

The Role of the School Nurse in Identifying Pediatric Sepsis

Brittany Waggoner MSN, RN, AGCNS-BC

Disclosures

- No Financial Disclosures to Discuss
- Content not endorsed by IHA

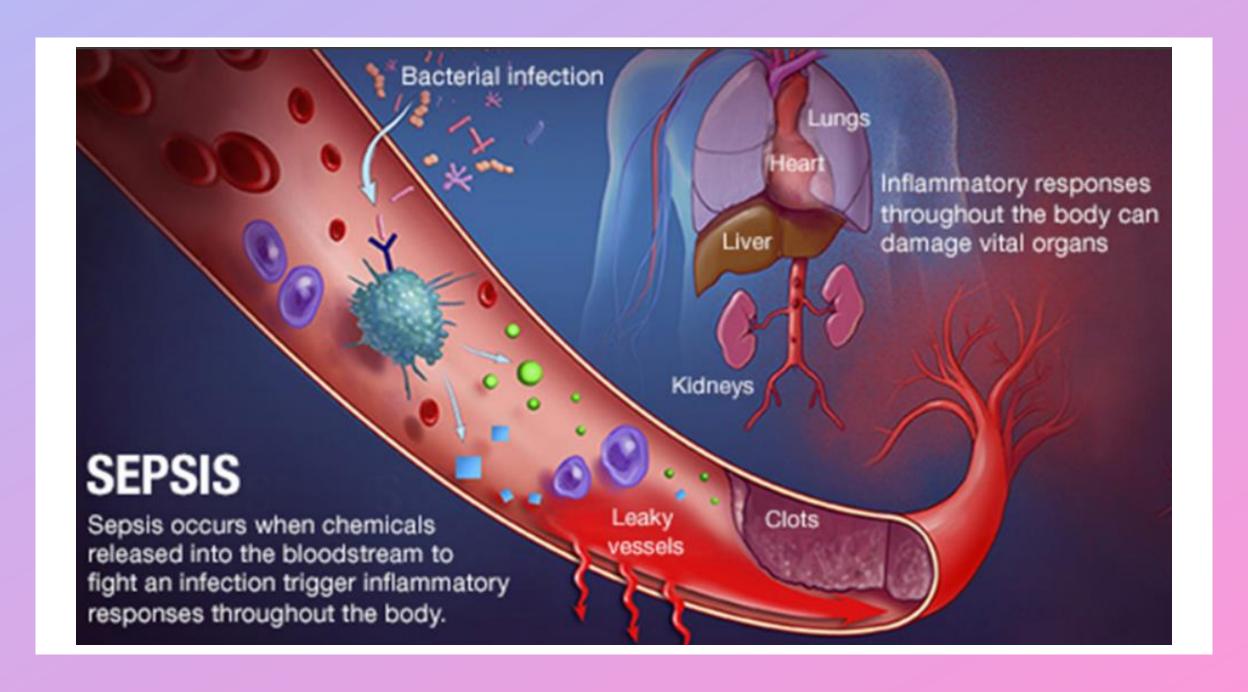
Objectives

- •To describe your role in the identification, assessment, and treatment of children with sepsis.
- •Explain how you can identify the presence of infection-related triggers for sepsis.
- •Prioritize treatment tools and techniques for children experiencing sepsis.





What is Sepsis?

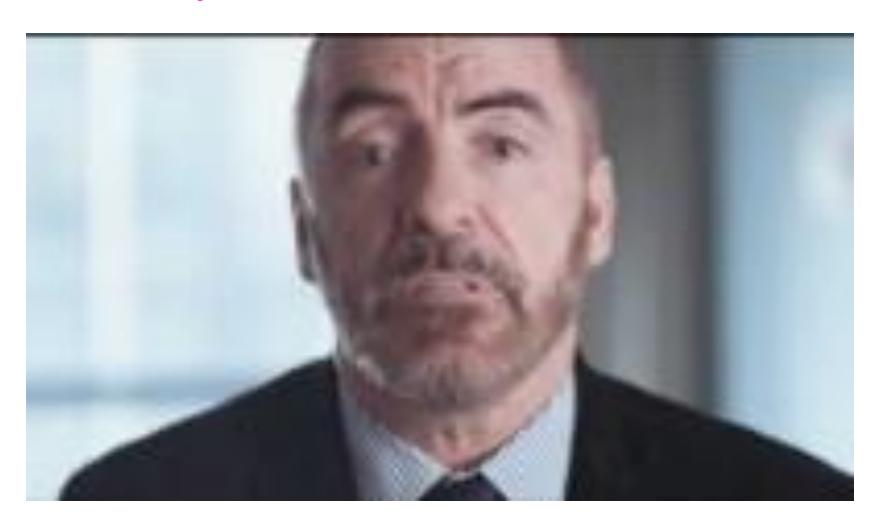


Sepsis in Children

- Pediatric Sepsis is the number one killer of children globally.
 - 72,000 cases per year.
 - 6,800 deaths per year.
- What is your role?
 - 87% of sepsis cases originate in the community
 - Awareness & Prevention
 - Recognition



