

**Overview of the Surviving Sepsis Campaign
The International Guidelines for Management of
Sepsis and Septic Shock 2017**

Surviving Sepsis Campaign

COI Disclosures

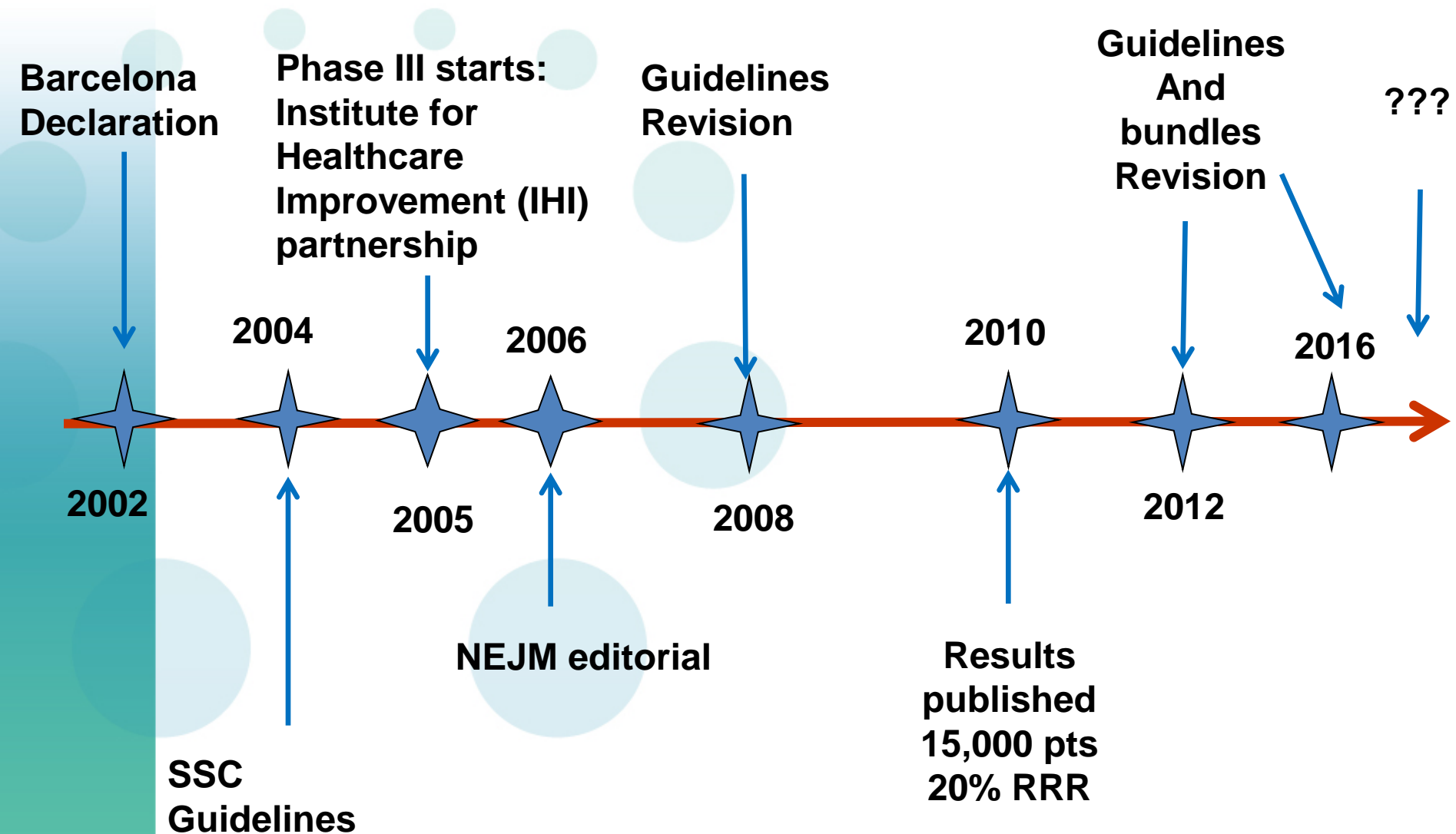
- Antonelli– Nothing to disclose



The Surviving Sepsis Campaign is a joint collaboration of the [Society of Critical Care Medicine](#) and the [European Society of Intensive Care Medicine](#) committed to reducing mortality from sepsis and septic shock worldwide.

