Inclusion Criteria
- Any patient with clinical concern for sepsis/septic shock
  OR
  ED Sepsis Score of 6 or greater
  AND
  ED attending/fellow assessment with concern for sepsis/septic shock

Exclusion Criteria
None

Sepsis / Septic Shock Care

Flow

ED

Inpatient

Appendix

Version Changes
Approval & Citation
Evidence Ratings
Bibliography
Sepsis / Septic Shock Pathway v10.0: Flow

Patient presents to the ED with fever and/or concern for infection and ED sepsis score ≥ 6

BPA fires

RN and Provider Huddle:
Is the patient ill appearing?

Yes

ED Sepsis / Septic Shock Pathway

- Use ED Sepsis / Septic Shock Plan
- Antibiotics and blood cultures for specific populations included

Minute 60 Huddle:
Does patient meet Inpatient Sepsis Pathway criteria?

No

Previously healthy > 30 days
- Admit to General Medicine

Previously healthy < 30 days
- Admit to General Medicine
- Follow Neonatal Fever Pathway
- Use Inpatient Fever Neonatal 0-30 days Plan

HemOnc/ BMT Suspected Infection
- Admit to Cancer Care Unit
- Follow HemOnc/BMT Suspected Infection Pathway
- Use HemOnc Suspected Infection Admit Plan

Central Line Infection
- Admit to General Medicine/GI Transplant
- Follow Central Line Infection Pathway
- Use Admit orders + Central Line Infection Plan

Inpatient Admit Criteria
- Resolution of hypotension and no ongoing signs of sepsis after ≤ 40 ml / kg NS bolus
- First dose antibiotics administered
- RISK to follow

Minute 60 Huddle:
Does patient meet Inpatient Sepsis Pathway criteria?

YES

Any admitted patient with concern for new or evolving sepsis / septic shock

RISK RN to follow all patients admitted with concern for sepsis

Minute 60 Huddle:
Does patient meet Inpatient Sepsis Pathway criteria?

NO

Well-appearing patients should be placed on the appropriate ED CSW pathway for their underlying condition (e.g. ED HemOnc BMT Suspected Infection, ED Suspected Central Line Infection, ED Neonatal Fever)

Concern for evolving sepsis
- Call RRT or Code Blue
- Follow Inpatient New Septic Shock Pathway
- Use Inpatient New Septic Shock Plan

Signs & Symptoms of Sepsis
- Hypotension (MAP ≤ 5th percentile for age)
- Tachycardia
- Poor perfusion
- Reduced urine output
- Tachypnea / new oxygen requirement
- Mental status changes

ED

Inpatient
Sepsis / Septic Shock Pathway v10.0: ED

Inclusion Criteria
Any patient with clinical concern for sepsis/septic shock
OR
ED Sepsis Score of 6 or greater
AND
ED attending/fellow assessment with concern for sepsis/septic shock

Exclusion Criteria
None

Time Zero =
ED Septic Shock Pathway Activation

15 Min
- Stop and Review
- Activate Septic Shock Pathway
- Reassess vital signs every 5 minutes
- Order appropriate antibiotics
- Place 2 large bore PIVs if no central line
- Consider PIV in patients with central line
- If 2 unsuccessful IV attempts; consider IO

30 Min
- Assess airway, breathing, circulation
- Provide supplemental oxygen
- Access / Labs
- EPOC: VBG, lactate, iCa
- POCT glucose
- Electrolytes, Magnesium, Phosphorus
- BUN, Creatinine
- Blood cultures
- CBC + diff
- CRP
- Consider ABO/RhD and antibody

60 Min
- Administer Antimicrobials
- Previously healthy patients: ceftriaxone (+vancomycin if history of/concern for MRSA)
- Appropriate antibiotics for specific populations:
  - HemOnco/BMT Suspected Infection (HOBSI)
  - Central Line Infection
  - Neonatal Fever (0-30 days)
- Consider history of resistant organisms
- If you are a patient with questions contact your medical provider, septicshock@seattlechildrens.org

Initial Fluid Resuscitation
- Administer 1st bolus of 20mL/kg normal saline rapidly over 20 minutes OR LESS
- Give stress dose steroids if known adrenal insufficiency