Rory's Story

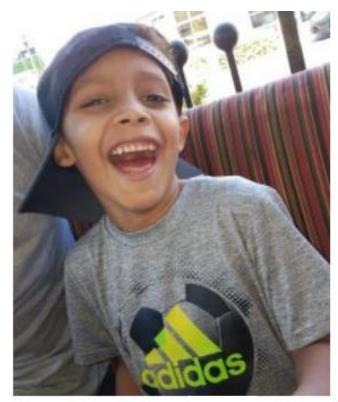


Why are Children at Higher Risk?

- Poor Understanding
- Very Susceptible
- Low Frequency
- Subtle Signs & Symptoms
- Rapid Deterioration



Unequal Burden of Sepsis



Quincy Bayo



- Black preterm infants are 13x more likely to develop sepsis
- Black preterm infants are 15x more likely to die than non-black infants
- Infants from lower income families are
 20% more likely to die from sepsis
- Infants from families without health insurance are 3x more likely to die from sepsis

What do Parents Know?



- 41% of parents think children can only get sepsis if they already in the hospital
- 42% of parents believe there are no longterm effects on children after having sepsis

Steven Keske



Who is at increased risk?





- Sickle Cell
- Cystic Fibrosis
- Premature Birth
- Poor Respiratory Function
- Poor Cardiac Reserves
- Liver Dysfunction
- Indwelling Devices.
- Cancer





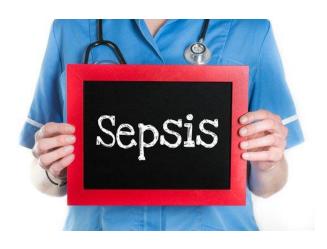
Wound Infections are a Common Cause of Sepsis

Prevention

Awareness



Nutrition





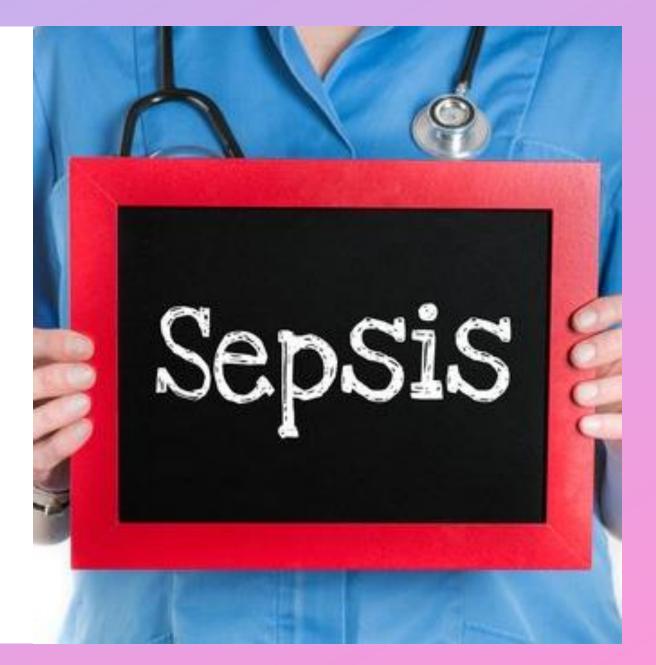




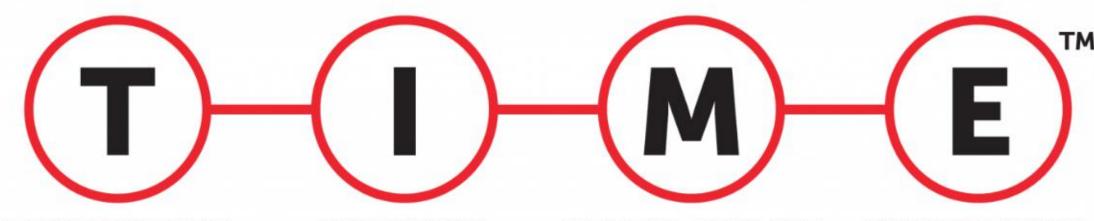


Recognition

Sepsis Awareness



When it comes to sepsis, remember IT'S ABOUT TIME™. Watch for:



