

Survey of current management of patients with severe sepsis/septic shock in the NHS

To provide a baseline for a number of research studies at ICNARC, we would like to gain an understanding of the current management of patients with severe sepsis/septic shock in the NHS. As a Clinical Director of an adult, general critical care unit, we need your help (and just 10 minutes of your time...!).

This survey has five parts:

- Emergency Department (ED) management - how you perceive patients with severe sepsis/septic shock are managed in your ED prior to admission to your critical care unit;
- Critical care unit management - how patients with severe sepsis/septic shock are managed following admission to your critical care unit;
- Adjunctive therapies - other possible adjunctive therapies used in the management of patients with severe sepsis/septic shock in your critical care unit;
- More generally in your critical care unit - other therapies used in the management of patients in your critical care unit; and
- Care bundles - care bundles used in the management of patients with severe sepsis/septic shock in your ED/critical care unit.

When answering the questions about critical care, please try to describe actual, rather than ideal, practice. Estimated frequencies are fine.

Big thanks...!

About you...

Name

Job title

Hospital

Email

*** Perceived Emergency Department management

Are the following done in the ED?

	Yes/No	Approx. % patients
Blood cultures		
Imaging studies	<input type="checkbox"/>	<input type="checkbox"/>
IV antibiotics within one hour		

What is the preferred choice of intravenous fluid for volume resuscitation in the ED?

	Approx. % patients
Crystalloid	
Colloid	<input type="text"/>
Other	
If other, please specify	<input type="text"/>

Does your ED use a resuscitation protocol?

Yes No

If yes:

- Which parameters are used (please indicate Yes/No)?
- In what order (use same rank for concurrent interventions)?
- To what target(s) (please state)?

	Parameter used (Yes/No)	Rank order	Target(s)
Urine output (ml/kg/hr)			
MAP (mmHg)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lactate (mmol/l)			
CVP (non-ventilated) (mmHg)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CVP (ventilated) (mmHg)			
Intermittent ScVO2 (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuous ScVO2 (%)			
Mixed venous oxygen saturation (with PAC) (%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CO			
Haemoglobin (known cardiac disease) (g/dl)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haemoglobin (without cardiac disease) (g/dl)			
Other (please state)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If yes, ED resuscitation protocol compliance:

%

Expected compliance

Actual compliance

Was actual % - (E)stimated or (A)udited?

What is the preferred choice of "first line" vasopressor in the ED?

- Dopamine
- Norepinephrine
- Epinephrine
- Vasopressin
- Other, please state:

What is the preferred choice of "first line" inotrope in the ED?

- Dobutamine
- Epinephrine
- Milrinone
- Levosimendan
- Other, please state:

**Contact email address for the Clinical Lead in your ED
(we will contact them also to provide answers to the above questions)**

*** Critical Care Unit management

How patients with severe sepsis/septic shock are managed following admission to your critical care unit.

Are the following done in your critical care unit (if not previously done in ED)?

	Yes/No	Approx. % patients
Blood cultures		
Imaging studies	<input type="checkbox"/>	<input type="checkbox"/>
IV antibiotics within one hour		

What is your preferred choice of intravenous fluid for volume resuscitation in your critical care unit?

	Approx. % patients
Crystalloid	
Colloid	<input type="checkbox"/>
Other	
If other, please specify	<input type="checkbox"/>

Does your critical care unit use a resuscitation protocol?

Yes No

If yes:

- Which parameters are used (please indicate Yes/No)?
- In what order (use same rank for concurrent interventions)?
- To what target(s) (please state)?

	Parameter used (Yes/No)	Rank order	Target(s)
Urine output (ml/kg/hr)			
MAP (mmHg)			
Lactate (mmol/l)			
CVP (non-ventilated) (mmHg)			
CVP (ventilated) (mmHg)			
Intermittent ScVO2 (%)			
Continuous ScVO2 (%)			
Mixed venous oxygen saturation (with PAC) (%)			
CO			
Haemoglobin (known cardiac disease) (gm/dl)			
Haemoglobin (without cardiac disease) (gm/dl)			
Other (if yes, please state)			

If yes, critical care resuscitation protocol compliance:

%

Expected compliance

Actual compliance

Was actual % - (E)stimated or (A)udited?