Ongoing Resuscitation
- Administer 2nd and 3rd bolus * of 20mL/kg normal saline rapidly over 20 minutes OR LESS until perfusion improves or unless rates or hepatomegaly develop
- Order vasoactive/inotropic drips
- Consider blood products as indicated
- BMT patients: consider vasoactive / inotropic drips after 2nd NS bolus

Respiratory Support
- Consider ET intubation for ongoing respiratory distress or altered mental status
- Provide supplemental oxygen
- Assess airway, breathing, circulation
- If 2 unsuccessful IV attempts; consider IO

Bedside ED Huddle
ED, ICU, +/- Hospitalist

ICU Transfer Criteria
- Recurrent hypotension despite > 40mL/kg fluid resuscitation in the last 12 hours
- Fluid resuscitation includes either crystalloid or colloid
- Hypotension (MAP ≤ 5th percentile for age)
- Clinical situation not appropriate for ongoing fluid resuscitation
- Defined as underlying cardiac disease, lung disease, existing fluid overload, impaired renal function
- Lactate ≥ 4 or base excess < - 4 mmol
- Sustained change in mentation or perfusion (>15 minutes)
- Patient requires continuous ICU monitoring or ICU level respiratory support

Inpatient Admit Criteria
- Resolution of hypotension AND no ongoing signs of sepsis after ≤ 40 mL/kg
- First dose antibiotics administered
- RISK to follow

Flow
Inpatient

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Inclusion Criteria
- Any patient with clinical concern for sepsis/septic shock
  OR
  ED Sepsis Score of 6 or greater
  AND
  ED attending/fellow assessment with concern for sepsis/septic shock

Exclusion Criteria
None

Inpatient Management
- Resolution of hypotension and no ongoing signs of sepsis after ≤ 40 ml/kg NS bolus
- First dose antibiotics administered

Previously healthy > 30 days
- Admit to General Medicine

Previously healthy < 30 days
- Admit to General Medicine
- Follow Neonatal Fever Pathway
- Use Inpatient Fever Neonatal 0-30 days Plan

HemOnc/BMT Suspected Infection
- Admit to Cancer Care Unit
- Follow HemOnc/BMT Suspected Infection Pathway
- Use HemOnc Suspected Infection Admit Plan

Central Line Infection
- Admit to General Medicine/GI Transplant
- Follow Central Line Infection Pathway
- Use Admit orders + Central Line Infection Plan

Sepsis Huddle RN / RISK and Provider
Is the patient ill appearing?

Any admitted patient with concern for new or evolving septic shock

Minute 60 Sepsis Huddle
Does patient meet ICU transfer criteria?

notification

ICU Transfer Criteria
- Recurrent hypotension despite > 40mL/kg fluid resuscitation in the last 12 hours
- Fluid resuscitation includes either crystalloid or colloid
- Hypotension (MAP ≤ 5th percentile for age)
- Clinical situation not appropriate for ongoing fluid resuscitation
- Defined as underlying cardiac disease, lung disease, existing fluid overload, impaired renal function
- Lactate ≥ 4 or base excess < - 4 mmol
- Sustained change in mentation or perfusion (>15 minutes)
- Patient requires continuous ICU monitoring or ICU level respiratory support
SEPSIS HUDDLE

Huddle Date_____ Time ___:___
Administer Antibiotics by: ____:
(within 1 hour of huddle)

**Within 5 mins**

- Check vitals q5-10 mins
- IV Access
- Supplemental O2
- RRT / RISK RN needed?

**15 mins**

- Orders (Sepsis/Septic Shock Order Set)
- Start 1st bolus (run over <20 mins)
- Draw cultures & labs

**60 mins**

- IV antibiotics
- Treat shock:
  - Bolus 1 _______ mL
  - If clinically indicated
  - Bolus 2 _______ mL
  - Call RRT if not previously activated

**Suggested Labs**

- Blood cultures
- UA
- RVP/COVID-19
- Trach aspirate
- CRP & procalcitonin
- CBC & diff
- BMP
- VBG & lactate
- iCa
- POC glucose

**Time Completed**

**Fluid Resuscitation**

Administer boluses rapidly over 5-20 mins. Give bolus 2 & 3 only if clinically indicated for ongoing shock.

Reassess for fluid overload (hepatomegaly, rales) between each bolus.

