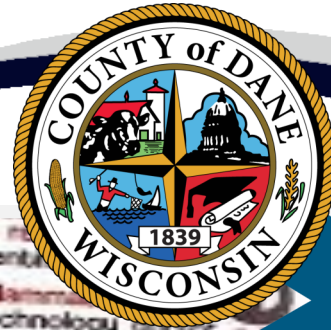


# Dane County EMS

Monthly Newsletter

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## SEPSIS

Sepsis is a serious medical problem caused by an overwhelming response to infection. Annually in the United States, more than one million patients are diagnosed with sepsis, approximately 25% of whom will die. Over 11% of hospitalized patients are diagnosed with sepsis, and sepsis is responsible for greater than 40% of hospital deaths. Including pneumonia, sepsis accounts for \$33.1 billion or 8.7% of the total costs of inpatient care in the United States.

Sepsis is:

- *Not* caused by the infection itself
- A complex process resulting from the body's *systemic response* to an infection
- Leads to problems with the body's ability to perfuse the tissues resulting in organ failure and shock.

Who is most at risk?

- Elderly
- Newborns
- Immunocompromised
- Those with chronic illnesses (DM, Kidney disease, COPD)
- Debilitated
- Drug and Alcohol abusers
- Those receiving invasive medical treatments involving IV's or catheter

## Influenza Reminder:

Influenza is a respiratory illness caused by the Influenza A or B viruses that cause outbreaks both domestically and internationally every year, typically in the winter months. It usually causes an upper and lower respiratory illness and comes with fever, headache, muscle aches and weakness. It is not usually associated with nausea, vomiting or diarrhea that the community generally labels, "the flu". In the general population, uncomplicated Influenza is generally not life-threatening, and is self-limited.

Influenza is often present in the respiratory secretions of infected persons, and is usually transmitted through large droplets spread by sneezing or coughing. Contact with infected surfaces may also cause spread of the virus. The typical incubation period after infection with influenza is 1-4 days, and people are generally believed to begin shedding virus (and contagious) for the 24-48 hours before symptom onset. \*Reminder: Use PPE and universal precautions.

Complications of influenza are more common in high-risk groups, and include both viral and bacterial pneumonia, myositis (severe inflammation and pain of the muscles, most commonly the legs) and muscle breakdown (rhabdomyolysis), acute myocardial infarction, pericarditis, encephalopathy and toxic shock syndrome.

There have been increasing reports of viral resistance to the adamantanes and neuraminidase inhibitors, so treatment is generally reserved for severely ill patients with confirmed influenza, or patients with known or suspected influenza who are at high risk for complications.

The United States Advisory Committee on Immunization Practices (ACIP) recommends influenza vaccine for all individuals over 6 months of age. High-risk individuals, their close contacts and health care workers should remain high-priority populations in vaccination campaigns.

If you have any additional questions, please do not hesitate to contact me at [mtlohmei@medicine.wisc.edu](mailto:mtlohmei@medicine.wisc.edu), or the Dane County EMS Office at [dcems@countyofdane.com](mailto:dcems@countyofdane.com).

## SEPSIS - CONTINUED

Not recognizing sepsis early can result in delays in treatment and increases the patient's risk for death. We know that time-sensitive care for patients with trauma, acute myocardial infarction, & strokes save lives. Sepsis falls into this category too. EMS recognition is the critical first link!

Check us out on Facebook!

[www.facebook.com/](http://www.facebook.com/DaneCountyEMS)

DaneCountyEMS



Assess your patient for the following:

1. Does your patient meet Systemic Inflammatory Response Syndrome (SIRS) criteria?

**2 or more of the following:**

- ◇ Temp greater than 38 (100.4)
- ◇ Temp less than 36 (96.8)
- ◇ Chills/Rigors
- ◇ Pulse greater than 90
- ◇ Respiratory rate greater than 20
- ◇ Acute mental status change from baseline
- ◇ Glucose greater than 120 without history of Diabetes

2. If yes, then is the patient's history/complaint suggestive of an infection?

3. If yes, then begin IVF bolus, 500ml NS and consider Shock/Non-Trauma Protocol. Is any of the following organ dysfunction present and NOT considered chronic and NOT caused by another condition? Consider ALS intercept.

- ◇ SBP  $\leq$  90mmHg
- ◇ SBP down 40 mmHg *from baseline*
- ◇ New or increased Oxygen requirements to keep SpO<sub>2</sub>  $\geq$  90%
- ◇ ST segment depression on 12 lead EKG
- ◇ Mental Status changes

4. **Notify receiving hospital of "Medical Red, SEPSIS ALERT" as part of radio report.**



Hospitals with prompt notification of a SEPSIS ALERT can prepare to intervene immediately. IVF resuscitation, antibiotic administration within the first hour of arrival, and pressors are

## SYMPTOMS OF SEPSIS

**S** Shivering, fever, or very cold  
**E** Extreme pain or general discomfort ("worst ever")  
**P** Pale or discolored skin  
**S** Sleepy, difficult to rouse, confused  
**I** "I feel like I might die"  
**S** Short of breath



Watch for a combination of these symptoms. If you suspect sepsis, see a doctor urgently, CALL 911 or go to a hospital and say, "I AM CONCERNED ABOUT SEPSIS."

SEPSIS.ORG

### If you suspect influenza -

- ◆ Wear a surgical or procedure mask for close contact with infectious patients. If patient is able, have them also don a mask.
- ◆ Wear gloves.
- ◆ Perform hand hygiene after contact with infectious patients.