



SAVING LIVES

Treating Sepsis in the Golden Hour

The diagnosis and treatment of Sepsis poses a medical emergency. The disease kills more people than AIDs, prostate and breast cancer combined globally. Worldwide sepsis is one of the most common deadly diseases in all countries, yet it is the one of the least well known. Every hour, around 1,000(1) people die from Sepsis worldwide. If diagnosed and treated in the first hour following presentation with sepsis, the patient has more than an 80% survival rate. After the sixth hour, the patient only has a 30% survival rate(2). It's crucially important that the early symptoms of Sepsis are recognised by both the public and the healthcare sector and treatment accessed, where possible, within the first hour – the “Golden Hour.” If it is, then the risk of death from Sepsis is halved. (3)

Despite the fact that a patient with Sepsis is around five times more likely to die than a patient who has suffered a heart attack or stroke, the disease is still not recognised or afforded the same sense of urgency as these critical care conditions. If a patient were to stumble into an emergency room clutching their chest and barely able to walk, he or she would be treated immediately. Yet symptoms of Sepsis are less widely appreciated and therefore present a more deadly threat.

Awareness is the number one cure for Sepsis. Raising recognition of the disease and increasing the number of patients treated in the ‘Golden Hour’ is the single biggest attempt we can make to save lives.’ Sepsis is still not treated as a medical emergency because awareness is low and many cases and deaths are misdiagnosed and attributed to underlying infections, such as pneumonia, rather than the true cause of death- Sepsis. For example, at aged 7 months, Tilly caught Sepsis while she had chicken pox. Her parents took her to an out-of-hours doctor, who prescribed her antibiotics and sent her home. She worsened, became limp and unresponsive and was taken to hospital, which the family anticipated would be a place of safety. However, the hospital staff didnot diagnose her condition, leaving Tilly’s mother to watch her deteriorate further. Seeing Tilly fighting for her life led Tilly’s Mum to demand that a senior Consultant attend- when she did, she immediately knew that Tilly had to be transferred to Intensive Care as an emergency. Had her mother not fought for a senior doctor, Tilly would not have survived. Tilly’s case is not unusual; Sepsis and its symptoms are not widely recognised, meaning that hospital staff often under diagnose and remain mystified as a patient’s health rapidly decreases.

The health industry has a challenging time ensuring that the signs and symptoms of Sepsis are recognised from the outset. These include a rapid heart rate, difficulty breathing, low blood pressure, a change in behaviour (confusion, drowsiness or slurring words- patients can appear ‘drunk’), hypothermia, diarrhoea, changes in skin colour and sore throats amongst other, lesser

Contact

World Sepsis Day

Head Office

Global Sepsis Alliance

Center for Sepsis Control & Care

Erlanger Allee 101

07747 Jena Germany

T +49 3641 9323191

E office@world-sepsis-day.org

www.world-sepsis-day.org

World Sepsis Day: September 13



symptoms. Similarly, the recognition of these warning signs should not only occur amongst emergency room staff but, due to the very urgent and rapid nature in which the disease takes hold, amongst all healthcare professionals the patient may encounter beforehand, such as community nurses, family doctors and paramedics. All healthcare practitioners should be able to initiate treatment with the right antibiotics and out-of-hospital fluids, similar to the way they would initiate first aid for a heart attack or stroke outside of a hospital. Likewise, the early diagnosis and treatment of patients with sepsis within the 'Golden Hour' is as important as catching myocardial infarction or stroke early as treatment delays in Sepsis can result in the loss of limbs or life. The Global Sepsis Alliance (GSA) is supporting work in the UK with 4 major Ambulance Services, who are training their Paramedics to screen for sepsis in the ambulance, commence out-of-hospital fluids, and pre-alert receiving Emergency Departments of the diagnosis so that they can mobilise the right hospital staff to ensure the patients receive rapid and appropriate treatment. If proven effective, these strategies will be rolled out across other countries. Recognising sepsis requires high awareness and a clinical assessment of the patient, including basic patient observations and a number of blood tests. Coupled with the fact that sepsis can arise at any time and in any patient, this explains why sepsis is so commonly overlooked.

Raising recognition of Sepsis is an important step in the long fight against reducing mortality rates for the disease. However, the real change in levels of awareness, from weak knowledge of Sepsis symptoms to instant recognition, can only be driven from the top of the professional healthcare sector and policymakers themselves. The growing burden of Sepsis in the developed and developing world must catch the attention of health policymakers at the regional, national and global level.

