

CAMPAGN Update

A global effort to improve care for patients with severe sepsis and septic shock

January/February 2007



Campaign Update is the official newsletter of the Surviving Sepsis Campaign. The Surviving Sepsis Campaign is a partnership of the European Society of Intensive Care Medicine, the International Sepsis Forum and the Society of Critical Care Medicine. This bi-monthly communiqué focuses on topics related to local, regional and national SSC activities. Feedback and content suggestions may be sent to campaignupdate@survivingsepsis.org.



UK SSC Network Quality Improvement Sparks SSC Implementation

A group of managers, physicians and nurses from the UK journeyed to Chicago in 2003 to learn from the Institute for Healthcare Improvement's (IHI) experience in quality improvement. Following that meeting, implementation of the ventilator bundle in England was the first step to introducing the "bundle" concept as a quality improvement technique. This use of the ventilator bundle in many ICUs in England assisted the introduction of the SSC Sepsis Bundles in 2005 and resulted in a widespread appreciation of the challenges facing the implementation of a complex bundle and the measurement of quality improvement in general.

Positive support from the Department of Health in England in many different ways endorsed the introduction of the "care bundle" as a process for quality improvement. Major National Health Service (NHS) documents and reports consistently

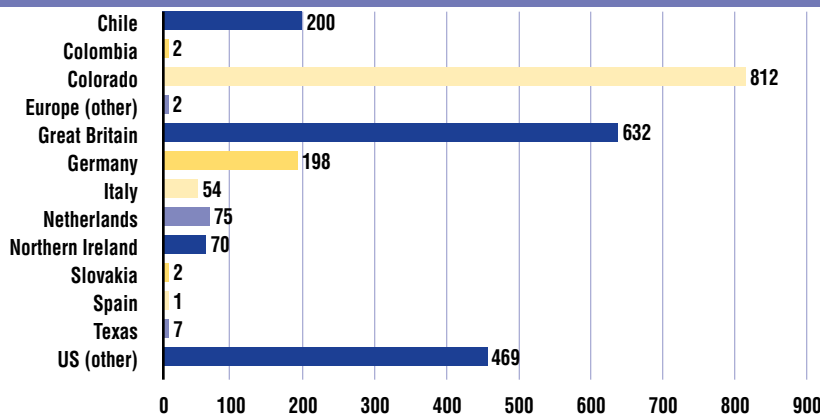
recommended this process and linked its implementation with improving patient safety as well as the improvement of the quality of the care delivered to critically ill patients. Simultaneously, critical care services in England were organised into networks.

Setting up a network for the implementation of the Surviving Sepsis Campaign was, in itself, a challenge. In addition, it was necessary to engage the collaboration of the 4 countries within the UK to form a unified SSC network for Great Britain. The first step to finding a common ground was to set up a UK steering group, spearheaded by Dr. Jane Eddleston, Consultant in Intensive Care Medicine at Manchester Royal Infirmary and also Critical Care Advisor to the Department of Health in England. Dr. Eddleston has been supported by a UK member of the SSC executive committee, Dr. Julian Bion, and SSC steering committee member Dr. Richard Beale. They have been instrumental in maintaining links with the international effort. The UK SSC steering group comprises enthusiastic physicians, nurses and managers from various hospital specialties and professional representation from the Intensive

(continued on page 4)

Copyright © 2007 by the European Society of Intensive Care Medicine, the International Sepsis Forum and the Society of Critical Care Medicine.

Chart Submission by Network as of January 1, 2007



In This Issue

- 2** Leadership Perspective
- 3** Database Meetings
- 3** Calendar
- 4** Campaign-at-a-Glance
- 4** Dutch Focus

Quality improvement in the ICU has gone from a novel concept to a routine part of daily practice. The forces that have driven this change include an ever-more-prominent gap in performance between actual practice and the best available science, a variety of market forces, and clinicians' desire to provide the best care to their patients. The Surviving Sepsis Campaign has been just one of many quality improvement initiatives available to hospitals. Other initiatives such as the Institute for Healthcare Improvement's (IHI) 100K Lives Campaign have also encouraged hospitals to focus on discrete initiatives to reduce mortality. Both initiatives share a common element: To know whether the clinical changes that you are implementing are actually changing outcomes, you must collect and review data.

