Yukon-Kuskokwim HEALTH CORPORATION

Clinical Guideline

Pediatric Sepsis/Shock

Shock Criteria

2 or more of the following:
- Temp <96.8 or >100.4
- Abnormal WBC count (<5 or >15)
- Abnormal HR
- Abnormal RR

AND

Signs of End-Organ Involvement:
- Altered mental status
- Delayed cap refill
- Cold/mottled extremities
- Weak pulses
- Difference between central and peripheral pulses
- Significantly decreased UOP
- Hypotension
- Bounding/brisk pulses with rapid cap refill

Patient meets criteria for severe sepsis/shock → Call pediatric hospitalist. Page pharmacist and RT. → Consult PICU by direct line: (907) 297-8809.

Place on CR monitor.
Start supplemental oxygen. Prepare BVM.
Get access: IV/IO x2.
Bolus: NS 20 mL/kg x2 over ≤ 10 minutes.
Reassess volume status after each bolus.

Use the Pediatric Critical Care Guide and ED Peds Critical Care PowerPlan for all medication dosing.

Labs: bedside glucose, blood culture, electrolytes, CBC, lactate, ionized calcium, procalcitonin.

Order empiric antibiotics STAT.

Is patient maintaining airway? — No → Intubate per Pediatric Intubation Guideline.

Yes

If not improving, give third bolus of NS 20 mL/kg.
Correct hypoglycemia.
Correct hypocalcemia.

Is there continuing hypotension, poor pulses, change in mental status, or delayed cap refill?

Yes → Start vasopressor and consider methylprednisolone for fluid-refractory shock in consultation with the PICU.
→ Continue to reassess and give boluses of NS 20 mL/kg unless patient develops rales, respiratory distress, hepatomegaly, or a gallop.
→ If shock persists, consider a second pressor, calcium chloride, etc. in consultation with PICU.

No → Monitor closely per Continuing Management Box while awaiting medevac.

Village Management
- Consult pediatric hospitalist.
- Aggressive hydration: IV or PO.
- Supplemental oxygen via nasal cannula.
- Monitor glucose.
- Treat hypoglycemia with Insta-Glucose tubes buccally – NOT rectally.
- Ceftriaxone 100 mg/kg IM.
- May give Epinephrine 0.01mg/kg SC.
- Activate medevac.
- Consider VTC.

See Wiki RMT Section for more detailed recommendations.

Continuing Management
- VS (including BP) at least Q15min.
- Blood glucose Q30 min.
- Maintenance IVF with DNS.
- Consider Foley.

Goals
Cap refill <2 sec
Normal BP for age
Normal pulses
Warm extremities
UOP > 1 mL/kg/hour
Normal mental status

Empiric Antibiotic Choice

≤28 days
Ampicillin 50 mg/kg AND gentamicin 4 mg/kg. If concern for meningitis, give cefepime 50 mg/kg IV. If concerned about HSV or neurologic impairment, add acyclovir 20 mg/kg.

>28 days
Ceftriaxone 100 mg/kg (max 2000 mg)
AND vancomycin 20 mg/kg (max 2000 mg)

If CVL in place, immunocompromised, or significant Hx antibiotics in past 30 days
Cefepime 50 mg/kg (max 2000 mg)
AND vancomycin 20 mg/kg (max 2000 mg)

If allergic to PCN
Meropenem 15 mg/kg (max 500 mg)
AND vancomycin 20 mg/kg (max 2000 mg)

If suspecting Staph or Strep:
Consider adding clindamycin 13 mg/kg IV for anti-toxin effect.

Age	HR (beats/minute)		RR (breaths/minute)		Hypotension (sBP in mmHg)
	Bradycardia	Tachycardia	Low	High	
0 days – 1 week	<100	>200	<30	>70	<60
1 week – 1 month	<100	>200	<30	>70	<60
1 – 3 months	<100	>180	<20	>60	<70
3 – 12 months	<100	>180	<20	>60	<70
1 – 2 years	<90	>160	<20	>40	<70
2 – 6 years	<60	>160		>40	<80
6 – 13 years	<60	>120		>23	<90
13 – 18 years	<60	>110		>23	<90

This guideline is designed for the general use of most patients but may need to be adapted to meet the special needs of a specific patient as determined by the medical practitioner.
Approved by MSEC 10/9/19.
If comments about this guideline, please contact Amy_Carson-Strnad@ykhc.org.