Sepsis and EMS Survey

Suspect Sepsis. Save Lives.
Sepsis and EMS Survey

- Sepsis is the body’s overwhelming and life-threatening response to infection which can lead to tissue damage, organ failure, and death.
  - More than 1.7 million people in the U.S. are diagnosed with sepsis each year - one every 20 seconds.¹
  - 270,000 people die from sepsis every year in the U.S. – one every 2 minutes; more than from prostate cancer, breast cancer and AIDS combined. ¹,²,³
  - Mortality from sepsis increases by as much as 8% for every hour that treatment is delayed. As many as 80% of sepsis deaths could be prevented with rapid diagnosis and treatment.⁴

Why do EMS practitioners need to know about sepsis?

- Emergency Medical Services (EMS) personnel transport more than 50% of all sepsis cases to the emergency department (ED).⁵,⁶,⁷,⁸
- In the U.S., it is estimated EMS providers care for over 60,000 more severe sepsis patients each year than they do for heart attack and stroke patients combined.⁶
- EMS personnel frequently represent the first medical contact for sepsis patients since as many as 87% of sepsis cases start in the community, prior to hospitalization.¹

References located in appendix
This survey was conducted online within the United States by a partnership between Sepsis Alliance and National Association of Emergency Medical Technicians (NAEMT). The surveys were conducted from January 17 – 29, 2019. 1,310 adults ages 18 and older who have a primary role in EMS and provides direct patient care completed the survey.

The sample utilized for the online survey was the NAEMT membership list.

For further information, please contact Angelica Estrada at aestrada@sepsis.org
Executive Summary

The goal of this research is to understand the prevalence of sepsis encounters among EMS practitioners, their awareness level of different aspects of sepsis and the education they receive regarding sepsis.

- With sepsis being one of the leading causes of death, only 52% are very confident in their ability to recognize the signs and symptoms of sepsis.
- While nearly all (98%) consider sepsis a medical emergency, just 61% are very aware of sepsis symptoms.
- While sepsis is one of the leading causes of death, 20% of EMS practitioners state their organization does not have a sepsis-specific protocol and 14% indicate their system does not receive any support for this protocol. In addition, more than 1/3 of EMS practitioners state sepsis isn’t a key priority in their organization.
- When looking for sources of information regarding sepsis, EMS practitioners utilize EMT/EMS Associations, their own facility, CDC, NIH and other medical organizations.
Only half of EMS practitioners are very confident in their ability to recognize the signs and symptoms of sepsis.

Q7. How confident are you in your ability to recognize the signs and symptoms for each of the following conditions?
Nearly all EMS practitioners (98%) state sepsis is a medical emergency yet only half (52%) are very confident in their ability to recognize signs and symptoms of sepsis.
EMS practitioners are aware of sepsis but not of different aspects of protocols and definitions.

Q9. How aware are you, if at all, about the following items on sepsis?
Fever is the number one sign EMS practitioners recognize as an early sign of sepsis.

Sepsis Alliance developed a program to help raise awareness of sepsis and the urgent need to seek treatment.

<table>
<thead>
<tr>
<th>Signs recognized by EMS practitioners</th>
<th>% of EMS practitioners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>89%</td>
</tr>
<tr>
<td>Heart rate &gt; 90 beats/min</td>
<td>73%</td>
</tr>
<tr>
<td>Altered mental status</td>
<td>70%</td>
</tr>
<tr>
<td>Tachypnea</td>
<td>67%</td>
</tr>
<tr>
<td>Chills</td>
<td>59%</td>
</tr>
<tr>
<td>Decreased urine output</td>
<td>55%</td>
</tr>
<tr>
<td>Hypotension</td>
<td>50%</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>40%</td>
</tr>
<tr>
<td>Cough</td>
<td>23%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
</tr>
<tr>
<td>I do not recognize any early signs of sepsis</td>
<td>2%</td>
</tr>
</tbody>
</table>

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: “I feel like I might die,” severe pain or discomfort

Watch for a combination of these symptoms. If you suspect sepsis, call 911 or go to a hospital and say, "I AM CONCERNED ABOUT SEPSIS."
One in five EMS practitioners state their organization does not have a sepsis-specific protocol.