Change Is Occurring. After the introduction of the Campaign, phase II was intended to drive as many hospitals as possible to adopt the severe sepsis bundles and to develop an organized program to treat severely septic patients. As I have crossed the United States conducting regional meetings with the help of our faculty, I've increasingly seen a fundamental change and have no doubt that physicians, nurses and quality improvement specialists are devoted to improving care. This is a substantial change from when the Campaign first began spreading its messages.

Unlike in years past, whenever the Campaign holds an event I am deluged by participants who have developed protocols, created severe sepsis order sets, analyzed discharge data, created a rapid response team to identify severely septic patients, or organized a "code sepsis" team to respond to patients in the emergency department or on the wards. These efforts suggest that the ground has shifted; now the aim is to make these substantial efforts fruitful.

Organized Approach is Needed. The Campaign may have done too fine a job raising awareness in the sense that we have not as strictly emphasized the need for organized methods to shepherd the changes required in hospitals to follow through on the initiatives they have begun. You may have thought, "I've spent countless hours building sepsis protocols and educating staff about sepsis for a year. My sepsis mortality rate is not changing and I don't think anyone is using my protocol. I'm going to devote even more time to this in 2007."

Unfortunately, such a strategy is not productive. Missing from strong starts I have seen are emphases on data collection and review. Data collection is essential to improvement. The reason for this is plain: Without attention to measurement, how will you know that your efforts are leading to improvement? Doubling the amount of time you spend working on sepsis may be effective – or not. Perhaps a change has made

things worse. You will not know unless you have some objective feedback. You need data to know if changes represent improvements rather than a well-intended, but nevertheless fruitless, effort. You need to know if your valuable time is well-spent, or if instead you need a new approach.

Database Measures Progress. The use of the Chart Review Database is an essential tool not only to collect data, but to receive feedback on performance anytime you wish to see your progress. The database is formatted for use with Microsoft Access, and is distributed by the SSC at no charge to participating hospitals. The installation comes complete with Microsoft Access Runtime software, which is distributed free of charge from Microsoft, Inc., enabling hospitals to run the program even if they do not have Microsoft Access regularly installed.

The SSC database is a powerful tool to analyze your institution's present level of care and show just where your patterns of practice fall short. By knowing which processes are not meeting care standards and understanding how compliance with the indicators is calculated, you will come to identify the care patterns that need improvement, or are perhaps missing altogether. Your clinical team can then redesign care where necessary, focusing efforts on known deficiencies. As you continue to collect data simultaneously with aggressively engaging in clinical improvement efforts, you will witness improvement.

Share Success. Aggregating data from scores of institutions that use the database will allow SSC to better understand severe sepsis care and the strategies that are effective in generating high performance. While transmitting data to the SSC is voluntary and hospitals can take advantage of the reports generated by the database without transmitting to the SSC, there is little reason to do so. The database is fully compliant with US and EU privacy laws, including HIPAA.

Data collection and review have been greatly simplified by use of the SSC chart review database. The tool provides both a method for collecting data locally and a powerful engine for improvement by representing the results of those data in many different formats. Using such information is the only way to know whether changes represent improvements. Sharing data with the SSC will enable the SSC to share improvement successes. In 2007 the Campaign looks forward to working with you to move beyond protocols and order sets and into the realm of measurable progress.

Sean R. Townsend, MD
Pulmonary & Critical Care
Brown University & Rhode Island Hospital
Institute for Healthcare Improvement

In the Literature

Listed below are articles that may provide additional background to practitioners as they implement the SSC.

Hurtado FJ and Nin N. **The Role of Bundles in Sepsis Care.** *Crit Care Clin* 2006; 22:521-529.

This publication goes through each of the elements in the SSC 6-hour and 24-hour bundles, offering rationale for why the indicator is included as well as specific detail and clinical hints on achieving the indicator.

Silva E, Akamine N, Salomao R, Dellinger RP and Levy M. **Surviving Sepsis Campaign: A Project to Change Sepsis Trajectory. Endocrine, Metabolic and Immune Disorders. Drug Targets.** 2006; 6:7-16.

This Latin American publication offers a concise review of the SSC guidelines, an overview of the bundles and a summary of application process for the performance improvement program.

Geroulanos S and Douka ET. **Historical Perspective of the Word Sepsis.** *Intensive Care Med* 2006; 32:2077.

This letter from Greek intensivists offers an explanation of the Greek origin of the word sepsis, from the Greek word for decomposition of animal or vegetable matter, first encountered in Homer's poems.

