



Asia
Pacific
Sepsis
Alliance

**APSA Bangkok Declaration
Program Management
Workgroups**

10 March 2020

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Introduction

In May 2017, the World Health Organisation (WHO) recognised sepsis as a global health priority adopting a resolution to improve the prevention, diagnosis and management of sepsis around the world. The resolution calls on all United Nations member states to take specific actions to reduce the burden of sepsis, including implementing national action plans. The resolution, with its implicit recognition of sepsis as a major global public health threat (Appendix 1) has the potential to save millions of lives.

National sepsis action plans would:

- Address low public and healthcare worker awareness of sepsis
- Improve accurate recording of the burden of sepsis
- Reduce deaths and disability caused by sepsis by implementing standard and optimal care via appropriate guidelines
- Encourage monitoring of progress toward improving outcomes for patients and survivors over time.

The actions proposed in the WHA resolution require coordinated efforts by healthcare providers, consumers, administrators, researchers and government across a broad healthcare landscape.

Leadership is currently provided:

- Internationally by the Global Sepsis Alliance (GSA)
- Regionally by the Latin American, African, Europe, North American and the Eastern Mediterranean alliances
- National programs, initiatives, professional organisations and support groups.

Formation of the Asia Pacific Sepsis Alliance (APSA) will support national initiatives to enact the WHA resolution and reduce the burden of sepsis in the region.

Purpose

The 1st APSA meeting was held in October 2018 in Bangkok, Thailand, and was followed by the APSA Steering Committee (virtual) meeting on 24 May 2019. The 2nd APSA meeting was held on 14 August 2019, also in Bangkok, Thailand.

This document provides the 2nd APSA meeting notes and outcomes, including the revised Bangkok Declaration and Steering Committee Terms of Reference, along with agreed program management requirements and updates to the APSA work groups. The document structure follows the meeting agenda (Appendix 2) with meeting notes included in each relevant section to reflect discussions and agreed outcomes.

Action items are listed in Appendix 3 and will form the basis of a separate 'live' action register that will be maintained by the APSA Program Team.

Acknowledgement

The 2nd APSA meeting was generously supported by an unrestricted grant from CSL Behring (Australia). The educational content, selected speakers and participants were decided independently by the APSA program management team, CSL Behring had no input into these decisions and did not attend the meeting.

Participants

Twelve countries were represented from across the Asia Pacific region including Australia, Bangladesh, Hong Kong, India, Indonesia, Malaysia, Nepal, Pakistan, Sri Lanka, Taiwan, Thailand and Vietnam. Apologies were received from New Zealand and China.

Participating representatives are listed in Appendix 4.

Meeting Objectives

- Educate on the latest clinical best practice, innovation and research on sepsis and antimicrobial management from across the Asia Pacific region
- Reaffirm, strengthen and broaden regional engagement
- Establish the APSA organisational structure and program management
- Establish the APSA workgroups and membership
- Determine workgroup activities, priorities, deliverables and timeframes.

Meeting notes:

- APSA is the largest regional sepsis alliance representative group globally
- APSA requires a formal organisational structure to move forward
- Program management support needs to be confirmed in terms of location and duration
- The 3rd APSA meeting in 2020 needs to be focused on the achievements towards realising the goals described in the Bangkok Declaration.

Global Sepsis Alliance

The GSA is working to support implementation of the WHA resolution and collaborating to foster sepsis specific work of WHO and its regional offices by:

- Advocating for dedicated WHO staff and financial budget for sepsis
- Lobbying for sepsis to become an integral part of high profile WHO/UN campaigns
- Establishing formal co-operations and identify sustainable development goals
- Collaborating on a global action plan against antimicrobial resistance
- Advising and contributing to the global report on sepsis epidemiology
- Promoting the work of member organisations and evolving regional alliances
- Developing and promulgating protocols and policies focused on early sepsis diagnosis
- Extending the success of World Sepsis Day and World Sepsis Congress initiatives.

See Appendix 5 for more information.

National Updates

Projects and programs of work being undertaken nationally were presented by Australia, India, Indonesia, Malaysia, Pakistan and Vietnam. Presentations are provided in Appendix 6.