Although sepsis is a leading cause of death in the United States, protocols are lacking. When asked about protocols and their systems’ support of this, EMS practitioners report they fall short.

<table>
<thead>
<tr>
<th>Sepsis Protocol</th>
<th>% of EMS practitioners</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-wide has sepsis protocol</td>
<td>21%</td>
</tr>
<tr>
<td>County-wide has a sepsis protocol</td>
<td>24%</td>
</tr>
<tr>
<td>Receiving hospital has sepsis protocol</td>
<td>16%</td>
</tr>
<tr>
<td>In house from their organization has sepsis protocol</td>
<td>21%</td>
</tr>
<tr>
<td>Our system does not receive support for sepsis protocol</td>
<td>14%</td>
</tr>
<tr>
<td>Organization does not have a sepsis-specific protocol</td>
<td>20%</td>
</tr>
</tbody>
</table>
More than 20% of EMS practitioners have to find sepsis-specific education themselves.

There is limited sepsis education from the state, county, receiving hospitals and their organizations. One in five have to obtain the education themselves.

<table>
<thead>
<tr>
<th>Sepsis Education</th>
<th>% of EMS practitioners</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-wide has sepsis specific education program</td>
<td>10%</td>
</tr>
<tr>
<td>County-wide has sepsis specific education program</td>
<td>13%</td>
</tr>
<tr>
<td>Receiving hospital has sepsis specific education program</td>
<td>13%</td>
</tr>
<tr>
<td>In house from their organization has sepsis specific education program</td>
<td>32%</td>
</tr>
<tr>
<td>I have obtained for myself sepsis specific education</td>
<td>21%</td>
</tr>
<tr>
<td>Our system does not receive support for sepsis specific education</td>
<td>15%</td>
</tr>
<tr>
<td>Organization does not offer an education program to support the treatment of sepsis.</td>
<td>15%</td>
</tr>
</tbody>
</table>

Q12. Does your system have a sepsis-specific education program?
Classroom and online are the most common types of sepsis training.
34% say sepsis isn’t a key priority in their organization.

33% say their organization is not well prepared for a patient with sepsis.

“Prehospital sepsis care should be a priority for every EMS organization. We need to improve and recognize the importance of prehospital identification of sepsis”

- Craig Manifold, DO
Medical Director, NAEMT
25% state that while they know patients have sepsis, physicians don't like to diagnose them with it.

58% say when patients are showing signs of sepsis, not all hospitals initiate a sepsis protocol.

“Although sepsis alerts are being implemented more widely, EMS professionals still need to **advocate** for their patients and say ‘I suspect sepsis!’”

- Rom Duckworth, award-winning EMS educator, career fire captain, and EMS coordinator

Q14. How much do you agree or disagree with the following statements?
79% say when families are told their loved ones have sepsis, most have never heard of it.

“When public sepsis awareness is increasing, patients and families still may not know to call and say "sepsis." EMS clinicians can play a critical role with early suspicion, assessment and coordination of care.”

- Thomas Heymann, President & Executive Director, Sepsis Alliance
EMS practitioners look to their own associations for information regarding sepsis.

- EMT/EMS Associations – 72%
- Their own facility – 41%
- CDC – 39%
- NIH – 26%
- Other medical organizations – 26%

Q15. Which of the following, if any, sources do you use or get your information regarding sepsis?
Survey Demographics

Primary role
- EMR – 1%
- EMT – 27%
- Paramedic – 46%
- Supervisor – 5%
- Manager – 2%
- Training coordinator – 8%
- EMS Director – 5%
- Medical Director – 1%
- Other – 5%

Primary employment
- Paid – 81%
- Volunteer – 15%
- Other – 4%

Level of patient care
- First aid only – 5%
- First response – 31%
- BLS transport to emergency department – 38%
- ALS transport to emergency department – 68%
- Critical care transport – 25%
- Other – 11%

Years in the EMS profession
- 0-47 years

Seen sepsis patients
- 83% have seen patient with sepsis in past year
References

   http://jamanetwork.com/journals/jama/fullarticle/2654187


   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4028958/

   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3622444/
