

# ProMISE (Protocolised Management In Sepsis)

## Background

In 2001, Rivers *et al* reported the results from a randomised controlled trial in a single US hospital. This trial compared six hours of early, goal-directed, protocolised resuscitation with usual resuscitation in patients presenting at the emergency department with emerging septic shock. Protocolised resuscitation significantly reduced hospital mortality (from 46.5% to 30.5%) and shortened hospital length of stay for survivors.

## Is protocolised resuscitation generalisable to NHS practice?

In 2006, ICNARC reported an increasing incidence of severe sepsis in UK adult critical care units, rising from 50 to 70 cases per 100,000 population per year over the last decade. Patients with emerging severe sepsis and septic shock presenting in the Emergency Department (ED) are an important subgroup of these patients, 21% of all severe sepsis patients are admitted to the critical care unit via the ED. In-hospital mortality for these patients is 35%.

So, should WE be doing early, goal-directed, protocolised resuscitation?

- There's a biological rationale: hypoperfusion fuels inflammation
- It could be an important life-saving strategy
- It is much talked about but not routinely practiced

To answer this question, we need an NHS-based, multi-centre trial.

ProMISE is complemented by two similar trials internationally:

- **ProCESS**  
**Protocolized Care for Early Septic Shock**  
CRISMA, University of Pittsburgh  
Chief Investigator - Derek Angus  
1950 patients/40 sites  
Opened March 2008
- **ARISE**  
**Australasian Resuscitation In Sepsis Evaluation**  
ANZICS Clinical Trials Group  
Chief Investigator - Rinaldo Bellomo  
1600 patients/50 sites  
Opened October 2008

An individual patient data meta-analysis will be performed across the three trials.

## What is ProMISE?

A multi-centre, randomised controlled trial of the clinical and cost-effectiveness of early, goal-directed, protocolised resuscitation for emerging septic shock

An important, collaborative, NIHR-funded research effort between emergency, acute and critical care medicine

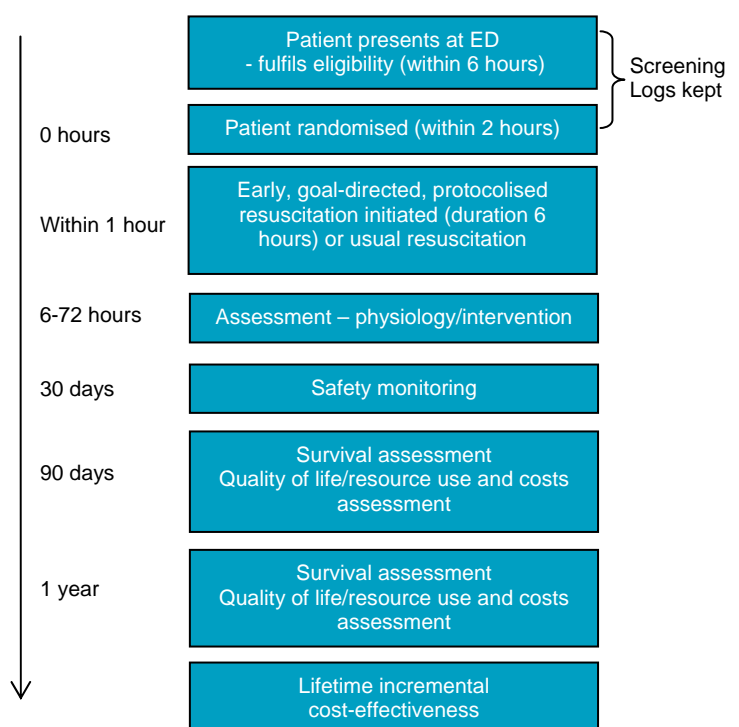
## Primary objectives

- To estimate the effect of early, goal-directed, protocolised resuscitation compared with usual resuscitation on mortality at 90-days.
- To compare the incremental cost-effectiveness, at one year of early, goal-directed, protocolised resuscitation versus usual resuscitation.

## Sites/Patients

- **48 hospitals**  
*(with local champions in place for emergency, acute and critical care medicine)*
- **1260 patients**  
*(630 per arm - equating to 14 patients, per hospital, per year)*

## Timeline



## Screening/Eligibility

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Eligibility needs to be confirmed as soon as possible. The following four inclusion criteria must be met, at any time, in any order, and just once and within six hours from presentation at the emergency department:

- suspected or confirmed infection;
- two or more SIRS criteria;
- evidence of refractory hypotension or hypoperfusion;
- IV antimicrobials commenced.

## Randomisation

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As soon as eligibility criteria are met, consent and randomisation should be completed within two hours.

Following randomisation, early, goal-directed, protocolised resuscitation commence as soon as possible or usual resuscitation continues as directed by the treating clinician(s).

## Funding

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### Central

- NIHR Health Technology Assessment Programme (07/37/47)

### Local

- Edwards Lifesciences equipment and training support
- NIHR Portfolio Trial
  - Portfolio Number: 9820
  - CSP Number: 39113
- NHS Support Costs negotiated equivalent to: 0.9 WTE Research Nurse (Band 8a)

## For further information

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[www.icnarc.org](http://www.icnarc.org)

## Sponsor

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ICNARC

## Trial Management

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ICNARC Clinical Trials Unit

## Team

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