotics in the care and management of sepsis?
4	Can diagnostic tests be developed for sepsis that can be used wherever the person is receiving care (e.g. in a GP surgery, hospital, ambulance or at home)?
5	Why and how do some people with sepsis become seriously ill very quickly?
6	Would specialist sepsis services improve outcomes for people with sepsis during hospital treatment and for follow-up care?
7	Are there ways to tailor treatment of sepsis to the individual (e.g. based on blood markers or other indicators)?
8	How does an infection lead to sepsis?
9	Would treatment before admission to hospital (e.g. provided by GPs or ambulance crews) improve outcomes for people with sepsis?
10	What are the safest and most effective ways to treat sepsis using antibiotics?

Take-away messages

- Co-produced Sepsis JLA Top 10 priorities for future research
- Provide a scaffold to inform funding decisions
- Top-ranked priority consistent feature through stages
  - ***How can the diagnosis of sepsis become faster, more accurate, and reliable?***
- Top 10 priorities reflect breadth of sepsis trajectory experience
- Mandate to now align future investigation on what is important to survivors, families, and professionals in the UK

SEPSIS RESEARCH FEAT

James Lind Alliance
Priority Setting Partnerships

Shaping the future of sepsis research

The sepsis priority setting partnership: results for future transformative research

Contents

"I was diagnosed with sepsis when I was only 16. It's very important to me that we carry out more research around sepsis to understand who gets sepsis and why. The top 10 list is a great way to focus research into the areas that are most important to the patients that have had sepsis, the carers that do an amazing job looking after family and loved ones suffering with the after effects of sepsis and also the healthcare professionals who do their best to minimise the impact of sepsis on their patients."

Walter Hall, patient, Bristol

Foreword

In the UK, great strides have been made in sepsis awareness through government initiatives and NHS training. This has improved survival rates, yet treatments for sepsis largely remain unchanged. The complexity of sepsis, affecting individuals differently, stresses the urgent need for research in genetics, diagnostics and care to save lives and help survivors live better lives.

The sepsis priority setting partnership, funded by Sepsis Research FEAT with input from sepsis patients, carers, family members and healthcare experts, scrutinised 950 sepsis-related research questions, culminating in the identification of 10 unanswered sepsis research priorities.

This report advocates for increased investment in sepsis research from funders, healthcare decision-makers and researchers to fill critical knowledge gaps and mitigate the devastating effects of sepsis. We encourage those affected by sepsis and medical professionals to engage with and support these research priorities. The findings urge those who provide funding and make decisions within the healthcare system to allocate more resources to sepsis research, improving treatment and care while reducing its burden on healthcare systems and society. **This will ultimately save lives.**

Colin Graham
Chief Operating Officer

Professor Joanne McPeake
University of Cambridge

https://sepsisresearch.org.uk/research-priorities/