Consider volumes of 5-10 mL/kg for fluid sensitive (cardiac/renal) patients.

**Patient Disposition**

Consider RRT or RISK RN assistance early.

Call RRT during bolus 2 if shock unresolved and RRT not previously activated.

Hypotension (MAP ≤ 50th percentile for age) after >40 mL/kg requires ICU admission. Other criteria dependent on clinical situation & require RRT evaluation.

---

Place patient sticker here

This is not part of the patient's EMR. This is confidential and protected quality improvement information. Use form R5 4250 and 7041900.
# Antibiotic Selection by Patient Population

<table>
<thead>
<tr>
<th>Patient Population</th>
<th>Antibiotic selection</th>
<th>Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previously healthy &lt; 28 days</td>
<td>Ampicillin and cefotaxime (or ceftazidime if cefotaxime unavailable)</td>
<td>Acyclovir if HSV work up performed</td>
</tr>
<tr>
<td></td>
<td>Consider ampicillin and gentamicin if CSF pleocytosis not &gt; 20 WBC/mm per pathway recommendations</td>
<td></td>
</tr>
<tr>
<td>Previously healthy &gt; 28 days</td>
<td>Ceftriaxone</td>
<td>Consider vancomycin for patients with known history of MRSA</td>
</tr>
<tr>
<td>Hematopoietic Cell Transplant (HCT/BMT) and HemOnc Suspected Infection patients. Pre-transplant patient-specific ID antibiotic plan may override these standard recommendations</td>
<td>Ceftazidime (or meropenem if already on ceftazidime) **PLUS Consider adding gentamicin and vancomycin if hypotension despite 40 cc/kg NS or sooner if ill appearing and/or signs of severe sepsis. **PLUS Consider adding clindamycin or metronidazole if suspected perineal or intra-abdominal infection, respectively (unless receiving meropenem)</td>
<td>Cefepime OR meropenem per pathway recommendations If concern for severe skin or perineal infection, consider use of “ED Necrotizing Soft Tissue Infection Plan”</td>
</tr>
<tr>
<td>Central Line Infection (not for HOSI/BMT)</td>
<td>• Immunocompetent – cefepime **PLUS vancomycin and gentamicin **PLUS vancomycin plus gentamicin if ill appearing **PLUS Consider adding fluconazole per pathway recommendations</td>
<td>Ciprofloxacin AND linezolid per pathway recommendations</td>
</tr>
</tbody>
</table>
Instructions for finding the “Individualized Antibiotic Plan”

The following represents the antibiotic plan formulated for this patient by ARNP, Division of Infectious Diseases, and modified on 11/09/20.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Can order within Sepsis Orderset</th>
<th>Must order outside Sepsis Orderset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-engraftment neutropenia (prophylaxis)</td>
<td>Cefepime</td>
<td></td>
</tr>
<tr>
<td>Fever, SIRS (empyema)</td>
<td>Ceftepime</td>
<td></td>
</tr>
<tr>
<td>Fever, hemodynamically unstable</td>
<td>Ceftepime</td>
<td></td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>Ceftepimne</td>
<td></td>
</tr>
</tbody>
</table>