Meeting notes

- Guideline development and endorsement is a key priority
- Pakistan has tailored the surviving sepsis guideline into 3 categories for different levels of hospitals and community healthcare facilities.
- Guidelines for sepsis management outside the ICU are needed
- Efforts to understand sepsis epidemiology across different population groups and regional differences within countries are underway
- Ongoing funding for vaccination programs is a concern in some countries.

Asia Pacific Sepsis Alliance

Simon Finfer provided an overview of the inception of APSA and its trajectory since October 2018 to become established and acknowledged the support provided by The George Institute for Global Health and the Australian Sepsis Network.

Meeting notes:

- Unanimous agreement that the focus at the 3rd APSA meeting in 2020 will be to report on the achievements made by APSA over the next 12 months with that focus being on actions rather than words.

Bangkok Declaration 2019

The draft Bangkok Declaration circulated prior to the meeting was reviewed.

Meeting notes:

- The declaration should emphasize that APSA will work with WHO, regional agencies and other governments to advocate for and enact the recommendations from the WHA resolution
- Consideration for stating it is a 'bottom up' approach not just 'top down'.

ACTION 1: Update the Bangkok Declaration and circulate for review and endorsement by APSA participants (APSA Program Team)

The declaration was updated accordingly.

Bangkok Declaration 2019 (Version 0.2)

Sepsis is one of the most common, least-recognised illnesses in the developed and developing world resulting in a death every few seconds

Death and disability from sepsis is preventable through early recognition and treatment

Sepsis is a major cause of preventable deaths in the Asia Pacific region and is the most common cause of death from infection. This Bangkok Declaration is a call to action for a regional alliance to reduce the burden of sepsis. The inaugural Asia Pacific Sepsis Alliance (APSA) meeting was held in Bangkok, Thailand, on 4 October 2018. Delegates from 12 countries called for urgent action by governments, policy makers, health services, researchers, funding agencies and the community to support national and international commitments to improve the prevention, diagnosis and treatment of sepsis and to dedicate human and financial resources towards these goals.

The Bangkok Declaration acknowledges:

1. The World Health Organisation (WHO) recognised sepsis as a global health priority in 2017 through a World Health Assembly (WHA) resolution urging member nations to adopt national action plans
2. Coordinated global, regional and national approaches are needed to improve the prevention, recognition, and treatment of sepsis and to support sepsis survivors and those bereaved by sepsis
3. The goals of the Global Sepsis Alliance (GSA) to:
 - a. Place sepsis on national health agendas by raising political awareness of the growing health and economic burden of sepsis
 - b. Ensure that treatment facilities, support programs and well-trained staff are available for acute and long term care
 - c. Support the implementation of international sepsis guidelines
 - d. Mobilise stakeholders to ensure that strategies to prevent and control the impact of sepsis are targeted at those who are most in need
 - e. Involve sepsis survivors and those bereaved by sepsis in planning strategies to decrease sepsis incidence and improve sepsis outcomes
4. There is wide variation among Asia-Pacific populations and healthcare services that needs to be addressed in national plans to target interventions and reduce inequity
5. That despite the unacceptable number of deaths and disabilities caused by sepsis, awareness among healthcare providers and the public in Asia-Pacific countries is very low.

In accordance with the Bangkok Declaration APSA will work with government authorities, policy makers, healthcare managers, professionals and associated societies, the WHO and its partners, and consumers to:

- Advocate for the WHA 2017 resolution on sepsis and enact the recommendations
- Develop and establish national action plans on reducing the burden of sepsis
- Focus on sepsis prevention through awareness and improvements in nutrition, the environment, sanitation and the promotion of World Sepsis Day (September 13th) as the annual national date for focused campaigning
- Promote vaccination to at-risk groups in particular infants and young children, women during pregnancy and the post-partum period and the elderly
- Provide training of healthcare professionals in relation to sepsis
- Minimize the risk of antimicrobial resistance and hospital-acquired infections
- Promote regional collaboration on:
 - Research into the epidemiology, prevention, diagnosis and treatment of sepsis
 - Guideline and policy development appropriate to local perspectives and priorities
 - Quality improvement, education and monitoring
 - Advocacy with government, regional WHO offices and NGO's.

Regional Engagement

Currently 12 countries are represented at APSA with China and New Zealand yet to formalise a delegate.

Meeting notes:

- APSA representatives acknowledged the importance of reaffirming, broadening and strengthening regional engagement.

