

Introduction: Welcome to Sepsis 911, Sepsis and Aging. My name is Ann Loges, I will be presenting today's event with my colleague, Diane Trende. We are both Senior Quality Improvement Facilitators with Telligen. This educational opportunity is provided by Telligen Quality Improvement Network – Quality Improvement Organization (QIN-QIO) along with Sepsis Alliance who produced this education; in part by a grant from Merck and Company Inc. We are speaking to you today about Sepsis; something that you may not have heard of, or something you don't know much about it, you are not alone.

Why am I doing this presentation? For me professionally, I am a nurse, and my passion is saving lives. Sepsis is fatal. Yet, the statistics state that many Americans have never heard of Sepsis. Today, let's change that. Knowledge is power. For me personally, I have witnessed firsthand with my father, while hospitalized following a stroke at the age of 73, how Sepsis delayed his healing with a trip back to the intensive care unit, and additional complications which included an 18-day hospital stay, followed by an extensive nursing home rehabilitation that significantly impacted his quality of life. He experienced worsened cognitive functioning, including posttraumatic stress disorder. Furthermore, in my community, Sepsis is devastating lives through the loss of loved ones, young children and the elderly. Sepsis can affect anyone at any time. Knowledge is not only power, it can be lifesaving.

According to the latest survey conducted annually by Sepsis Alliance, the nation's leading Sepsis nonprofit organization, nearly 1/3 of American adults have never heard the word Sepsis, and many who have heard the word don't really know what it means, or how important it is.

The goal of today is to help improve that statistic. In the next 30 minutes, I am going to cover along with my colleague, Ann Loges, what Sepsis is and isn't, the symptoms and stages, as well as prevention, how it disproportionately affects older members of our community and what to do if you think you or a loved one has Sepsis.

What is Sepsis? Let's get started! It is your body's toxic response to an infection. It kills about 270,000 people every year in the United States. That is more than people who die from breast cancer, prostate cancer, and AIDS, combined. When you have an infection, your immune system works hard to fight it. Sometimes, it can fight the infection on its own, and other times, it needs help with drugs, like antibiotics, antifungal, or antiviral medications.

For reasons we don't understand, sometimes instead of fighting the infection, your body starts to attack itself. This is Sepsis. It is the number one killer in hospitals in the United States; however in most cases, 87% begin in the community. Not a hospital. This means that most of the time sepsis develops from an infection someone gets in everyday life, as opposed to results of hospital procedure, or complication.

Sepsis and older adults: How does this affect older adults? Here are some statistics that may surprise you:

- More than 80% of Sepsis patients are 50 years of age or older.
- 70% of hospitalizations for Sepsis are for people who are over 60 years old.
- Adults aged 65 and older are 13 times more likely to be hospitalized with Sepsis, than adults younger than 65.

- Older adults who are in the ICU for septic shock, tend to be sicker than their younger counterparts and stay longer.
- Older Sepsis survivors are at a higher risk for long-term cognitive impairment, and physical problems than others their age who were treated for other illnesses.
- 76% of older Sepsis survivors are more likely to be discharged to a skilled nursing facility, rather than to their previous living arrangements.

What Sepsis isn't. People may refer to Sepsis as blood poisoning, but that term isn't accurate anymore. Sepsis is also not an infection and it is not contagious. It is your body's reaction to an infection. It is also not rare. In fact, about 1.7 million people in the United States develop Sepsis every year.

Why have so few people heard of Sepsis? In the healthcare community, Sepsis isn't necessarily a commonly used word, which is surprising because it is not an uncommon illness. Unfortunately, doctors tend not to use the word Sepsis; instead, saying things like complications of pneumonia or complications from an infection. Even death certificates often default to the original diagnosis, which could be cancer or another illness. Stating complications of ... if doctors and nurses aren't using the word Sepsis, it is more difficult for patients and families to learn about it. We all need to start using the word, say "Sepsis."