One factor that will really grab policy makers' attention is the massive emotional and economic burden of Sepsis. The number of cases of Sepsis has doubled since 2008 in the US with an estimated \$14.6 billion spent on hospitalisations. From 1997 through 2008, the US inflation-adjusted aggregate costs for treating patients hospitalised for this condition increased on average annually by 11.9%(4,5,6,7). In Germany the cost of a typical episode of sepsis to healthcare services increased over the last decade from approximately 25,000 to 55,000 Euros. In the midst of a global, economic crisis that sees governments introducing spending cuts and harsh austerity measures, ignoring one of the most deadly diseases will lead to continued, huge and avoidable healthcare costs.

The Global Sepsis Alliance (GSA) and its members that include - the World Federation of Societies of Intensive and Critical Care Medicine (WFSICCM), the World Federation of Intensive and Critical Care Societies (WFPICCS), the World Federation of Critical Care Nurses (WFCCN), the International Federation for Emergency Medicine (IFEM), the International Sepsis Forum (ISF) and the Sepsis Alliance (SA) have joined together to issue a call to action to bring the tragedy of Sepsis mortality to the attention of health policymakers at a national, regional and global level. In order to do this, they are asking everyone to support the first World Sepsis Day which will take place on September 13th 2012.

Contact

World Sepsis Day
Head Office
Global Sepsis Alliance
Center for Sepsis Control & Care
Erlanger Allee 101
07747 Jena Germany
T +49 3641 9323191
E office@world-sepsis-day.org
www.world-sepsis-day.org
World Sepsis Day: September 13



However, while we wait for the policymakers to stand up and take notice, there is another way to address this fast-killing disease. Already there are many hospitals globally committed to setting up schemes that introduce briefings on Sepsis for hospital workers and introductions into learning who to target and screen for Sepsis in the emergency department. These schemes can then feedback on how to better improve the rates of mortality amongst Sepsis victims by identifying and how to best treat the first stages of the disease in the Golden Hour.

Treating Sepsis in the “Golden Hour” is a real opportunity to reduce the drastic levels of people who are still dying or are seriously affected by Sepsis. However, the key to treatment within this crucial time period comes through awareness. Only a global approach to tackling Sepsis and reinforcing recognition at every level will drive an initiative to reduce the amount of deaths in every country.

References

1. Angus DC, Linde-Zwirble WT, Lidicker J et al. Epidemiology of severe sepsis in the United States: analysis of incidence, outcome, and associated costs of care. *Crit Care Med* 2001; 29: 1303–10
2. Kumar A, Roberts D, Wood KE et al. Duration of hypotension prior to initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock. *Critical Care Medicine* 2006; 34: 1589–96. Rivers E, Nguyen B, Havstad S, Ressler J, Muzzin A, Knoblich B, Peterson E, Tomlanovich M. Early goal-directed therapy in the treatment of severe sepsis and septic shock. *N Engl J Med*, 2001. 345(19): p. 1368-77.
3. Hall MJ, Williams SN, DeFrances CJ, Golosinskiy A (2011) Inpatient care for septicemia or sepsis: A challenge for patients and hospitals. NCHS data brief. Hyattsville, MD: National Center for Health Statistics DOI: <http://www.cdc.gov/nchs/data/databriefs/db62.htm>
4. International Organizations Declare Sepsis a Medical Emergency. Issued by an expert panel representing 20 adult and pediatric intensive care societies, October 4th 2010. 2010: Press release. Available from: <http://www.prnewswire.com/news-releases/international-organizations-declare-sepsis-a-global-medical-emergency-104142073.html>. [accessed 2012 16th February]
5. Kumar G, Kumar N, Taneja A, Kaleekal T, Tarima S, McGinley E, Jimenez E, Mohan A, Khan RA, Whittle J, Jacobs E, Nanchal R. Nationwide trends of severe sepsis in the 21st century (2000-2007). *Chest*, 2011. 140(5): p. 1223-31.
6. Yeh RW, Sidney S, Chandra M, Sorel M, Selby JV, Go AS. Population trends in the incidence and outcomes of acute myocardial infarction. *N Engl J Med*, 2010. 362(23): p. 2155-65.

Contact

World Sepsis Day
Head Office
Global Sepsis Alliance
Center for Sepsis Control & Care
Erlanger Allee 101
07747 Jena Germany
T +49 3641 9323191
E office@world-sepsis-day.org
www.world-sepsis-day.org
World Sepsis Day: September 13