


**CQ18-1 (GRADE)**

**P: Pediatric patients with septic shock/ severe sepsis or organ injury due to infection**

**I: Use of clinical algorithms for initial resuscitation**

**C: Not use of clinical algorithms for initial resuscitation**

**O: Mortality, resolution of shock**

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Treatment	Placebo	Relative (95% CI)	Absolute (95% CI)		
<b>Mortality</b>												
1	observational study	very serious	not serious	not serious	serious	Residual confounding indicated pseudo effect.	2/27 (7.4%)	24/64 (37.5%)	OR 0.13 (0.03 to 0.61)	303 fewer per 1,000 (from 357 fewer to 107 fewer)	 Low	CRITICAL

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	Trivial	Small	Moderate	<b>Large</b>		Varies	Don't know
UNDESIRABLE EFFECTS	Large	Moderate	Small	Trivial		Varies	<b>Don't know</b>
CERTAINTY OF EVIDENCE	<b>Very low</b>	Low	Moderate	High			No included studies
VALUES	Important uncertainty or variability	Possibly important uncertainty or variability	<b>Probably no important uncertainty or variability</b>	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	Probably favors the comparison	Does not favor either the intervention or the comparison	<b>Probably favors the intervention</b>	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	Probably no	<b>Probably yes</b>	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	<b>Probably yes</b>	Yes		Varies	Don't know

**CQ18-7 (GRADE and unGRADE)**

**P: Pediatric patients with septic shock**

**I: Dopamine**

**C: Adrenaline/ Noradrenaline**

**O: Mortality, resolution of shock, length of ICU stay, serious adverse event**

**Dopamine vs Adrenaline**

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Treatment	Placebo	Relative (95% CI)	Absolute (95% CI)		
<b>Mortality (28 day)</b>												
2	randomized study	not serious	not serious	not serious	very serious	none	31/94 (33.0%)	18/86 (20.9%)	<b>RR 1.65</b> (0.71 to 3.82)	<b>136 more per 1,000</b> (from 61 fewer to 590 more)	⊕⊕○○ Low	CRITICAL
<b>Resolution of shock within 1 hour</b>												
1	randomized study	not serious	not serious	not serious	serious	none	4/31 (12.9%)	12/29 (41.4%)	<b>RR 0.31</b> (0.11 to 0.86)	<b>286 fewer per 1,000</b> (from 368 fewer to 58 fewer)	⊕⊕⊕○ Moderate	CRITICAL
<b>Vasoactive drug free-days</b>												
1	randomized study	not serious	not serious	not serious	very serious	none	63	57	-	<b>MD 4.80 day lower</b> (from 8.44 lower to 1.16 lower)	⊕⊕○○ Low	CRITICAL
<b>Length of ICU stay</b>												
1	randomized study	not serious	not serious	not serious	serious	none	31	29	-	<b>MD 1.00 day lower</b> (from 3.95 lower to 1.95 lower)	⊕⊕⊕○ Moderate	CRITICAL
<b>Serious adverse event</b>												
2	randomized study	not serious	not serious	not serious	very serious	none	25/94 (26.6%)	10/86 (11.6%)	<b>RR 2.08</b> (0.57 to 7.57)	<b>126 more per 1,000</b> (from 50 fewer to 764 more)	⊕⊕○○ Low	CRITICAL

### Dopamine vs Adrenaline (GRADE)

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	<b>Trivial</b>	Small	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	Large	<b>Moderate</b>	Small	Trivial		Varies	Don't know
CERTAINTY OF EVIDENCE	<b>Very low</b>	Low	Moderate	High			No included studies
VALUES	Important uncertainty or variability	Possibly important uncertainty or variability	<b>Probably no important uncertainty or variability</b>	No important uncertainty or variability			
BALANCE OF EFFECTS	<b>Favors the comparison</b>	Probably favors the comparison	Does not favor either the intervention or the comparison	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	Probably no	<b>Probably yes</b>	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know

### Dopamine vs Noradrenaline (unGRADE)

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	<b>Trivial</b>	Small	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	Large	Moderate	<b>Small</b>	Trivial		Varies	Don't know
CERTAINTY OF EVIDENCE	Very low	Low	Moderate	High			<b>No included studies</b>
VALUES	Important uncertainty or variability	Possibly important uncertainty or variability	<b>Probably no important uncertainty or variability</b>	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	<b>Probably favors the comparison</b>	Does not favor either the intervention or the comparison	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	Probably no	<b>Probably yes</b>	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know

