

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



World Sepsis Day **Newsletter** **03/2014**

World Sepsis Day is only 9 weeks away on 13 September 2014, and will be marked by events around the globe aimed at increasing sepsis awareness. Since the success of the World Sepsis Day 2013 Event Poster, we are now planning an even more engaging way of highlighting international efforts. We will publish a World Sepsis Day 2014 Movie where your event can be included. [More information on this can be found on page 4.](#)

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## **New alarming figures on the effect of sepsis on overall hospital mortality in the US**

Dr. Liu and colleagues have quantified the contribution of sepsis to mortality in two complementary inpatient cohorts from Kaiser Permanente Northern California (KPNC) and the Healthcare Cost and Utilization Project Nationwide Inpatient Sample (NIS). The Nationwide Inpatient Sample (2010) comprises data from 1051 Hospitals with 6 555 621 admissions and 143 312 deaths. The following results were reported in a letter to JAMA [Liu V, Escobar GJ, Greene JD, Soule J, Whippy A, Angus DC, et al. Hospital Deaths in Patients With Sepsis From 2 Independent Cohorts. JAMA July 14, 2014, DOI: 10.1001/jama.2014.5804]:

**a)** Sepsis contributed to 1 in every 2 to 3 deaths, and most of these patients had sepsis at admission.

**b)** Patients with sepsis, normal blood pressure, and measured lactate levels of less than 4 mmol/L (n = 15 095) comprised 55.9% (95%CI, 53.6%-58.1%) of sepsis deaths. Surprisingly, patients with initially less severe sepsis made up the majority of sepsis deaths. The majority of individuals who died with sepsis presented to the hospital with the illness. This contradicts the belief of policymakers and some healthcare authorities that sepsis results primarily from hospital-acquired infections.

The authors yielded another interesting find in their comparison of the two different approaches for the identification and classification of sepsis patients. The "explicit approach" identifies patients by the ICD-9 coding system according

to codes 038 (septicemia), 995.91 (sepsis), 995.92 (severe sepsis), or 785.52 (septic shock) and may result in under-recognition of sepsis. The authors also used an "implicit approach" according to the "Angus implementation" which is based on the International Consensus Conference Definition of Severe Sepsis. This method adds patients with evidence of both infection and acute organ failure. According to the "explicit" approach, 280 663 hospital admissions (4.3%) were attributable to sepsis compared to 717 718 hospital admissions (10.9%) when the "implicit" approach was used. Hospital mortality was 17.7% in the explicit and 10.4% in the implicit cohort. The authors concluded on this aspect of the report that: **"Given the prevalence of these patients, improving standardized care for patients with less severe sepsis could drive future reductions in hospital mortality."**

The authors furthermore report very interesting data from the KPNC quality improvement program. More than 25% of all patients with sepsis fulfilled the criteria for "early goal-directed therapy" (EGDT) (lactate >4 mmol/L) at admissions to the hospital, however, only 1 200 of the 2 536 eligible patients received EGDT. The mortality rate of patients who did not receive EGDT was 28.7% compared to 17.8% for patients who received EGDT. Also, 90% of the patients who received EGDT but only 43% of the patients who did not receive EGDT were directly admitted to the ICU. Obviously, it may be concluded that there was a relevant delay in the diagnosis in these patients who did not receive early goal-directed hemodynamic treatment.

**These findings again emphasize the relevance of early recognition and therapy of sepsis in the emergency department and in other hospital settings.**

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The results strongly contradict conclusions from Rhee et al, published in a "Perspective article" in the NEJM, that "standardized, screening protocols, bundled order sets, and algorithms for early, goal-directed therapy" might be harmful because "Protocols that force physician behavior risk promoting inappropriate prescribing of broad-spectrum antibiotics, unnecessary testing, overuse of invasive catheters, diversion of scarce ICU capacity, and delayed, identification of non-sepsis diagnoses." Rather, sepsis quality-improvement programs which employ standardized case identification are useful and could offer meaningful improvements in population mortality.

Konrad Reinhart



## Spanish website

We are particularly happy to announce that the Spanish version of the World Sepsis Day website is now live.

[Check the Spanish website here.](#)

Spanish, as one of the leading world languages spoken in 20 countries by approximately 450 million people, will broaden the reach of sepsis awareness worldwide.