Initiated in 2002 at the ESICM's annual meeting with the [Barcelona Declaration](#), the Campaign progressed in phases that have expanded the scope and reach of the Campaign via publication of 3 editions of evidence-based guidelines, implementation of a performance improvement program, and analysis and publication of data from more than 30,000 patient charts collected around the world.

Surviving Sepsis Campaign: Timeline



Phase II: Development and Publication of Guidelines

June 2003

- Representatives of 11 international societies convened in Windsor, UK to develop guidelines for the management of severe sepsis and septic shock.

March and April 2004

- Publication of guidelines in *Critical Care Medicine* and *Intensive Care Medicine*.





Phase III: Guideline Implementation, Behavior Change, and Data Collection

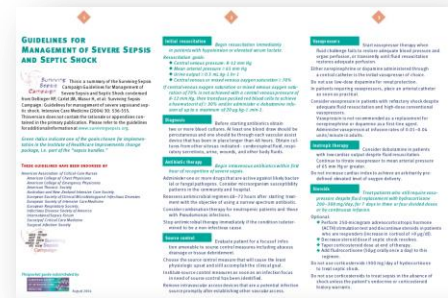
September 2003

- The Surviving Sepsis Campaign initiated a partnership with the [Institute for Healthcare Improvement](#) to apply their successful quality improvement techniques to treatment of sepsis. The Surviving Sepsis Campaign Bundles evolved from this collaboration.
- Education initiatives continue at critical care conferences globally.



September 2004

- Campaign presented to European clinicians and international representatives gathered for development of bundles.
- Pocket guidelines and posters developed and distributed by SCCM in North America and ESICM in Europe
- Development of data collection tool



February 2005

- Regional networks established to promote collaboration in data collection and performance improvement throughout US.

December 2005

- *Implementing the Surviving Sepsis Campaign*, the manual for conducting the Campaign in local hospitals, was published.

Phase III: Guideline Implementation, Behavior Change, and Data Collection

January 2006

- approx. 5000 copies of manual distributed in North America.
- Meeting of representatives from 28 countries to begin development of an updated edition of the Surviving Sepsis Campaign guidelines.

2008

- Second edition of SSC Guidelines published in *CCM* and *ICM*.
- Performance improvement efforts continue worldwide with data collection, educational programs, and listserv collaboration.

2010

- **Publication of results of 15,000 patient data set shows association of bundle compliance with 20% relative risk reduction.**

2011

- Gordon and Betty Moore Foundation fund development of educational programming, research, and Campaign outreach

2012

- Third edition of the SSC Guidelines published along with revised bundles.



Phase IV: Reinvigoration of the Campaign

2013

- ESICM and SCCM announce a **reinvigoration** of the Campaign with the [Surviving Sepsis Campaign Declaration](#) in Puerto Rico
- Regulatory bodies in the US adopt the SSC Bundles as **mandated measures**.
- The Campaign prepares to incorporate new data as they are published into the guideline

2016

- ESICM and SCCM publish the Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016
- Research Committee established to explore gaps in clinical research.**
- Approval for a new children's guideline stimulates new focus on neonates and children for campaign.



2017

- SSC management appoints co-chairs of children's guideline to steering committee.

The Global Maternal and Neonatal Sepsis Initiative: a call for collaboration and action by 2030



Significant progress has been made in reducing maternal and neonatal mortality in the past 15 years, but additional improvements will require a comprehensive approach that targets all causes of maternal and newborn mortality.¹ Further reduction of maternal and newborn deaths is a priority for achieving the Sustainable Development Goals and for implementing the UN Global Strategy for Women's, Children's and Adolescents' Health, and is also critical for two strategic plans—Every Newborn: An Action Plan to End Preventable Deaths (ENAP) and the Strategies toward Ending Preventable Maternal Mortality (EPMM).¹