[Delet]
# MAP: Definition of hypotension & resuscitation goals

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Critical Hypotension</th>
<th>Hypotension Threshold</th>
<th>Minimum Resuscitation Goal</th>
<th>Normotension for Age</th>
<th>Hypertension Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>37 weeks PMA-30 Days</td>
<td>≤ 1%</td>
<td>≤ 5%</td>
<td>≥10%</td>
<td>50%</td>
<td>≥95%</td>
</tr>
<tr>
<td>1-3 Months</td>
<td>32</td>
<td>39</td>
<td>42</td>
<td>56</td>
<td>79</td>
</tr>
<tr>
<td>3-6 Months</td>
<td>34</td>
<td>41</td>
<td>44</td>
<td>59</td>
<td>82</td>
</tr>
<tr>
<td>6-12 Months</td>
<td>37</td>
<td>44</td>
<td>47</td>
<td>62</td>
<td>86</td>
</tr>
<tr>
<td>1-2 Years</td>
<td>41</td>
<td>48</td>
<td>52</td>
<td>67</td>
<td>92</td>
</tr>
<tr>
<td>2-3 Years</td>
<td>45</td>
<td>52</td>
<td>56</td>
<td>72</td>
<td>96</td>
</tr>
<tr>
<td>3-4 Years</td>
<td>45</td>
<td>53</td>
<td>55</td>
<td>71</td>
<td>94</td>
</tr>
<tr>
<td>4-5 Years</td>
<td>45</td>
<td>52</td>
<td>55</td>
<td>69</td>
<td>90</td>
</tr>
<tr>
<td>5-6 Years</td>
<td>46</td>
<td>53</td>
<td>56</td>
<td>69</td>
<td>88</td>
</tr>
<tr>
<td>6-7 Years</td>
<td>47</td>
<td>54</td>
<td>58</td>
<td>71</td>
<td>89</td>
</tr>
<tr>
<td>7-8 Years</td>
<td>48</td>
<td>55</td>
<td>59</td>
<td>72</td>
<td>90</td>
</tr>
<tr>
<td>8-9 Years</td>
<td>49</td>
<td>55</td>
<td>59</td>
<td>72</td>
<td>91</td>
</tr>
<tr>
<td>9-10 Years</td>
<td>49</td>
<td>56</td>
<td>59</td>
<td>73</td>
<td>92</td>
</tr>
<tr>
<td>10-11 Years</td>
<td>49</td>
<td>56</td>
<td>59</td>
<td>73</td>
<td>92</td>
</tr>
<tr>
<td>11-12 Years</td>
<td>49</td>
<td>56</td>
<td>59</td>
<td>73</td>
<td>92</td>
</tr>
<tr>
<td>12-13 Years</td>
<td>49</td>
<td>56</td>
<td>59</td>
<td>73</td>
<td>92</td>
</tr>
<tr>
<td>13-14 Years</td>
<td>49</td>
<td>56</td>
<td>59</td>
<td>74</td>
<td>93</td>
</tr>
<tr>
<td>14-15 Years</td>
<td>49</td>
<td>56</td>
<td>59</td>
<td>74</td>
<td>94</td>
</tr>
<tr>
<td>15-16 Years</td>
<td>49</td>
<td>56</td>
<td>60</td>
<td>75</td>
<td>94</td>
</tr>
<tr>
<td>16-17 Years</td>
<td>49</td>
<td>57</td>
<td>61</td>
<td>75</td>
<td>95</td>
</tr>
<tr>
<td>17-18 Years</td>
<td>49</td>
<td>57</td>
<td>62</td>
<td>76</td>
<td>96</td>
</tr>
</tbody>
</table>
# Warm Shock and Cold Shock

<table>
<thead>
<tr>
<th></th>
<th>WARM shock</th>
<th>COLD shock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peripheral perfusion</td>
<td>Warm/flushed</td>
<td>Cold/clammy/cyanotic/mottled</td>
</tr>
<tr>
<td>Capillary refill</td>
<td>Brisk/flash; &lt;2 sec</td>
<td>Delayed; &gt;2 sec</td>
</tr>
<tr>
<td>Pulse</td>
<td>Bounding</td>
<td>Weak/thready</td>
</tr>
<tr>
<td>Heart rate</td>
<td>↑</td>
<td>↑ or ↓</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>May be normotensive</td>
<td>Usually hypotensive</td>
</tr>
<tr>
<td>Pulse pressure</td>
<td>Widened</td>
<td>Narrow</td>
</tr>
</tbody>
</table>
# Severe Sepsis / Septic Shock Resuscitation Goals