TEMPERATURE

higher or lower than normal

INFECTION

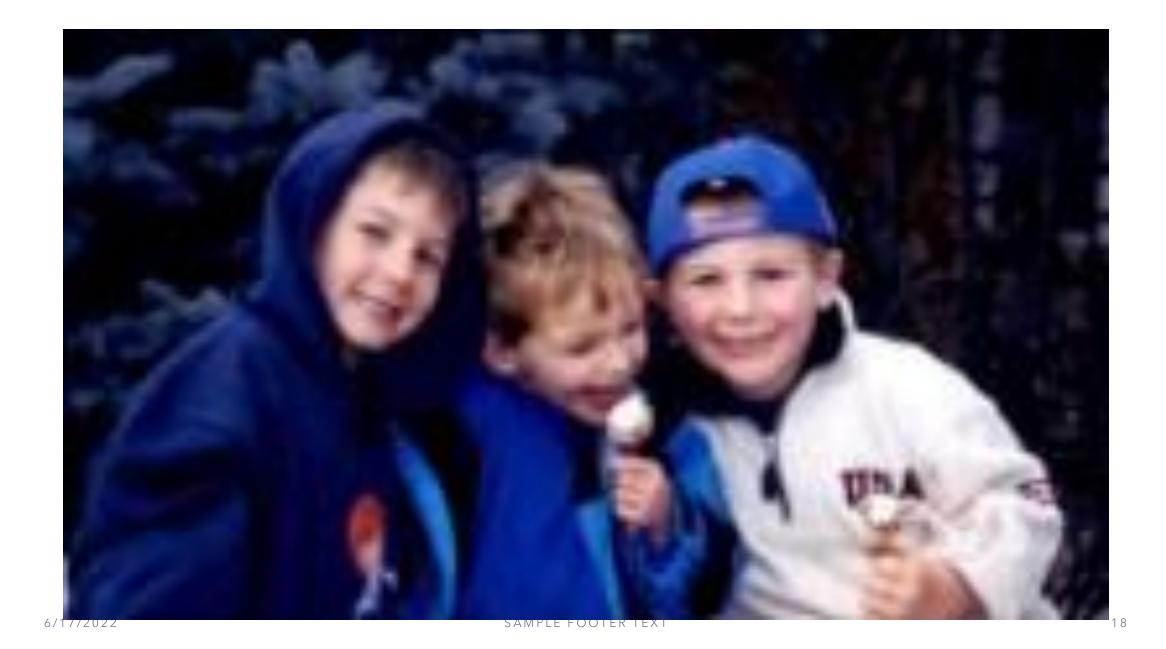
may have signs and symptoms of an infection

MENTAL DECLINE

confused, sleepy, difficult to rouse

EXTREMELY ILL

severe pain, discomfort, shortness of breath



Thank you



Brittany Waggoner MSN,
RN, AGCNS-BC

Maternal & Infant Quality
Improvement Advisor
317-488-1031
bwaggoner@IHAconnect.org

References

- Center for Disease Control and Prevention. (2016, August). Making Health Care Safer: Think Sepsis. Time Matters. Retrieved July 29, 2019, from CDC Vital Signs website: https://www.cdc.gov/vitalsigns/pdf/2016-08-vitalsigns.pdf
- Hartman, M. E., Linde-Zwirble, W. T., Angus, D. C., & Watson, R. S. (2013). Trends in the epidemiology of pediatric severe sepsis*. Pediatric Critical Care Medicine: A Journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies, 14(7), 686–693. https://doi.org/10.1097/PCC.0b013e3182917fad
- Mathias, B., Mira, J., & Larson, S. D. (2016). Pediatric Sepsis. Current Opinion in Pediatrics, 28(3), 380–387. https://doi.org/10.1097/MOP.000000000000337
- Duckworth, R. L. (2016, September 1). Recognizing Pediatric Sepsis with CHART Mnemonic. JEMS: A Journal of Emergency Medical Services.
- Pearson, G. A., Ward-Platt, M., Harnden, A., & Kelly, D. (2011). Why children die: Avoidable factors associated with child deaths. Archives of Disease in Childhood, 96, 927–931. https://doi.org/10.1136/adc.2009.177071
- Depinet, H. E., Eckerle, M., Semenova, O., Meinzen-Derr, J., & Babcock, L. (2018). Characterization of Children with Septic Shock Cared for by Emergency Medical Services. Prehospital Emergency Care, 1–10. https://doi.org/10.1080/10903127.2018.1539147
- Han, Y. Y., Carcillo, J. A., Dragotta, M. A., Bills, D. M., Watson, R. S., Westerman, M. E., & Orr, R. A. (2003). Early Reversal of Pediatric-Neonatal Septic Shock by Community Physicians Is Associated With Improved Outcome. Pediatrics, 112(4), 793–799. https://doi.org/10.1542/peds.112.4.793
- Evans, I. V. R., Phillips, G. S., Alpern, E. R., Angus, D. C., Friedrich, M. E., Kissoon, N., ... Seymour, C. W. (2018). Association Between the New York Sepsis Care Mandate and In-Hospital Mortality for Pediatric Sepsis. JAMA, 320(4), 358–367. https://doi.org/10.1001/jama.2018.9071
- Pediatric First Response (2019), Sepsis Alliance Institute. Sepsisinstitute.org
- Schlapbach, L. J., & Kissoon, N. (2018). Defining Pediatric Sepsis. JAMA Pediatrics, 172(4), 313–314. https://doi.org/10.1001/jamapediatrics.2017.5208
- Goldstein, B., Giroir, B., Randolph, A., & International Consensus Conference on Pediatric Sepsis. (2005). International pediatric sepsis consensus conference: Definitions for sepsis and organ dysfunction in pediatrics. Pediatric Critical Care Medicine: A Journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies, 6(1), 2–8. https://doi.org/10.1097/01.PCC.0000149131.72248.E6