Trzeciak ST, Dellinger RP, Parrillo JE, Guglielmi M, Bajaj J et al. **Early Microcirculatory Perfusion Derangements in Patients with Severe Sepsis and Septic Shock: Relationship to Hemodynamics, Oxygen Transport and Survival.** *Ann Emerg Med.* 2007; 99:88-98.

This study shows more marked impairment of microcirculation (sublingual) in non-survivors with severe sepsis and septic shock than in survivors. With the assumption that earlier and more aggressive early resuscitation may diminish some of the microcirculatory impairment, this has important clinical implications as it relates to the resuscitation bundle.

Education

Database Contributors to Share Successes

Contributors to the SSC database will gather in two meetings on opposite sides of the Atlantic in February and March to share their experiences as they have implemented the Surviving Sepsis bundles and submitted their data.

On February 17, a North American meeting is scheduled in Orlando during the SCCM Congress at Gaylord Palms Resort and Convention Center from 1:00 to 6:00 pm. Participants will hear about updates to the latest SSC guidelines and share information among networks to enhance data collection and entry to the aggregate database. Presentations will include a global overview of the Campaign by members of the SSC executive committee, Drs. R. Phillip Dellinger and Graham Ramsay. Dr. Sean Townsend will facilitate a discussion among participants who have overcome barriers to the change process as they have implemented the Campaign. Christa Schorr, RN, BSN, from Cooper University will lead a presentation from 4 networks regarding the educational initiatives they developed in their hospitals surrounding SSC. In addition, participants whose abstracts were accepted for the SCCM Congress will present their preliminary data to the group. Drs. Dellinger and Ramsay will close the afternoon's activities as they encourage input from attendees

about differences they have seen since beginning data collection and additional resources they would like from the Campaign.

The 2nd Pan European User Group meeting will occur on March 26 at the Royal Windsor Hotel in Brussels prior to the International Symposium on Intensive Care and Emergency Medicine. Participants will update their colleagues on progress since their previous meeting in Barcelona in 2006 and will welcome a number of new groups who have begun data collection and submission since then.

Meeting participants will include physicians, nurses and allied health and quality improvement personnel from intensive care units and emergency departments. Attendance is by invitation only to those groups who are actively contributing data to the Campaign's master database. Groups who are collecting data and are about to begin submission should contact campaignupdate@survivingsepsis.org to determine if space is available at the meeting so they may gain valuable insight from current Campaign participants.

CALENDAR

2007

January 25

New Mexico Regional Training Program
11:30 am - 4:30 pm
Albuquerque Marriott Pyramid North
Albuquerque, N.M.

January 31

Wisconsin Regional Training Program
10:00 am - 3:00 pm
Four Points Sheraton Milwaukee Airport
Milwaukee, Wisc.

February 17

1st North American User Group Meeting
1:00 - 6:00pm
Gaylord Palms Hotel and Convention Center
Orlando, Fla.

February 21

SCCM 36th Annual Congress
SSC Educational Session
9:30 - 11:00am
Gaylord Palms Hotel and Convention Center
Orlando, Fla.

March 15

Indiana Regional Training Program
Time TBD
Meeting Place TBD
Indianapolis, In.

March 26

2nd Pan European User Group Meeting
1:00 - 6:00 pm
Royal Windsor Hotel
Brussels, Belgium

October 7-10

ESICM 20th Annual Congress
SSC Educational Session
TBD
Berlin, Germany

2008

February 2-6, 2008

SCCM 37th Annual Congress
SSC Educational Session
TBD
Honolulu, Hawaii

Send us your SSC meeting information and we will include it in future issues of *Campaign Update*. Send submissions to campaignupdate@survivingsepsis.org.