As part of this comprehensive approach, it is impossible to neglect the importance of infection as an underlying and contributing cause of maternal and newborn mortality. Deaths due to infection occur mainly through sepsis—a potentially life-threatening condition caused by a dysregulated host response to infection and organ dysfunction.² Infections cause about 11% of maternal deaths, and are also a significant contributor to many deaths attributed to other conditions.³ The risk of

vision, goals, priority areas of work, and objectives. The Initiative has received extensive support from the International Federation of Gynecology and Obstetrics, the International Confederation of Midwives, the International Pediatric Association, the Global Sepsis Alliance, and the Surviving Sepsis Campaign, in collaboration with the Society of Critical Care Medicine and the European Society of Intensive Care Medicine.

An early output of the Initiative is the new WHO definition of maternal sepsis, which reads as follows: "Maternal sepsis is a life-threatening condition defined as organ dysfunction resulting from infection during pregnancy, child-birth, post-abortion, or post-partum period".⁷ The new maternal sepsis definition was developed on the basis of a review of existing definitions (including the 2016 Third International Consensus Definitions for Sepsis and Septic Shock²) and through an international technical consultation. This process indicated that there are several definitions currently in use, which affects the identification of maternal sepsis

Lancet Glob Health 2017

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Surviving Sepsis Campaign

Society of
Critical Care Medicine
The Intensive Care Professionals

 **ESICM**
EUROPEAN SOCIETY OF
INTENSIVE CARE MEDICINE
The Intensive Connection

 **World Health
Organization**

 **Global
Sepsis
Alliance**

Structure

Leadership

Representatives from the Society of Critical Care Medicine and the European Society of Intensive Care Medicine provide direction for the Surviving Sepsis Campaign.

Executive Committee



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Surviving Sepsis Campaign

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Management of Potential Conflict of Interest

- No industry input
- Panelists did not receive honoraria
- Personal disclosure of potential COI upon joining guidelines panel and annually
- Management of potential COI
 - Limited voting on topics pertinent to COI
 - Group reassignment

Sepsis-3 Definitions

- ***Sepsis***: Life-threatening organ dysfunction caused by dysregulated host response to infection
- ***Septic Shock***: Subset of sepsis with circulatory and cellular/metabolic dysfunction associated with higher risk of mortality

JAMA. 2016;315(8):801-810. doi:10.1001/jama.2016.0287

SSC Guidelines and Sepsis-3 Definitions

- ***“Sepsis”*** in place of ***“Severe Sepsis”***
- Sepsis-3 clinical criteria (i.e. qSOFA) were not used in studies that informed the recommendations in this revision
 - Could not comment on use of Sepsis-3 clinical criteria

JAMA. 2016;315(8):801-810. doi:10.1001/jama.2016.0287

SSC Guideline Process

- PICO Question Review and Development
- Literature searches
 - Minimum of 2 major databases
 - Assistance from professional librarians
- Generation of evidence profiles
- Grading of recommendations
 - GRADE
- Voting
 - 80% agreement required
- Reformulation and re-voting as needed

GRADE: Quality of Evidence

- Risk of bias
- Inconsistency
- Indirectness
- Imprecision
- Publication bias
- Other criteria

Best Practice Statements

- Strong but ungraded statements
- Use defined criteria

Criteria for Best Practice Statements

Is the statement clear and actionable?

Is the message necessary?

Is the net benefit (or harm) unequivocal?

Is the evidence difficult to collect and summarize?

Is the rationale explicit?

Is the statement better if formally GRADEd?

CONFERENCE REPORTS AND EXPERT PANEL



Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016

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Recommendations

- 93 Recommendations
 - 32 **Strong** recommendations: “***We recommend***”
 - 39 **Weak** recommendations: “***We suggest***”
 - 18 Best Practice Statements
 - No recommendation provided for 4 PICO questions

Sepsis and septic shock are medical emergencies and we recommend that treatment and resuscitation begin immediately.