This was made possible through the work of:

- Prof. Jorge Hidalgo, MD, MACP, FCCM, FCCP (Belize)
- Prof. Bettina von Dessauer, MD, PhD (Chile)
- Dr. Alexander Bataszew, MD, PhD (Chile)
- Prof. Sebastian Ugarte, MD, PhD (Chile)
- Prof. Ricard Ferrer Roca, MD, PhD (Spain)

Dr. Eduardo Romay Medina, MD, PhD (Spain)  
Alex Ferreti, translator (Uruguay)

Your work contributes significantly to the circulation of sepsis know-how beyond existing language borders. Thank you.

The editors in charge will be EDUSEPSIS ([learn more here](#)) in Spain, headed by Prof. Ricard Ferrer and his team, especially Eduardo Romay. You will see the Spanish website evolve into a continuously greater tool for the Spanish-speaking community to create awareness about sepsis.

In the event you want to support or contribute to the Spanish version of the World Sepsis Day Website please contact: [eromay@mutuaterrassa.es](mailto:eromay@mutuaterrassa.es)

## 2012 = start, 2013 = gaining impact, 2014 = reaching out further

World Sepsis Day is a single day on which worldwide events focus on creating sepsis know-how and awareness. These joint events are extremely impressive and have an influential global impact. Though there is still so much to be done, the rise of non-profit organizations and movements focusing on sepsis from a scientific, medical or microbiological perspective, as well as from a public or patient-orientated viewpoint, lends hope that the recognition of early sepsis symptoms will one day be as well known as those of a stroke.

Combining these worldwide events facilitates contact to relevant governmental bodies on both the national and international level. Global events range from fundraising campaigns, lectures, and congresses to quality-improvement advice or even children's tournaments. Here are some inspirational ideas happening around the world:

### Events for medical professionals

- Educational lectures for physicians, clustered by area: e.g. pediatrics, gynecology, internal medicine
- Education day for critical care nursing staff
- Conferences, symposia, round table discussions
- Information mailings to doctors in private practice and hospital employment
- 'Train the Trainer' program in hospitals
- Information events for the Quality Management of hospitals
- Student Awareness Project
- Open Day – visit the ICU



WSD cycling event by UK Sepsis Trust, 2013

### Public events by initiatives & charities

- Spike out Sepsis (beach volleyball tournament fundraising event)
- Sepsis Heroes (gala event)
- Sepsis Ball (gala event)
- Walks/cycle event (fundraising event)
- Establishing a sepsis foundation
- BUGS Classic: fishing fundraising event
- Public hearing National Forum on Sepsis on September 17

### Public events by hospitals

- Open days
- Kids theatre event (simulate the resuscitation of a septic child in an emergency department environment)
- Pink Picnics
- Public events such as: Bus Shelter Displays, Blood Culture Days
- Newsletter cover
- Screening of '97 Seconds-Sepsis' Movie in hospital environments. [Watch here](#)

### Digitally-driven awareness measures

- Switching the background colours of landing pages and websites into black or pink
- Micro sites by organizations & sponsors
- Email attachment or text announcement under your disclaimer: 'Save the date: 13 September is World Sepsis Day'
- Integration of World Sepsis Day banners: available in round & 125x125
- Integration of donation banner
- Public screening of '97 Seconds-Sepsis' Clip. [Watch here](#)

Please do not hesitate to contact us if you have questions – we are very happy to support your event with digital material & input. It does not matter whether you organize a small or large event. In the World Sepsis Day Toolkits you will find material to help to set up your events:

- > Infographics
- > Logos
- > Basic Powerpoint presentations
- > Multilingual Sepsis Factsheet
- > Multilingual World Sepsis Declaration
- > Ready-made stickers & banners

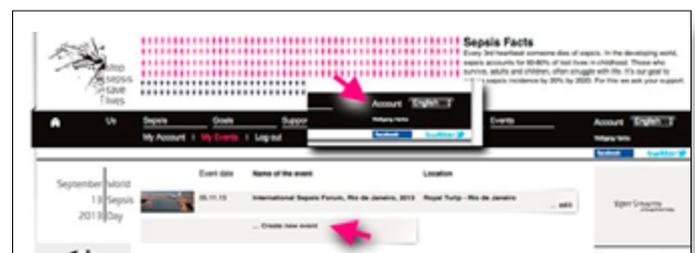
[Download material here.](#)

### Informing us of your activities strengthens our global commitment!

For World Sepsis Day HQ it is crucial that we have as complete an idea as possible of your planned efforts for the day. This overview helps us highlight local needs within the global World Sepsis Day community – independent of region and nation.