ACTION 2: Map stakeholders across the region to determine additional engagement (APSA Program Team)

Program Management

Program Structure

An overview of the program structure was presented (Figure 1) showing three tiers of activity at strategic, operational and subject matter expert levels. Participants contribute to the various activities according to their expertise and agreement, with crossover between the tiers by representatives as required.

GSA have hired a full time person starting October 2019 to act as liaison between the GSA, regional alliances and GSA head office in Berlin. Through ongoing contact with the regional alliances it is envisaged that greater collaboration and knowledge sharing will be facilitated. In addition this will provide a central point of contact for regional alliance support on administration matters, program management, communications and engagement.



NB. Updated 10032020 to reflect merged workgroups

Figure 1 APSA Program Structure (Revised)

APSA Steering Committee

The first APSA Steering Committee meeting was held (virtually) on 24 May 2019. The primary focus was on the requirements to establish APSA as an entity and the content for the 2nd APSA meeting. Steering Committee members are Abi Deane, Arjen Dondorp, Barath Kumar, Lowell Ling, Naomi Hammond, Rashan Haniffa, Ratapum Champunot, Sebastian Tan and Simon Finfer.

Terms of reference were developed for endorsement at the 2nd APSA meeting.

The draft Terms of Reference were distributed for review prior to the 2nd APSA meeting and discussed as an agenda item.

Meeting notes:

- May need to increase membership to accommodate executive positions
- The scope of research activities was broadened to include all sepsis relevant research
- Include WHO/GSA as a collaborator
- Election of executive positions to be progressed out of session
- APSA executive positions will be progressed out of session

ACTION 3: Revise Steering Committee ToR to incorporate APSA feedback (Table 1) (APSA Program Team)

Table 1 APSA Steering Committee Term of Reference (revised)

Function	The Asia Pacific Sepsis Alliance (APSA) will work with all interested parties and countries to enact the 2017 WHA resolution to improve the outcomes of patients with sepsis in the Asia Pacific region, The APSA program of work will involve a coordinated approach across the Asia-Pacific region on prevention, recognition, treatment and support for survivors and those bereaved to reduce the burden of sepsis.
Responsibilities & activities	<p>The APSA Steering Committee provides high level strategic advice and direction on the overall approach and specific strategies undertaken to reduce the burden of sepsis. Strategies include, but are not limited to:</p> <ul style="list-style-type: none"> • Establishing APSA as the peak regional body on sepsis and engage with government authorities, policy makers, health services, professional societies and colleges, the Global Sepsis Alliance and WHO Regional Offices to enact the the WHA 2017 resolution on sepsis • Ensuring APSA is represented in all key sepsis related strategies to promote the adoption and sustainability of interventions • Explore variation among Asia-Pacific populations and their healthcare services to inform appropriate planning and targeted sepsis interventions • Support development and endorsement of sepsis national action plans • Promote regional collaboration and provide strategic oversight on: <ul style="list-style-type: none"> ○ Advocacy, prevention, awareness and vaccination ○ Sepsis related research including but not limited to epidemiology, diagnostics and clinical care ○ Guideline and policy development tailored to local perspectives and priorities ○ Quality improvement in clinical care, education and monitoring • Explore potential industry, government and research funding and sponsorship • Represent APSA on regional committees, advisory boards, at promotional and fundraising events and media activities
Committee Membership	<ul style="list-style-type: none"> • All members are expected to play an active role in the development, implementation and review APSA sepsis strategies and workgroups. • Membership should provide gender balanced representation from: <ul style="list-style-type: none"> - Lower, middle and high income countries from within the region - Critical care medical, nursing, research and academic disciplines - Infectious disease and anti-microbial resistance disciplines - General practice and primary care - Consumer representation - Health policy and quality improvement • Other representatives may be co-opted as required to assist the committee
Executive Roles (elect)	<ul style="list-style-type: none"> • Director (TBC) • Deputy Director (TBC) • Secretary (TBC) • Treasurer (TBC)
Secretariat	Program Manager (employed position)
Tenure	All elected roles will be for 4 years. At each 2 year interval 50% of elected positions will be re-elected to provide program continuity.
Quorum	Half the number of members plus one, must be in attendance for decision-making
Meetings	Quarterly via virtual technology and one annual face-to-face meeting
Reporting	TBC

ACTION 4: APSA members to ratify revised Terms of Reference (ALL).