Best Practice Statement

Sepsis Performance Improvement

- Performance improvement efforts for sepsis are associated with improved patient outcomes
- A recent meta-analysis of 50 observational studies:
 - Performance improvement programs associated with a significant increase in compliance with the SSC bundles and a reduction in mortality (OR 0.66; 95% CI 0.61-0.72).
- Mandated public reporting:
 - NYS, CMS, UK

Setting Goals of Care

- **We recommend that goals of care and prognosis be discussed with patients and families. (BPS)**
- **We recommend that the goals of care be incorporated into treatment and end-of-life care planning, utilizing palliative care principles where appropriate. (Strong recommendation; moderate quality of evidence)**
- **We suggest that goals of care be addressed as early as feasible, but no later than within 72 hours of ICU admission. (Weak recommendation; low quality of evidence)**

Source Control

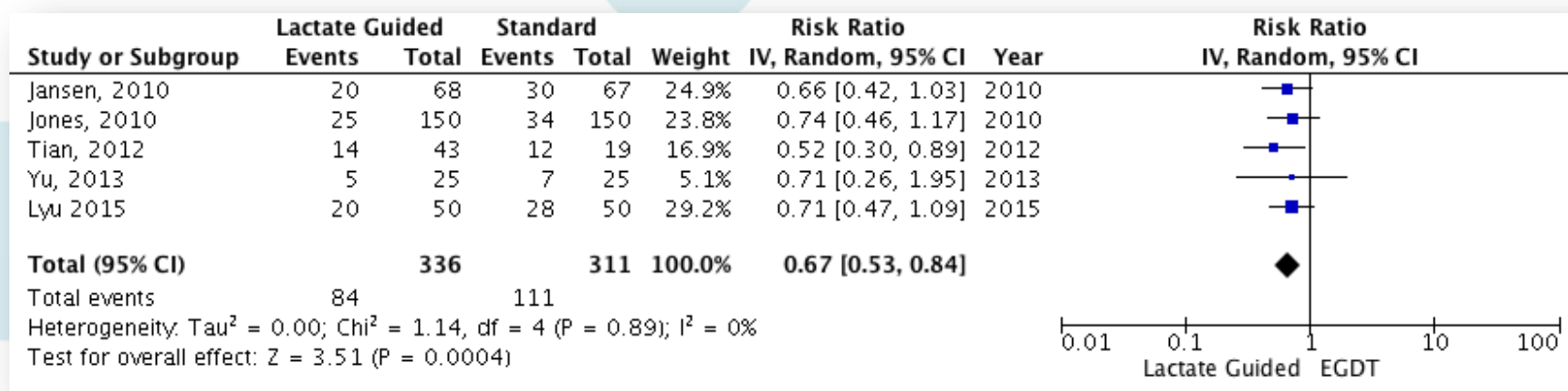
- **We recommend that a specific anatomic diagnosis of infection requiring emergent source control be identified or excluded as rapidly as possible in patients with sepsis or septic shock, and that any required source control intervention be implemented as soon as medically and logistically practical after the diagnosis is made.**

(Best Practice Statement).

Lactate can help guide resuscitation

- We suggest guiding resuscitation to normalize lactate in patients with elevated lactate levels as a marker of tissue hypoperfusion.

(Weak recommendation; low quality of evidence)



Antibiotics

- **We recommend that administration of IV antimicrobials be initiated as soon as possible after recognition and within 1 h for both sepsis and septic shock.**

(strong recommendation, moderate quality of evidence).

- **We recommend empiric broad-spectrum therapy with one or more antimicrobials to cover all likely pathogens.**

(strong recommendation, moderate quality of evidence).

Antimicrobial Therapy

Antibiotic Stewardship

- We recommend that empiric antimicrobial therapy be narrowed once pathogen identification and sensitivities are established and/or adequate clinical improvement is noted.
 - (BPS)
- We suggest that an antimicrobial treatment duration of 7-10 days is adequate for most serious infections associated with sepsis and septic shock.
 - (Weak recommendation; low quality of evidence)
- We recommend daily assessment for de-escalation of antimicrobial therapy in patients with sepsis and septic shock.
 - (BPS)

Summary

- **Start resuscitation early with source control, intravenous fluids and antibiotics.**
- **Frequent assessment of the patients' volume status is crucial throughout the resuscitation period.**
- **We suggest guiding resuscitation to normalize lactate in patients with elevated lactate levels as a marker of tissue hypoperfusion.**

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