**CQ18-8 (GRADE)**

**P: Pediatric patients with septic shock/ vasodilation shock**

**I: Vasopressin**

**C: Noradrenaline or placebo**

**O: Mortality (hospital), Duration of resolution of shock, length of ICU stay, serious adverse events**

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Treatment	Placebo	Relative (95% CI)	Absolute (95% CI)		
<b>Mortality</b>												
2	randomised trials	serious	not serious	serious	very serious	none	30/63 (47.6%)	25/60 (41.7%)	RR 1.17 (0.60 to 2.26)	60 more per 1,000 (from 130 fewer to 250 more)	⊕○○○ Very low	CRITICAL
<b>Duration of resolution of shock</b>												
1	randomised trials	serious	not serious	serious	very serious	none	33	32	-	MD 2.60 h higher (from 49.95 lower to 55.15 higher)	⊕○○○ Very low	CRITICAL
<b>Length of ICU stay</b>												
2	randomised trials	serious	not serious	serious	very serious	none	63	60	-	MD 3.64 day lower (from 9.82 lower to 2.53 higher)	⊕○○○ Very low	CRITICAL
<b>Serious adverse events</b>												
2	randomised trials	serious	not serious	serious	very serious	none	8/63 (12.7%)	5/60 (8.3%)	RR 1.52 (0.53 to 4.36)	40 more per 1,000 (from 60 fewer to 140 more)	⊕○○○ Very low	CRITICAL

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	Trivial	<b>Small</b>	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	Large	<b>Moderate</b>	Small	Trivial		Varies	Don't know
CERTAINTY OF EVIDENCE	<b>Very low</b>	Low	Moderate	High			No included studies
VALUES	Important uncertainty or variability	Possibly important uncertainty or variability	<b>Probably no important uncertainty or variability</b>	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	<b>Probably favors the comparison</b>	Does not favor either the intervention or the comparison	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	Probably no	<b>Probably yes</b>	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	<b>Probably yes</b>	Yes		Varies	Don't know

**CQ18-9 (GRADE)**

**P: Pediatric patients with septic shock (initial fluid resuscitation and catecholamines did not archive resolution of shock)**

**I: Steroid**

**C: Not use of steroid**

**O: Mortality (ICU), length of hospital stay, Duration of resolution of shock, length of mechanical ventilation, complication**

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Treatment	Placebo	Relative (95% CI)	Absolute (95% CI)		
<b>Mortality</b>												
3	randomised trials	serious	not serious	not serious	very serious	none	22/74 (29.7%)	27/81 (33.3%)	<b>RR 0.88</b> (0.50 to 1.39)	<b>40 fewer per 1,000</b> (from 167 fewer to 130 more)	⊕○○○ Very low	CRITICAL
<b>Length of hospital stay</b>												
2	randomised trials	serious	not serious	not serious	not serious	none	El-Nawawy 2017: 11.4 ± 8.2 vs 8.2 ± 5.3 days Menon 2017: 10.7 [5.4, 25.9] vs 9.6 [7.1, 20.9] days				⊕⊕⊕○ Moderate	CRITICAL
<b>Duration of resolution of shock</b>												
2	randomised trials	serious	not serious	serious	serious	none	El-Nawawy 2017: 60.0 ± 21.6 vs 139.2 ± 43.2 hours Menon 2017: 49.5 [26, 144] vs 70 [12, 269] hours				⊕○○○ Very low	CRITICAL
<b>Secondary infection</b>												
2	randomised trials	serious	serious	not serious	very serious	none	7/42 (16.7%)	6/45 (13.3%)	<b>RR 1.31</b> (0.45 to 3.13)	<b>41 more per 1,000</b> (from 73 fewer to 284 more)	⊕○○○ Very low	CRITICAL

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	Trivial	<b>Small</b>	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	Large	Moderate	<b>Small</b>	Trivial		Varies	Don't know
CERTAINTY OF EVIDENCE	<b>Very low</b>	Low	Moderate	High			No included studies
VALUES	Important uncertainty or variability	Possibly important uncertainty or variability	<b>Probably no important uncertainty or variability</b>	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	Probably favors the comparison	<b>Does not favor either the intervention or the comparison</b>	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	Probably no	<b>Probably yes</b>	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know

**CQ18-10 (GRADE)**

**P: Hemodynamically stable pediatric critically ill patients**

**I: Lower red blood cell transfusion threshold**

**C: Higher red blood cell transfusion threshold**

**O: Mortality (hospital), length of ICU stay, length of hospital stay, length of mechanical ventilation, complication due to transfusion**

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Treatment	Placebo	Relative (95% CI)	Absolute (95% CI)		
<b>Mortality</b>												
2	randomised trials	not serious	not serious	serious	very serious	none	17/391 (4.3%)	21/406 (5.2%)	<b>RR 0.89</b> (0.46 to 1.74)	<b>6 fewer per 1,000</b> (from 28 fewer to 30 more)	⊕○○○ Very low	CRITICAL
<b>Length of ICU stay</b>												
2	randomised trials	not serious	serious	not serious	very serious	none	391	406	-	<b>MD 0.62 day lower</b> (from 1.76 lower to 0.51 higher)	⊕○○○ Very low	CRITICAL
<b>Length of mechanical ventilation</b>												
2	randomised trials	not serious	serious	not serious	very serious	none	391	406	-	<b>MD 0.00 day higher</b> (from 0.84 lower to 0.84 higher)	⊕○○○ Very low	CRITICAL
<b>Complication due to transfusion</b>												
1	randomised trials	not serious	not serious	not serious	very serious	none	97/320 (30.3%)	90/317 (28.3%)	<b>RR 1.10</b> (0.78 to 1.54)	<b>28 more per 1,000</b> (from 62 fewer to 153 more)	⊕⊕○○ Low	CRITICAL



