Sepsis: Prevent it. Spot it. Treat it – beat it.

World Sepsis Day Newsletter 04/2014

25 days till World Sepsis Day +++ Ebola & Sepsis +++ Life after sepsis survey +++ Only what is counted counts +++ New York, Mexico, Netherlands, Poland, Germany +++ General Assembly of the United Nations +++ Quality initiatives +++ Sepsis awareness can be rewarding!

Take action – help to increase awareness and participate in education about sepsis. Support the World Sepsis Declaration by registering on the World Sepsis Day website. Speak up about sepsis. Support our request to get sepsis on the agenda of the United Nations.

Life after sepsis – a survey about problems faced by sepsis survivors

After surviving an acute phase of sepsis, a patient may continue to struggle with a long list of serious symptoms. The extent of these complications varies, depending on the severity of sepsis and the length of treatment in an intensive care unit and hospital. Such complications may persist for years after a sepsis episode, often having far-reaching effects on a survivor’s quality of life. The lack of specific, standardised rehabilitation programs for sepsis patients further slows or hinders full recovery.

Among the long-term physical effects are functional impairment of the muscles due to atrophy and nerve damage (critical illness polyneuropathy and critical illness myopathy), loss of body substance (cachexia, atrophy), problems with swallowing or speaking, and/or general weakness and low physical resilience.

The psychological long-term effects range from cognitive changes and disorders to panic attacks and depression. Despite the known impact, there is limited data available on the extent of problems faced by sepsis survivors.

This is why - together with sepsis survivors, the UK Sepsis Trust, Sepsis Alliance, Sepsis Aware, Sepsis Survivors Engagement Project, and Loma Linda University - World Sepsis Day is fully dedicated to improving medical knowledge on the long-term effects of sepsis. Dealing with the long-term impact of sepsis must become an integral part of learning curricula for healthcare workers around the world so that sepsis survivors and their loved ones can receive the support they need. Armed with the know-how of individual quality-of-life experiences after sepsis, we can make a real difference.

The study will be open for participation in English, Spanish and German from World Sepsis Day 13 September 2014 till 13 September 2015. Additional languages will follow.

The number of sepsis cases is rising and is still underestimated

To date we are experiencing an outbreak of Ebola* virus disease in West Africa, which is the most severe in recorded history. Infection with this virulent and contagious agent leads to death from sepsis with multi-organ failure in 70 – 90% of sufferers. Since 1976 when it was first identified, this disease has killed roughly 2,000 people.

Now, everything possible needs to be done by the national authorities and the international community to stop this frightening disaster.
What makes Ebola so deadly

Ebola is a viral illness which infects through direct contact with blood or bodily fluids of a sick person or animal, or with contaminated objects. It leads to sepsis and organ failure and kills up to 90% of victims.

1. Symptoms: Onset of illness is abrupt and is characterized by fever, headache, joint and muscle aches, sore throat, red eyes, and weakness.

2. Cytokine storm: Immune cells get caught in endless loop, releasing extreme levels of cytokines – proteins within cells which cause inflammation – and attracting yet more immune cells.

3. Septic shock: Several organs stop functioning sequentially or simultaneously, and cardio-circulatory failure leads to a sudden drop in blood pressure.

Infection: Ebola genome contains four genes which together prevent dendritic cells – in skin, nose, lungs and digestive system – from sending messages to trigger immune system.

Unchecked viral growth: Virus spreads to cell types throughout body by binding glycoprotein to receptors on cell surfaces.

Unseen viral growth: Virus spreads to cell types throughout body by binding glycoprotein to receptors on cell surfaces.

VP40, VP24: Proteins enable virus reproduction.
However, we should remind ourselves that this menacing headline — infection accounts for less than one-thousandth of a percent of the 300 million deaths from infection globally in the same time frame. The world must face the fact that despite the advances of modern medicine, the fight against infectious diseases and sepsis is far from won. The public is largely ignorant of the fact that sepsis – also called “blood poisoning” – can be triggered by almost any infectious disease and is responsible for almost 8 million annual deaths worldwide. The annual increase of sepsis cases in industrial nations by 7 – 8% over the last decade has gone largely unnoticed and unremarked. Sepsis cases are increasingly caused by viruses and multi-resistant bacteria. The U.S. National Center for Health Statistics of the Centers for Disease Control and Prevention (CDC) has issued estimates derived from claims data that sepsis cases have increased in the U.S. from 621,000 in the year 2000 to 1,141,000 in 2008. CDC

* Ebola virus infections are characterised by immune suppression and a systemic inflammatory response that causes impairment of the vascular, coagulation, and immune systems, leading to multi-organ failure and shock, and thus, in some ways, resembling septic shock. (Feldman and Geisbert Ebola review Lancet 2011.pdf)

**To correct this oversight, we need to achieve the following:**

- spread the understanding that most acute infectious diseases only become deadly when they develop into sepsis with organ failure
- have sepsis accurately coded as primary and secondary diagnosis in hospitals under the International Classification of Diseases Systems of the WHO (ICD9 or ICD10).