CAMPAIGN at-a-Glance

Asia

China

Europe

Denmark—*Lone Poulsen*

England—*Jane Eddleston*

Germany—*Konrad Reinhart*

Ireland—*Jeanne Moriarty,*

Brian McCloskey

Italy—*Massimo Antonelli*

Netherlands—*Arthur Van Zanten,*

Dave Tjan

Poland—*Andrzej Kubler*

Portugal—*Antonio Cameiro*

Scotland—*Simon Mackenzie,*

Louie Plenderleith

Spain—*Antonio Artigas*

Sweden—*Hans Hjelmqvist*

Wales—*Mark Smithies*

Latin America

Brazil—*Eliezer Silva*

Chile

North America

Alabama—*Moustaffa Hassan*

California (Southern)—

Herbert Rogove

California (Sutter)—*John Mesic*

Colorado—*Ron Rains*

Connecticut—*Dawn Martin*

Florida—*Edgar Jimenez*

Georgia—*Kenneth Kalassian*

Illinois—*Nathan Lidsky, John Butler,*

Michael Ries, Jay Cowen

Iowa—*James Boddicker, Jill Morgan*

Kansas—*Steve Simpson*

Maryland/Washington, DC—

Gabriel Hauser

Michigan—*Joseph Bander*

Minnesota—*Henry Mann*

New Jersey—*R. Phillip Dellinger*

New York (NYHHC)—

Karen Scott Collins

North Carolina—*C. Diane Byrum*

Puerto Rico—*Gloria Rodriguez*

Texas (Memorial-Hermann)—

James Heisler

Virginia—*William Brock*

UK SSC Network

(continued from page 1)

Care Societies of England, Wales, Scotland and Northern Ireland; the Royal College of Nursing and British Association of Critical Care Nurses, the College of Emergency Medicine and the Intensive Care National Audit and Research Centre (ICNARC).

The Steering Committee designed a template to assist collection of data relevant to compliance with both bundles. This was felt necessary as real-time data collection within Critical Care in the UK is still uncommon. The committee also commissioned a pathway of care for patients with severe sepsis presenting to accident and emergency departments or, alternatively, for use on the general wards.

Data handling was anticipated to be a sensitive issue and safeguards were put in place to ensure that all data reports from the Campaign were returned to a secure NHS site. Individual hospital's data are returned to this NHS site and filed in that hospital's respective Critical Care Network. In the case of Wales, Scotland and Northern Ireland, the data are stored by country.

Launch meetings within the different countries took place in 2005 and the SSC network embarked on changing clinical practice. Since those launch meetings took place, the UK hospitals have successfully raised the awareness of the SSC sepsis bundles with various materials endorsed by the major national intensive care societies of each of the four countries, the Royal College of Nursing, British Association of Critical Care Nurses and support from major emergency and acute medicine societies.

The challenge for the future is collecting and coordinating national compliance data to contribute to the international compliance database as well as have national and regional compliance data. Additionally, a significant amount of new clinical information on sepsis in patients can only further understanding of patient care and help inform the research to maximize treatments and achieve the best clinical outcomes.

Further reading: Gao F, Melody T, Daniels DF, et al. The impact of compliance with 6-hour and 24-hour sepsis bundles on hospital mortality in patients with severe sepsis: a prospective observational study. *Critical Care* 2005; 9: R764-R770.

Dutch focus on submitting data

With nearly 400 patients' data in databases throughout the Netherlands, the focus of the Dutch Surviving Sepsis Campaign in early 2007 is to submit those data to the main SSC database so they can be included in the analysis of the effectiveness of the Campaign on patient care improvement.

The 2nd annual meeting of the Dutch SSC following their launch meeting in December 2005 took place in Ede, Amsterdam, on December 15, 2006. More than 300 delegates—physicians, nurses and hospital managers—attended what was the largest critical care meeting in the Netherlands in 2006. Elements of Campaign implementation were the main topics for the majority of attendees, primarily nurses from hospitals throughout the Netherlands. The early part of the day concentrated on updates in the field of sepsis and the international activities of the SSC. Local and international speakers included Dr. Richard Beale, Dr. Marcel Levi, and Prof. Djillali Annane, who covered topics such as early resuscitation, steroids, glucose control and lung-protective ventilation in severe sepsis.

Afternoon workshops concentrated on the practical issues around implementing the SSC bundles and how to get started with change teams. Dr. Mitchell Levy, representing the SSC executive committee, closed the day with a view of the SSC in general including the efforts of countries around the world as well as an update on the guidelines revision process. An additional highlight of the meeting was a well-supported poster session which resulted in three poster prizes.

The meeting was supported by 13 various industry sponsors.

Sentara featured in March/April

Watch your e-mail in late March for the next issue of *Campaign Update*, which will include a profile of the Sentara hospitals' implementation of the Campaign as a quality initiative in the state of Virginia. Links to their resources will be included. Look also for reports on SSC activities at the SCCM Congress.