Sepsis does not discriminate. Anyone of any age can get Sepsis. In addition to being older, there are others who are at a higher risk, including people with a chronic illness, such as diabetes, or COPD, also known as chronic obstructive pulmonary disease. The very young are also at higher risk. And on the other end of the spectrum, the very old are at risk. People who have weaker immune systems, which can be caused by taking medications like steroids, or chemotherapy, are also in this group.

Why are older people at higher risk? There are several reasons. For example, older people may:

- Have one or more chronic conditions that increase the risk of Sepsis;
- Take multiple medications, some of which lower the immune system's ability to fight infection;
- Be admitted to a healthcare facility, where they may contract an infection;
- Have fragile skin, that tears or breaks easily and can become infected;
- Have sustained a fracture or other serious injury from falling.

Also, if you have had sepsis before, you may be at a higher risk of developing it again. It is also important to understand that as we age, we may not show signs of an infection as we did when we were younger. There are signs that may indicate that Sepsis is developing. For example, the signs and symptoms of a urinary tract infection (UTI) are usually burning when urinating, an increasing urgent need to urinate and cloudy or foul-smelling urine. However, many older people who have a urinary tract infection (UTI) do not show those symptoms. And the first sign that something is wrong is they suddenly become confused or disoriented. Or, if they have cognitive issues already, they deteriorate. Therefore, an infection may not be detected in its early stages.

Symptoms: There is no one symptom for Sepsis; instead, it is a compilation of symptoms. Sepsis Alliance put together an acronym to help you remember the most common ones. Remember the word “TIME” as in time is of the essence, and recognizing, diagnosing, and treating Sepsis.

- T- temperature; Higher or lower than normal
- I- signs of an Infection
- M - mental decline; could be confused, sleepy, or difficult to arouse
- E - feeling extremely ill, like the worst they ever felt

At first glance, these symptoms may seem quite vague, like those of the flu. It is when someone has a combination of these symptoms, paired with an infection, that Sepsis should be a serious concern.

Sepsis is a medical emergency. If someone you know has an infection, or is very sick, with any of these symptoms, suspect Sepsis and seek medical help right away. Just like strokes and heart attacks, time is vital. The chances of surviving Sepsis drops as much as 8% every hour there is no treatment. Sepsis is a medical emergency, call 911, and be sure to let them know you are concerned about Sepsis.

Why does Sepsis occur? What causes Sepsis? To quickly recap, we already talked about how Sepsis is your body's toxic response to an infection. When you have an infection, your immune system works hard to fight it, but sometimes your immune system turns and starts to attack itself. This is Sepsis.

Types of infections that may lead to Sepsis: We already know that infection may lead to Sepsis; but, I also want you to know this infection can be caused by bacteria, viruses, fungi, or even parasites.

This is why it is particularly important to be aware of the signs and symptoms of sepsis if:

- You have been injured by a cut or a bug bite
- You have had an illness, like food poisoning or pneumonia; or
- You have had an invasive procedure, such as surgery, a urinary catheter, or even an intravenous line.

Anytime your skin is broken, or something is introduced into your body, you are at risk of developing an infection. That being said, sometimes people who develop Sepsis never knew they had an infection, or the doctors never identified what the infection was.

Progression of Sepsis: Sepsis, when left untreated, can progress to septic shock. Sepsis can progress very quickly, which is why it is so important to know the symptoms and to get medical attention right away, if you suspect sepsis.

Let's talk more about Sepsis. So, someone has an infection, and their body is trying to fight it, but it turns on itself. Now this person has Sepsis. We have already talked about the symptoms, and they are important to reference again as we talk about how Sepsis progresses. Sepsis is when you have an infection and combination of any of the symptoms; such as a high or low body temperature, rapid breathing, confusion, and change in mental status.

Sepsis is a medical emergency that requires urgent attention, and rapid treatment for survival. Sepsis can be treated, and in many instances, lives are saved by using existing and proven protocols. As many as 80% of sepsis deaths can be prevented with rapid diagnosis and treatment.

Septic shock: It is a severe and potentially fatal condition. It occurs when Sepsis leads to life-threatening low blood pressure. It is the most difficult to treat. Remember, I have shared that if you have septic shock, your chances of survival, drops as much as 8% every hour you are not treated.