If sepsis is coded appropriately this will be reflected in the national health statistics or burden of disease reports. These national statistics are the basis of the GBDR.

**To support these actions, please find the WHO ICD 10 codes here.** Although the WHO is committed to extending their educational material on sepsis and to contribute to an improved representation of sepsis in the GBDR, this will only have the necessary impact if national health statistics reflect the true burden of sepsis.

**Educate the public about sepsis:**

**- prevention measures and long-term outcomes of the disease**

In the last two years, numerous initiatives from all regions of the world came forward with quality improvement measures. The result of these actions might have contributed to the awareness about sepsis in the medical community as well as led to recent publications and studies (see newsletter 2 & 3 /2014). Yet, as long as sepsis is not a household term and caregivers, parents and laypeople are not informed about prevention and the early signs of sepsis, needless deaths will occur. Most of us do not have the means to launch national or regional advertising campaigns, yet what can be done is to establish “sepsis” there, where laypeople search for reliable information – on the websites of National Centers for Disease Control and its national equivalents. On the WHO website, sepsis does not appear in the A-Z list except as “maternal sepsis” and “sepsis in newborns” and until the beginning of this year, sepsis did not appear on the CDC website. The same was true for the Robert Koch Institute [RKI, center for disease control in Germany]. But individual and joint activities have worked to achieve the recognition of sepsis on both the A-Z lists of the CDC in the U.S. and the German equivalent, RKI. The directors of the U.S. CDC and the German RKI are now ambassadors for World Sepsis Day. **This is just the beginning.**
Other ways of increasing awareness about sepsis are the numerous great events – in addition to the pink picnics – happening around the globe on a very local level.

For example, “The Johnathan R. Vasiliiou Foundation” (learn more here) has for two years run a “zombie gauntlet” to raise funds in memory of Johnathan Vasiliiou, who died of sepsis as a teenager. The racer packets includes information on sepsis along with T-shirts. A portion of the 2014 proceeds will sponsor a commercial on the local radio station during the month of September promoting World Sepsis Day and sepsis awareness.

The annual “Sepsis Hero” event on 18 September in New York established a Charity Gala which celebrates Champions of Sepsis Awareness with a growing national outreach and high press engagement, honouring outstanding organizations and individuals. The creation of communication-relevant events for the press achieves a twofold goal. It applauds those people working toward the spread of sepsis awareness and therefore inspiring others, and creates positive media communication with attractive, eye-catching images. Of course, time is needed before the impact of nationwide featured galas can be attained – but persistence and the high quality of this event will surely foster sepsis awareness. (learn more about Sepsis Heroes here)

Seminar and lectures about sepsis are gaining ground for medical professionals

Seminars and lectures for medical professionals are a high-impact feature in the spread of sepsis know-how. We are aware of over numerous events in September so far – ranging from local training sessions for juniors, doctors and nurses to national congresses with an international outreach.

We are unfortunately not able to list all of these great events, but the following highlight the range of efforts:

- **Paris, France, 12 September**, Colloquium, organization committees: Institute Pasteur, Fondation pour la Recherche en Réanimation, Collectif Interassociatif Sur la Santé (CISS), Le Lien, Alliance Contre le Développement des Bactéries Multi-Résistantes and the Hospital Group St-Joseph. (click to learn more)
- **Lunteren, Netherlands, 12 September**, 1st Netherlands International Sepsis Symposium, Speaker of the program committee Arthur R. H. van Zanten, Chair Sepsis Expert Group National Patient Safety Program, The Netherlands (click to learn more)
- **Sao Paulo, Brazil, 18-19 September**, 11th International Sepsis Forum, Organizer: LASI / Instituto Latino-Americano de Sepse (click to learn more)
- **Heidelberg, Germany, 10 September**, Symposium: Diagnostic and Therapeutic Management of Sepsis. (click to learn more)
- **Temuco, Chile, 13 September**, “Infections and sepsis in critically ill patients Reunion”, Organized by Chilean Intensive Care Society (SOCHIMI) and the Critical Care and Emergency Society (Intensive Network)
- **Bogota, Colombia, 12-13 September** “Pan American Sepsis Symposium” organized by the Colombian Critical Medicine and Intensive Care Association (AMCI).
- **México, México, 13 September**, World Sepsis Day Symposium, Organized by the GEMEI (Grupo Mexicano para el Estudio de la Medicina Intensiva) [Grupo Mexicano para el Estudio de la Medicina Intensiva] (click to learn more)
- **Washington DC, USA, ICAAC; 08 September**, World Sepsis Day Roundtable Symposium, Chaired by Philipp Dellinger. Supported by BD Diagnostics (click to learn more)
Sepsis as a government-relevant national healthcare topic

Whereas medical professionals must be informed on how to diagnose and treat sepsis, laypeople must know the signs of sepsis, and politicians, government, national healthcare workers and decision-making bodies must be informed about the burden as well as the social and economic impact of sepsis.