## Clinical Goals for Initial Resuscitation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Target</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Arterial Pressure (MAP)</strong></td>
<td>Age-related (see table above)</td>
<td>Arterial Monitoring preferred</td>
</tr>
<tr>
<td><strong>Urine Output (UOP)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt; 30 kg: &gt; 1 ml/kg/hr</td>
<td>Inadequate urine output is one sign of poor end-organ perfusion</td>
</tr>
<tr>
<td></td>
<td>≥ 30 kg: ≥ 30 ml/hr</td>
<td></td>
</tr>
<tr>
<td><strong>Central Venous Pressure (CVP)</strong></td>
<td>8-12 cm H2O (natural airway)</td>
<td>Most accurately measured from CVL with tip at the SVC-RA</td>
</tr>
<tr>
<td></td>
<td>12-15 cm H2O (mechanical ventilation)</td>
<td>junction; Femoral CVL, PICC and Broviac measurements less reliable,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>but trends may be useful</td>
</tr>
<tr>
<td><strong>Lactate</strong></td>
<td>&lt; 4 mmol/L or</td>
<td>Elevated lactate &gt; 4 mmol/L may be sign of shock with</td>
</tr>
<tr>
<td></td>
<td>≥ 10% decrease every 2 hours</td>
<td>inadequate oxygen delivery (ref: Puskarich et al, Resuscitation, 2011)</td>
</tr>
<tr>
<td><strong>Central Venous Oxygen Saturation (ScvO2)</strong></td>
<td>≥ 70%</td>
<td>Most accurately measured from CVL with tip at the SVC-RA</td>
</tr>
<tr>
<td></td>
<td>Note: Elevated ScvO2 (&gt; 80%) may occur</td>
<td>junction or long femoral line with tip near RA</td>
</tr>
<tr>
<td></td>
<td>in sepsis due to “cytopathic hypoxia” despite ongoing shock</td>
<td></td>
</tr>
<tr>
<td><strong>Hemoglobin</strong></td>
<td>Hgb ≥ 10 g/dL (for patients in shock)</td>
<td>Hemoglobin is a primary determinant of O2 delivery; thus, anemia</td>
</tr>
<tr>
<td></td>
<td>- ScvO2 &lt; 70%, lactate &gt; 4 mmol/L</td>
<td>should be treated in shock. Patients NOT in shock may tolerate a lower</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hgb level of 7</td>
</tr>
<tr>
<td><strong>Mental Status</strong></td>
<td>Alert and appropriate for age</td>
<td>Lethargy, confusion, agitation is one sign of poor end-organ perfusion</td>
</tr>
<tr>
<td><strong>Capillary Refill</strong></td>
<td>&lt; 2 seconds</td>
<td>Flash capillary refill can be seen in warm shock, delayed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>capillary refill can be seen in cold shock</td>
</tr>
</tbody>
</table>
Summary of Version Changes

- **Version 1.0 (10/7/2015)**: Go live.
- **Version 2.0 (2/12/2016)**: Clarification of clinical findings indicative of warm vs. cold shock added; updates to hypotension and resuscitation goals to reflect hospital standards; clarification of indication for RRT vs. code blue.
- **Version 3.0 (12/14/2016)**: New Septic Shock Inpatient Plan update; Revision of Septic Shock Score Trigger; Inclusion of BMT in Hem/Onc Suspected Infection pathway (renamed Hem/Onc/BMT Suspected Infection - HOBSI).
- **Version 4.0 (5/22/2017)**: Updated MAP to include Normotension Median for Age (50 % ile). Added verbiage “Resolution of hypotension = Two blood pressure measurements obtained 15 minutes apart with MAP >10 %ile”.
- **Version 5.0 (5/18/2018)**: Updated the recommendations for empiric therapy from pip/tazo to cefepime.
- **Version 6.0 (9/5/2018)**: Updated PHASE IIA to separate PICU/CICU Sepsis/Septic Shock Plan, including peripheral pressors.
- **Version 7.0 (10/16/2019)**: Cefotaxime is no longer available and has been replaced with ceftazidime. Sepsis Antibiotic Chart updated.
- **Version 8.0 (7/14/2020)**: Age range updated from <=30 days to <= 28 days on Sepsis Antibiotic Chart.
- **Version 9.0 (5/18/2021)**: Updated to reflect Epic change to ED Sepsis Score. Updated MAP table and added 2020-Sepsis Guidelines. Removed RRT K-Card.
- **Version 10.0 (12/1/2021)**: Full approval go live with new formatting style and some content changes: Inpatient Sepsis Huddle and revised Inpatient Sepsis/Septic Shock Orderset for all Inpatients.
Approved by the CSW Septic Shock Pathway Team for December 1, 2021, go-live

CSW Sepsis/Septic Shock Pathway Team:

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Reid Farris, MD, MS
ICU, Stakeholder
Britt Sandler, MD
RISK team/ICU Stakeholder
Joan Roberts, MD
ICU, CNS
Hector Valdivia, CNS
HemOnc, Stakeholder
Jennifer Wilkes, MD
HemOnc, CNS
Amanda Lulloff, MD
HemOnc, Stakeholder
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Mike Leu, MD, MS, MHS
Zachary Van Rheen, PA, PALS

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Darren Migita, MD
Operations Director
Jaleh Shafii, MS, RN, CPHQ

Retrieval Website: https://www.seattlechildrens.org/pdf/septic-shock-pathway.pdf

Please cite as:
Evidence Ratings

This pathway was developed through local consensus based on published evidence and expert opinion as part of Clinical Standard Work at Seattle Children’s. Pathway teams include representatives from Medical, Subspecialty, and/or Surgical Services, Nursing, Pharmacy, Clinical Effectiveness, and other services as appropriate.

When possible, we used the GRADE method of rating evidence quality. Evidence is first assessed as to whether it is from randomized trial or cohort studies. The rating is then adjusted in the following manner (from: Guyatt G et al. J Clin Epidemiol. 2011;4:383-94, Hultcrantz M et al. J Clin Epidemiol. 2017;87:4-13.):

Quality ratings are downgraded if studies:
- Have serious limitations
- Have inconsistent results
- If evidence does not directly address clinical questions
- If estimates are imprecise OR
- If it is felt that there is substantial publication bias

Quality ratings are upgraded if it is felt that:
- The effect size is large
- If studies are designed in a way that confounding would likely underreport the magnitude of the effect OR
- If a dose-response gradient is evident

Certainty of Evidence
★★★★ High: The authors have a lot of confidence that the true effect is similar to the estimated effect
★★★★ Moderate: The authors believe that the true effect is probably close to the estimated effect
★★★★★ Low: The true effect might be markedly different from the estimated effect
★★★★★★ Very low: The true effect is probably markedly different from the estimated effect

Guideline: Recommendation is from a published guideline that used methodology deemed acceptable by the team
Expert Opinion: Based on available evidence that does not meet GRADE criteria (for example, case-control studies)
Literature Search Methods
Studies were identified by searching electronic databases using search strategies developed and executed by a medical librarian, Jackie Morton. Searches were performed in April, 2015. The following databases were searched – on the Ovid platform: Medline (2012 to date), Cochrane Database of Systematic Reviews (2012 to date); elsewhere – Embase (2012 to date), Clinical Evidence, National Guideline Clearinghouse, TRIP (2012 to date) and Cincinnati Children’s Evidence-Based Care Guidelines.

Retrieval was limited to humans (any age) and English language. In Medline and Embase, appropriate Medical Subject Headings (MeSH) and Emtree headings were used respectively, along with text words, and the search strategy was adapted for other databases using their controlled vocabularies, where available, along with text words. Concepts searched were sepsis and specific laboratory diagnostic procedures or antibiotic therapeutics. Additional searches for concepts not specific to sepsis were Rapid Sequence Intubation (RSI) and sedation, anesthetic, paralytic or pain agents and lastly the use and number of peripheral intravenous lines. All retrieval was further limited to certain evidence categories, such as relevant publication types, Clinical Queries filters for diagnosis and therapy, index terms for study types and other similar limits.

An additional consensus document was identified by team members and added to results.

Flow diagram adapted from Moher D et al. BMJ 2009;339:bmj.b2535

Identification
- Records identified through database searching (n=233)
- Additional records identified through other sources (n=1)

Screening
- Records after duplicates removed (n=234)

Eligibility
- Records screened (n=234)
- Records excluded (n=167)

Included
- Articles excluded (n=56)
  - Did not answer clinical question (n=5)
  - Did not meet quality threshold (n=46)
  - Removed for other reasons (n=4)
  - Duplicate (n=1)
- Studies included in pathway (n=11)
Included Studies


Texas Children’s Hospital Evidence-Based Outcomes Center. Recognition and Initial Management Septic Shock Review Summary. . Updated 2015 JanuaryPDF.

Medical Disclaimer

Medicine is an ever-changing science. As new research and clinical experience broaden our knowledge, changes in treatment and drug therapy are required.

The authors have checked with sources believed to be reliable in their efforts to provide information that is complete and generally in accord with the standards accepted at the time of publication.

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