Program Logistics

- Program support and secretariat

Unanimous agreement that The George Institute for Global Health – Australian Sepsis Network will continue to provide program support for the next two years.

- APSA logo

Unanimous agreement to revise the current logo (with improved resolution) to:



Explore opportunities to include the logo on all relevant sepsis activities in the region.

- APSA title

Unanimous agreement to retain 'Asia Pacific Sepsis Alliance' as the formal title.

- Website

Unanimous agreement to:

- Develop and host the APSA website using the GSA web platform to align with both the GSA website and regional alliances for continuity and to support site maintenance
- APSA will manage the website content.

- APSA 2020

Several options were discussed for the location of the APSA meeting next year. Consideration needs to be given to travel logistics, associated costs and coinciding events. Most likely venues being Bangkok and Singapore as they have direct flights to most countries. Bangkok less expensive and meeting could be held in conjunction with either the TSCCM meeting or meeting of Welcome Trust Flagship Network.

ACTION 5: Recommendation will be made on location (APSA Program Team).

Workgroups

At the inaugural APSA meeting four workgroups were identified to progress activities in relation to Advocacy and Engagement, Epidemiology and Research, Policy and Guidelines, and Quality Improvement.

In March 2020 the APSA Executive determined the need to merge the workgroups due to a crossover of priorities and activities. The four workgroups initially proposed were restructured into:

- Research and Awareness
- Guidelines and Quality Improvement

Key considerations: (general):

- Need to understand what is happening in the region (situational analysis) to inform the activities undertaken by each workgroup
- Succinct project implementation plans for specific activities will assist in defining the approach and deliverables
- Workgroup membership will be determined by the expertise required with external stakeholders and subject matter experts engaged as required for specific projects.
- Representation should ideally include:
 - Lower, middle and high income countries from within the region
 - Critical care medical, nursing, research and academic disciplines
 - Infectious disease and anti-microbial resistance disciplines
 - General practice and primary care
 - Consumers

Research and Awareness

Function 1: to identify areas and opportunities for strategic engagement to promote sepsis advocacy across the region to ensure APSA positioned as a key driver and enabler of key sepsis related activities and innovative interventions.

- Responsibilities & activities:
 - Develop a strategic engagement and communications plan
 - Identify opportunities for promotion and marketing
 - Promote public and healthcare worker awareness and early recognition of sepsis
 - Coordinate a regional approach for World Sepsis Day
 - Implement social media and web based platforms
 - Foster collaboration with relevant organisations and government authorities
 - Engage with community representatives to recruit sepsis champions
 - Promote consistent sepsis definitions, language and messaging.

ACTION 6: Develop a brief survey to undertake a situational analysis in each country across the region (SF).

Function 2: Identify areas to target research on the prevalence, incidence and burden of sepsis with a specific focus on better understanding differences between lower, middle and high income countries in the region. Research outputs will inform the strategic priorities for the APSA work program.

- Responsibilities & activities:
 - Develop consistent sepsis definitions and terms for the public, health and media
 - Contribute to refined sepsis coding standards for clinical use and research
 - Build research capacity by coordinating multisector national and regional collaboratives between academic, health services, industry and consumer groups
 - Contribute to the harmonisation of research methods across the region
 - Implement a quality process to assess evidence to be promoted by APSA
 - Explore the viability of establishing a regional clinical registry for sepsis.

Meeting notes:

- Considerable epidemiological data exists across the region – need to work on combining the data and a process for presenting back to the workgroup and APSA
- Relevant data on the global burden of disease will require validation within the region
- Need to confirm what has been done, what is currently being done, what is planned and where are the gaps in research
- Map research that could be potentially be published and showcased on the APSA website
- Use APSA for advocacy to liaise with policy makers on data and research outputs
- Potential to engage PhD students in the region.

ACTION 7: Develop of plan of action (Bala Venkatesh and Barath Kumar)

Guidelines and Quality Improvement

Function 1: To provide guidance and contribute to the development of best evidence based clinical guidelines and pathways. A key objective will be the translation of high-quality relevant research into health policy aimed at reducing the burden of sepsis.