Who gets Sepsis? Sepsis does not discriminate. Anyone of any age can get Sepsis. There are those who are at higher risk, including people with a chronic illness, such as diabetes, or COPD. The very young are also at higher risk, because they do not have fully developed immune systems yet. On the other end of the spectrum, older adults are at risk, as are people who have weaker immune systems, which can be caused by taking medications, like steroids or chemotherapy. All of these increase the risk of Sepsis. Also, if you have had Sepsis before, you may also be at a higher risk of developing it again.

Celebrities and Sepsis: Sepsis sometimes makes national headlines, especially when a celebrity is involved. Each of these well-known people died from sepsis.

- Professional boxer, Muhammad Ali, who had Parkinson's disease, passed away in June 2016, from Septic Shock.
- Actress Patty Duke experienced a ruptured intestine and passed away in March 2016, from Sepsis.
- Muppets creator, Jim Henson, passed away in May, 1990 from Sepsis.
- Singer Mel Tillis had diverticulitis, and developed Sepsis. He spent almost a month in the intensive care unit before his death in November 2017.
- Pope John Paul II passed away from Sepsis and multiple organ failure in April 2005. He had many infections over the last few years of his life, and developed a UTI, just before his death.
- Singer Etta James developed a UTI and died of Sepsis in 2012.
- Microsoft founder, Paul Allen, had cancer and was immunocompromised; he died of Sepsis in 2018.

Complications after treatment: Unfortunately, the treatment needed to save people from dying from Sepsis can cause long-term consequences, such as post Sepsis syndrome, posttraumatic stress disorder (PTSD), organs not working properly, and even amputations.

Post Sepsis syndrome is a condition that affects up to 50% of Sepsis survivors. They are left with physical or psychological long-term effects such as:

- Insomnia, difficulty getting to sleep, or staying asleep
- Nightmares, vivid hallucinations, and panic attacks
- Disabling muscle and joint pain
- Extreme fatigue
- Poor concentration
- Decreased mental functioning, and loss of self-esteem and self-belief.

Likewise, there are many survivors who are diagnosed with PTSD following their treatment.

In severe cases, amputations are required after sepsis. The medications given to keep the blood flow going to the major organs can cause tissue death in the extremities, causing them to turn black. Often this happens in the fingers and toes first; when too much tissue dies, it has to be removed, which sometimes means amputation. After surviving sepsis, many experience impaired cognitive or physical function. This is very significant among people over the age of 65. In fact, on average, older sepsis survivors experience one to two new limitations in their activities of daily living after they were hospitalized.

Sepsis prevention: Sepsis can't always be prevented; but, we can reduce our risk of contracting an infection which reduces our risk of getting sepsis. We reduce our risk of infection by following some simple steps; including frequent and thorough handwashing, keeping wounds clean and dry, avoiding people who are sick and avoiding going out when we are sick, receiving recommended vaccines, and taking care of ourselves when we do get an infection. That means:

- Taking antibiotics when prescribed, for a bacterial infection and following the directions
- Taking them as often as prescribed, and for as long as prescribed
- Not taking someone else's antibiotics, because you think it may be the same infection
- Not asking for antibiotics for an infection that is not bacterial.

What you can do: Advocate- Up to half of Sepsis deaths could be prevented by timely recognition and treatment, and many complications could be avoided. In order to advocate for yourself and your loved ones, you need first to know that Sepsis exists. That is why Sepsis awareness is vital, and hopefully after today, you know more about Sepsis and can recognize the symptoms.

In addition to recognizing Sepsis, it is important to express your concerns to the medical team, and ask for clarification if anything is not understood. You can also visit [Sepsis.org](https://www.sepsis.org) for even more information and resources.

Thank you for sharing your time today to learn more about Sepsis. If you are looking for more resources, you can go to the Sepsis Alliance website, [Sepsis.org](https://www.sepsis.org), email them at info@sepsis.org or find them on social media.

This concludes the Sepsis 911 Sepsis and Aging community education. Thank you for participating.