	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	<b>Trivial</b>	Small	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	Large	Moderate	Small	<b>Trivial</b>		Varies	Don't know
CERTAINTY OF EVIDENCE	Very low	<b>Low</b>	Moderate	High			No included studies
VALUES	Important uncertainty or variability	<b>Possibly important uncertainty or variability</b>	Probably no important uncertainty or variability	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	Probably favors the comparison	<b>Does not favor either the intervention or the comparison</b>	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
FEASIBILITY	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know

CQ18-11 (GRADE)

P: Pediatric patients with sepsis

I: Blood purification therapy

C: Not use of blood purification therapy

O: Mortality, length of ICU stay, length of mechanical ventilation, duration of resolution of shock, serious adverse events

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Treatment	Placebo	Relative (95% CI)	Absolute (95% CI)		
<b>Mortality</b>												
1	randomised trials	serious	not serious	not serious	very serious	none	10/25 (40.0%)	4/23 (17.4%)	RR 3.17 (0.83 to 12.13)	377 more per 1,000 (from 30 fewer to 1000 more)	⊕○○○ Very low	CRITICAL

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	<b>Trivial</b>	Small	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	Large	<b>Moderate</b>	Small	Trivial		Varies	Don't know
CERTAINTY OF EVIDENCE	<b>Very low</b>	Low	Moderate	High			No included studies
VALUES	Important uncertainty or variability	Possibly important uncertainty or variability	<b>Probably no important uncertainty or variability</b>	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	<b>Probably favors the comparison</b>	Does not favor either the intervention or the comparison	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	<b>Probably no</b>	Probably yes	Yes		Varies	Don't know
FEASIBILITY	No	<b>Probably no</b>	Probably yes	Yes		Varies	Don't know

CQ18-12 (unGRADE)

P: Pediatric patients with severe sepsis/ septic shock or organ injury due to infection

I: Use of IVIG

C: Use of placebo or not use of IVIG

O: Mortality, duration of resolution of shock, length of mechanical ventilation, length of ICU stay, adverse effect

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	<b>Trivial</b>	Small	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	Large	Moderate	Small	<b>Trivial</b>		Varies	Don't know
CERTAINTY OF EVIDENCE	Very low	Low	Moderate	High			<b>No included studies</b>
VALUES	Important uncertainty or variability	<b>Possibly important uncertainty or variability</b>	Probably no important uncertainty or variability	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	Probably favors the comparison	<b>Does not favor either the intervention or the comparison</b>	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	<b>Probably no</b>	Probably yes	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know





**CQ18-13 (GRADE)**

**P: Pediatric patients in intensive care unit**

**I: Strict glyceimic management**

**C: Standard glyceimic management**

**O: Mortality, length of ICU stay, length of mechanical ventilation, hypoglycemia**

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Treatment	Placebo	Relative (95% CI)	Absolute (95% CI)		
<b>Mortality</b>												
5	randomised trials	not serious	serious	not serious	serious	none	98/1928 (5.1%)	107/1995 (5.4%)	<b>RR 0.98</b> (0.73 to 1.31)	<b>1 fewer per 1,000</b> (from 14 fewer to 17 more)	 Low	CRITICAL
<b>Length of ICU stay</b>												
3	randomised trials	not serious	serious	not serious	not serious	none	1533	1516	-	<b>MD 0.50 day lower</b> (from 0.52 lower to 0.48 lower)	 Moderate	CRITICAL
<b>Length of mechanical ventilation</b>												
3	randomised trials	not serious	serious	not serious	not serious	none	1533	1516	-	<b>MD 0.30 day lower</b> (from 0.32 lower to 0.27 lower)	 Moderate	CRITICAL
<b>Hypoglycemia</b>												
5	randomised trials	not serious	serious	not serious	serious	none	185/1931 (9.6%)	39/2002 (1.9%)	<b>RR 6.37</b> (4.41 to 9.21)	<b>105 more per 1,000</b> (from 66 more to 166 more)	 Low	CRITICAL

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	<b>Yes</b>		Varies	Don't know
DESIRABLE EFFECTS	<b>Trivial</b>	Small	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	<b>Large</b>	Moderate	Small	Trivial		Varies	Don't know
CERTAINTY OF EVIDENCE	Very low	<b>Low</b>	Moderate	High			No included studies
VALUES	Important uncertainty or variability	Possibly important uncertainty or variability	<b>Probably no important uncertainty or variability</b>	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	<b>Probably favors the comparison</b>	Does not favor either the intervention or the comparison	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	<b>Probably no</b>	Probably yes	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	<b>Probably yes</b>	Yes		Varies	Don't know