- Responsibilities & activities:
 - Contribute to the development and dissemination of materials that provide clinical guidance to improve the overall standard of sepsis prevention, detection, clinical management and post sepsis care
 - Develop a 'library' of resources, accessible via the APSA website, that are relevant to the Asia Pacific region that affirm consistent sepsis definitions and terminology for the public, health sector and media
 - Identify opportunities for multi-national collaborations that support the development of clinical guidelines
 - Ensure local situational factors and requirements are appropriately considered to ensure variations between lower, middle and high income countries within the region to inform guideline development and implementation.

Meeting notes:

- Next iteration of the Surviving Sepsis Guidelines (SSG) will incorporate a focus on LMIC and APSA should be involved in this work
- Dondorp AM, Dünser MW, Schultz MJ, editors. Sepsis Management in Resource-limited Settings. Springer; 2019, has been endorsed by the ESICM, downloaded >29,000 times and is freely available as an ebook at: <https://www.springer.com/gp/book/9783030031428>
- It was acknowledged that many country specific guidelines are already being developed in the region using the SSG as a basis and incorporating recommendations from the Sepsis Management in Resource-limited Settings publication
- Effective guideline implementation is recognised as a key component of sustainable adoption and needs to be factored into any planning on guideline development
- Policy component may need to be realigned under the Advocacy and Engagement workgroup to facilitate take up of guidelines by policy development and management groups.

ACTION 8: Liaise with SSG review and development team to explore the involvement of APSA in development of LIMC guidelines (SF/LT).

Function 2: Promote a quality-centred approach to reducing the burden of sepsis by providing strategic and policy advice on the effectiveness of programs and interventions to ensure ongoing improvement in patient care.

- Responsibilities & activities:
 - Evaluating sepsis related strategies in terms of preventable patient harm and clinical care
 - Ensures appropriate professional, expert and consumer stakeholder consultation during the APSA program of work and activities
 - Collaborate with quality improvement groups at regional and national levels
 - Develop quality standards in consultation with the APSA Guideline workgroup
 - Evaluate program implementation and adoption
 - Contribute to an education strategy to improve sepsis care and outcomes
 - Identify quality indicators and a review process for to inform continued quality improvement.

Meeting notes:

- A presentation was given on quality management and reporting (Appendix 7)
- Most sepsis deaths happen outside of the hospital and APSA should have a strong focus on advocacy, education and training in the community
- A priority is the need to develop a core quality metric for the evaluation of sepsis care
- APSA should consider developing a training model for inclusion in health professional undergraduate program curriculums for medical students, nurses and allied health.

ACTION 9: Prepare a draft report on sepsis quality improvement topics and potential consensus recommendations by APSA (Ratapum Champunot).

Appendix 1 World Health Assembly Resolution 2017

SEVENTIETH WORLD HEALTH ASSEMBLY

WHA70.7

Agenda item 12.2

29 May 2017

Improving the prevention, diagnosis and clinical management of sepsis

The Seventieth World Health Assembly,

Having considered the report on improving the prevention, diagnosis and clinical management of sepsis;¹

Concerned that sepsis continues to cause approximately six million deaths worldwide every year, most of which are preventable;

Recognizing that sepsis as a syndromic response to infection is the final common pathway to death from most infectious diseases worldwide;

Considering that sepsis follows a unique and time-critical clinical course, which in the early stages is highly amenable to treatment through early diagnosis and timely and appropriate clinical management;

Considering also that infections which may lead to sepsis can often be prevented through appropriate hand hygiene, access to vaccination programmes, improved sanitation and water quality and availability, and other infection prevention and control best practices; and that forms of septicæmia associated with nosocomial infections are severe, hard to control and have high fatality rates;

Recognizing that while sepsis itself cannot always be predicted, its ill effects in terms of mortality and long-term morbidity can be mitigated through early diagnosis and appropriate and timely clinical management;

Recognizing also the need to improve measures for the prevention of infections and control of the consequences of sepsis, due to inadequate infection prevention and control programmes, insufficient health education and recognition in respect of early sepsis, inadequate access to affordable, timely and appropriate treatment and care, and insufficient laboratory services, as well as the lack of integrated approaches to the prevention and clinical management of sepsis;

Noting that health care-associated infections represent a common pathway through which sepsis can place an increased burden on health care resources;

¹ Document A70/13.