These different perspectives are discussed and publicised in the following two examples:

- **Washington DC, USA, 17 September**, First National Symposium on Sepsis, initiated by the Rory Staunton Foundation and co-organized by the North Shore-LIJ Health System. They have joined forces to discuss with an expert panel (from Dr Tom Frieden, Director CDC to Charles E. Schumer, U.S. Senator) the currently failing methods in addressing sepsis care and to share ideas for a fresh approach.

- **Berlin, Germany, 11 September**, National Sepsis Action Plan, Forum. A broad national coalition - the German Sepsis Society and Sepsis AID, Center for Sepsis Care and Control, German Center for Infection Research and invitees to a public round table discussion on the need for a national action plan to fight sepsis in Germany. Dr. H. Braun German Federal Minister and former Intensivist, and key academic figures have agreed to participate. [click to learn more]

Given the enormous and growing global burden of sepsis, World Sepsis Day needs to be officially acknowledged by the General Assembly of the United Nations. So far “World Disease Days” acknowledged by the General Assembly (GA) of the UN, are Cancer, AIDS and Hepatitis C. Key representatives of the WHO have encouraged the Global Sepsis Alliance to apply for this endorsement. However, to get sepsis on the agenda of the GA requires the request of two or three nations. This means only with the support of at least two national ministries of health will the GA take World Sepsis Day into consideration. If you feel you can help us by talking to the respective government authority in your country please let us know and we will provide you with the necessary information material.

Contact: office@world-sepsis-day.org

Carl Flatley and Erin Kay Flatley Foundation: New Sponsors of World Sepsis Day

In 2002 Erin Flatley, the beloved daughter of Carl Flatley, a dentist in Florida, had gone to the hospital for a simple surgical procedure. Six days later she died of sepsis. This was the first time Dr. Flatley had heard about sepsis, and the needless death of his daughter Erin changed his life forever. He went on to become a driving force in the fight against sepsis and a role model for others who have lost loved ones from the condition. In 2004 he founded the “Sepsis Alliance” which is one of the founding organizations of the Global Sepsis Alliance. In 2014 he initiated and published an App about sepsis through the „Erin Kay Flatley Memorial Foundation” – which is especially aimed at laypeople [download app here]. Through these and other outstanding efforts by Carl Flatley he has become a leading figure in fostering awareness about sepsis. The Global Sepsis Alliance and team of World Sepsis Day would like to say, “Thank you Carl, for not only becoming a long-term sponsor of World Sepsis Day but also for your relentless efforts to create awareness about sepsis.”

World Sepsis Day Website:

We are proud to announce that World Sepsis Day website translations are now available not only in English and German, but also in Spanish (www.world-sepsis-day.org). Thanks to the efforts of EDUSEPSIS and support from the Spanish-speaking community, outreach to the Spanish speaking public has increased significantly. This highlights the importance of local, community-adapted website information.
Pink Picnic event gallery

**Lithuania:** Professor Saulius Vosylius and members (students and residents) of the Anesthesiology and Intensive Care circle at Vilnius University Medical Faculty Students Scientific Society, Lithuania Anesthesiologists - Intensive Care Society during a team building event discussing World Sepsis Day activities in June.

**Mexico: Grupo Mexicano Medicina Intensiva**

The team around Dr. Raúl Carrillo Esper under the coordinations of Dra. Teresa de la Torre León and Dr. Carlos Alberto Peña Pérez discussing how to mend sepsis in Mexico with great cakes, sandwiches & food.
Global Event Movie

To bring your event into global focus, World Sepsis Day is collecting video material to create a compelling and informative movie about World Sepsis Day 2014.

You can use a smartphone/cellphone video or any other video format available to you. Please upload your small clip till 15 October.

We plan to publish the film around the end of November in combination with interview shorts from the Global Sepsis Alliance Executive Board. The movie will be available as a download from a secure server to facilitate access for hospitals and for different channels such as Vimeo and YouTube.

To be part of this movie, we ask that you:
1. Go to www.dropbox.com
2. Log in with the following email and password: email: info@geritzt.com / password: wsd2014
3. Click “Documentation WSD 14”
4. Drag & Drop the movie file onto “Upload”
5. Log out

Banners for your website

show your support with these two digital banners for your blog or website. Integrate the codes (just copy them) for the buttons [round or square] into your website and they will link to the World Sepsis Day Website.

We invite you to download the newsletter and use these key messages for your own bulletins, website, Facebook, and/or Twitter accounts or disseminate it to your colleagues /other organizations or friends in your area.

Date: 22 August 2014
Responsible: Konrad Reinhart, Ron Daniels, Flavia Machado, Niranjan Tex Kissoon, Regina Hanke
Feedback is always appreciated!
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#5moments: handhygiene
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