### Promote your event on World Sepsis Day

As a registered supporter, all you need to provide is an image and information such as venue, location, and contact details. About 30 events were featured on the World Sepsis Day website in 2013. With over 200 worldwide events planned in 2013, we hope that at least 50 of these will be featured on the website in 2014. If you cannot find the time to do so, please mail us the needed details (title, address, date, host of the event) with a short introduction text (around 350 letters) and a landscape header image.



1. Log in and click on "Account".
2. Under "My Events" you can add your own event details.

[Mail us your event details: office@world-sepsis-day.org](mailto:office@world-sepsis-day.org)



## 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.

To be part of this movie, we ask that you:

- Film your event with a camera or smartphone
- Send an email to [office@world-sepsis-day.org](mailto:office@world-sepsis-day.org) and you will be provided with access data to upload your files

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.



WSD events in Berlin, Vilnius and San Juan

## Follow-up on the WHO: Recognition of sepsis as Global Burden

One of the major hurdles for regional and local healthcare decision-making bodies is the lack of an adequate listing of Sepsis in the 'Global Burden of Disease Report' and other World Health-related publications. Currently, sepsis is only communicated as 'Sepsis in newborns' and 'Maternal Sepsis'. The coding of diseases is surely one issue, but creating a sepsis-conscious climate to generate change within WHO's communication is of additionally high importance.

To enable this climate of change, the Global Sepsis Alliance is currently establishing closer contact to decision-making bodies of the WHO, as well as fostering change through sepsis know-how.

### The Global Sepsis Alliance, the charity behind World Sepsis Day, targets the following changes within the WHO:

- Communicate sepsis in the 'Global Burden of Disease Report' as the most common pathway to death following an infection
- Include sepsis in the WHO A-Z list
- Provide information on sepsis for all WHO Programs related to infectious diseases

The first step in the right direction is the start of collaborative efforts between the Chief Manager of the Patient Safety Program ([learn more here](#)), Edward Kelley, and the Team Leader of SARI, Nikki Shindo, who agree that sepsis is not yet commonly understood as a final pathway to death and disability in almost all acute severe infections. One cooperative aim is to overcome this incomplete understanding of sepsis in general, and even more so in ongoing and future WHO projects which are related to infection and sepsis control. This is a first effort in achieving the steps needed to be taken by the WHO in order to change the perception of sepsis on a global and national level.



## CDC has taken the first steps - now will other national research centers and institutions follow?

Just recently the Centers for Disease Control and Prevention (CDC) as a leading American health care institution, has begun to recognise sepsis as both a global and local issue. Hence the CDC has included sepsis in its famous A-Z List. This was made possible thanks to the relentless efforts of the Rory Staunton Foundation. The achievements finalised a long standing fight by outstanding people and organizations to establish sepsis in the USA for what it is: a major killer.

We have examined national research centers and leading institutions like the Robert Koch Institute (RKI) in Germany and found they also did not register sepsis in their A-Z lists. After contacting the RKI President Prof. R. Burger, who has also become an ambassador for WSD, the RKI is now working to improve sepsis information on their website accordingly. This type of information gap has far-reaching implications for all those who experience sepsis, as well as relatives and friends who search for answers – heightening insecurity, anger and misunderstandings. But it has an additional political implication. What is not recognised by national reference centers or institutions is not influential to a political body. The Chairman of the UK Sepsis Trust has been newly elected as adviser to the Guideline Development Group

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**Please share this newsletter and inform us about your activities.**

of the National Institute for Health and Care Excellence in the UK (NICE). This will bring sepsis into the national agenda of the National Health Service (NHS). In France representatives and sepsis experts of the Societé de Reanimation de Langue Francaise will for the first time mark World Sepsis Day with a national congress which will take place at the Institute Pasteur in Paris. This is only possible due to the efforts taken by single individuals or medically-driven organizations. Perhaps the leading national healthcare institute or research center in your country does not feature sepsis? As the above examples show it is possible to change this.

**We would like to encourage you to check whether the national public health institute in your country lists sepsis in their A-Z list and informs adequately about sepsis.**

Please contact us at: [office@world-sepsis-day.org](mailto:office@world-sepsis-day.org)

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.

## Stay connected

**Twitter:** [twitter.com/WorldSepsisDay](https://twitter.com/WorldSepsisDay)

#sepsis: information related to sepsis

#wsd14: events around World Sepsis Day 2014

#5moments: handhygiene

#pic: pink picnic

**Facebook:** [facebook.com/WorldSepsisDay](https://facebook.com/WorldSepsisDay)

## Our sponsors