If your critical care unit uses a resuscitation protocol, then does it commence in your ED and transition in to your critical care unit?

Yes No Don't use one

What is your preferred choice of "first line" vasopressor in your critical care unit?

- Dopamine
- Norepinephrine
- Epinephrine
- Vasopressin
- Other, please state:

What is your preferred choice of "first line" inotrope in your critical care unit?

- Dobutamine
- Epinephrine
- Milrinone
- Levosimendan
- Other, please state:

Reviewing your overall management of severe sepsis/septic shock in your ED/critical care unit, what would be the usual order for doing the following (use same rank for concurrent interventions, rank zero for not done)?

Order

Blood culture(s)

IV fluids

Antibiotics

EGDT

Source control

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Adjunctive therapies

Other possible adjunctive therapies used in the management of patients with severe sepsis/septic shock in your critical care unit

For advanced management in your critical care unit, do you use the following?

Yes/No % patients Estimated Audited

Steroids for persistent hypotension in septic shock

Activated protein C				

Glucose control

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For glucose control in your critical care unit, what target do you aim for?

- 4-6 mMol/L
- 6-8 mMol/L
- 8-10 mMol/L
- Other, please specify:

For mechanically ventilated patients, in normal circumstances, which of the following options do you use (accepting the fact that, in exceptional circumstances, these options cannot be adhered to)?

	Yes/No	Approx. % patients
A tidal volume of 6 ml/kg ideal body weight		
An upper limit plateau pressure target of 30 cm H2O	<input type="checkbox"/>	<input type="checkbox"/>
Permissive hypercapnia (allow PaCO2 to increase above normal)		
Head of the bed elevation to 45°	<input type="checkbox"/>	<input type="checkbox"/>
Prone positioning		
High frequency oscillation	<input type="checkbox"/>	<input type="checkbox"/>
Inhaled nitric oxide		
Extracorporeal Membrane Oxygenation	<input type="checkbox"/>	<input type="checkbox"/>
Steroids		
A weaning protocol	<input type="checkbox"/>	<input type="checkbox"/>

Other (please state)

[Redacted]

For advanced management in your critical care unit, do you use the following?

	Yes/No	Approx. % patients	Clinical situation
TPN			
[Redacted]			
Immunonutrition			
[Redacted]			
SDD			
[Redacted]			
IVIg			
[Redacted]			
Plasmapheresis			
[Redacted]			
High volume haemofiltration			
[Redacted]			
Erythropoietin			
[Redacted]			
Growth hormone			
[Redacted]			
Beta blockers			
[Redacted]			
Statins			
[Redacted]			
Antithrombin III			
[Redacted]			
N acetyl cysteine			
[Redacted]			
Antioxidants (e.g. Selenium)			
[Redacted]			

Immunomodulatory drugs (e.g.
Pentoxifylline, Ketoconazole, etc.)

More generally, in your critical care unit

In your critical care unit, do you use the following?

	Yes	No
A sedation protocol	<input type="checkbox"/>	<input type="checkbox"/>
Intermittent bolus sedation	<input type="checkbox"/>	<input type="checkbox"/>
Continuous infusion sedation	<input type="checkbox"/>	<input type="checkbox"/>
Sedation scores	<input type="checkbox"/>	<input type="checkbox"/>
Daily sedation holds	<input type="checkbox"/>	<input type="checkbox"/>
DVT prophylaxis	<input type="checkbox"/>	<input type="checkbox"/>
Stress ulcer prophylaxis	<input type="checkbox"/>	<input type="checkbox"/>

Care bundles

Care bundles used in the management of patients with severe sepsis/septic shock in your ED/critical care unit

In your critical care unit, do you use the following?

Yes/No Compliance % Estimated Audited

Surviving Sepsis Campaign
Resuscitation Bundle

Your own resuscitation bundle

Surviving Sepsis Campaign
Management Bundle

Your own management bundle

Survive Sepsis UK Sepsis Six

If you do not use care bundles in your critical care unit, please explain why?