References

- Howell, M. D., & Davis, A. M. (2017). Management of Sepsis and Septic Shock. JAMA, 317(8), 847-848. https://doi.org/10.1001/jama.2017.0131
 - de Souza, D. C., Brandão, M. B., & Piva, J. P. (2018). From the International Pediatric Sepsis Conference 2005 to the Sepsis-3 Consensus. Revista Brasileira de Terapia Intensiva, 30(1), 1–5. https://doi.org/10.5935/0103-507X.20180005
- National Association of Emergency Medical Technicians (NAEMT). (2019). AMLS Advanced Medical Life Support (3rd ed.). Jones & Bartlett Publishers.
- Duckworth, R. L. (2016, January 25). The ABCs of Pediatric Sepsis | EMSWorld.com. EMS World.
- Stegmann, B. J., & Carey, J. C. (2002). TORCH Infections. Toxoplasmosis, Other (syphilis, varicella-zoster, parvovirus B19), Rubella, Cytomegalovirus (CMV), and Herpes infections. Current Women's Health Reports, 2(4), 253–258.
- (2017). Update on pediatric sepsis: A review. Journal of Intensive Care, 5. https://doi.org/10.1186/s40560-017-0240-1
- Davis, A. L., Carcillo, J. A., Aneja, R. K., Deymann, A. J., Lin, J. C., Nguyen, T. C., ... Zuckerberg, A. L. (2017). American College of Critical Care Medicine Clinical Practice Parameters for Hemodynamic Support of Pediatric and Neonatal Septic Shock. Critical Care Medicine, 45(6), 1061. https://doi.org/10.1097/CCM.0000000000002425
- de Caen, A. R., Berg, M. D., Chameides, L., Gooden, C. K., Hickey, R. W., Scott, H. F., ... Samson, R. A. (2015). Part 12: Pediatric Advanced Life Support: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation, 132, S526-42. https://doi.org/10.1161/CIR.000000000000066
- El-Radhi, A. S., & Barry, W. (2006). Thermometry in paediatric practice. Archives of Disease in Childhood, 91(4), 351-356. https://doi.org/10.1136/adc.2005.088831
- Schlapbach, L. J., Straney, L., Bellomo, R., MacLaren, G., & Pilcher, D. (2018). Prognostic accuracy of age-adapted SOFA, SIRS, PELOD-2, and qSOFA for in-hospital mortality among children with suspected infection admitted to the intensive care unit. Intensive Care Medicine, 44(2), 179–188. https://doi.org/10.1007/s00134-017-5021-8
- Gao, Y., Zhu, J., Yin, C., Zhu, J., Zhu, T., & Liu, L. (2017). Effects of Target Temperature Management on the Outcome of Septic Patients with Fever. BioMed Research International, 2017. https://doi.org/10.1155/2017/3906032
- Matics, T. J., & Sanchez-Pinto, L. N. (2017). Adaptation and Validation of a Pediatric Sequential Organ Failure Assessment Score and Evaluation of the Sepsis-3 Definitions in Critically Ill Children. JAMA Pediatrics, 171(10), e172352–e172352. https://doi.org/10.1001/jamapediatrics.2017.2352
- Lukito, V., Djer, M., Pudjiadi, A., & Munasir, Z. (2011). The role of passive leg raising to predict fluid responsiveness in pediatric intensive care unit patients. Pediatric Critical Care Medicine: A Journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies, 13, e155-60. https://doi.org/10.1097/PCC.0b013e3182388ab3