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Considering the need for an integrated approach to tackling sepsis that focuses on prevention, early recognition through clinical and laboratory services, and timely access to health care, including intensive care services, with reliability in the delivery of the basics of care, including intravenous fluids and the timely administration of antimicrobials, where indicated;

Acknowledging that: (i) the inappropriate and excessive use of antimicrobials contributes to the threat of antimicrobial resistance; (ii) the global action plan on antimicrobial resistance adopted in resolution WHA68.7 (2015),¹ as well as resolution WHA67.25 (2014), urged WHO to accelerate efforts to secure access to effective antimicrobials and to use them responsibly and prudently; (iii) sepsis represents the most vital indication for the responsible use of effective antimicrobials for human health; (iv) in the absence of appropriate and timely clinical management, including effective antimicrobials, sepsis would be almost universally fatal; (v) ineffective or incomplete antimicrobial therapy for infections, including sepsis, may be a major contributor to the increasing threat of antimicrobial resistance; (vi) the incidence of some resistant pathogens may be reduced by the use of appropriate vaccines; and (vii) immunocompromised patients are most at risk from very serious forms of septicemia;

Recognizing that many vaccine-preventable diseases are major contributors to sepsis and reaffirming resolution WHA45.17 (1992) on immunization and vaccine quality, which urged Member States, inter alia, to integrate cost-effective and affordable new vaccines into national immunization programmes in countries where this is feasible;

Recognizing also the importance of strong, functional health systems, which include organizational and therapeutic strategies in order to improve patient safety and outcomes from sepsis of bacterial origin;

Further recognizing the need to prevent and control sepsis, to increase timely access to correct diagnosis and to provide appropriate treatment programmes;

Also recognizing the advocacy efforts of stakeholders, in particular through existing activities held every year on 13 September² in many countries, to raise awareness regarding sepsis,

1. URGES Member States:³

(1) to include prevention, diagnosis and treatment of sepsis in national health systems strengthening in the community and in health care settings, according to WHO guidelines;

(2) to reinforce existing strategies or develop new ones leading to strengthened infection prevention and control programmes, including by strengthening hygienic infrastructure, promoting hand hygiene, and other infection prevention and control best practices, clean childbirth practices, infection prevention practices in surgery, improvements in sanitation, nutrition and delivery of clean water, access to vaccination programmes, provision of effective personal protective equipment for health professionals and infection control in health care settings;

¹ See document WHA68/2015/REC/1, Annex 3.

² See document A70/13, paragraph 11: civil society organizations promote a World Sepsis Day on 13 September.

³ And, where applicable, regional economic integration organizations.

(3) to continue in their efforts to reduce antimicrobial resistance and promote the appropriate use of antimicrobials in accordance with the global action plan on antimicrobial resistance,¹ including the development and implementation of comprehensive antimicrobial stewardship activities;

(4) to develop and implement standard and optimal care and strengthen medical countermeasures for diagnosing and managing sepsis in health emergencies, including outbreaks, through appropriate guidelines with a multisectoral approach;

(5) to increase public awareness of the risk of progression to sepsis from infectious diseases, through health education, including on patient safety, in order to ensure prompt initial contact between affected persons and the health care system;

(6) to develop training for all health professionals on infection prevention and patient safety, and on the importance of recognizing sepsis as a preventable and time-critical condition with urgent therapeutic need, and of communicating with patients, relatives and other parties using the term “sepsis” in order to enhance public awareness;

(7) to promote research aimed at innovative means of diagnosing and treating sepsis across the lifespan, including research for new antimicrobial and alternative medicines, rapid diagnostic tests, vaccines and other important technologies, interventions and therapies;

(8) to apply and improve the use of the International Classification of Diseases system to establish the prevalence and profile of sepsis and antimicrobial resistance, and to develop and implement monitoring and evaluation tools in order to focus attention on and monitor progress towards improving outcomes from sepsis, including the development and fostering of specific epidemiologic surveillance systems, and to guide evidence-based strategies for policy decisions related to preventive, diagnostic and treatment activities and access to relevant health care for survivors;

(9) to engage further in advocacy efforts to raise awareness of sepsis, in particular through supporting existing activities held every year on 13 September in Member States;²

2. REQUESTS the Director-General:

(1) to develop WHO guidance including guidelines, as appropriate, on sepsis prevention and management;

(2) to draw attention to the public health impact of sepsis, including by publishing a report on sepsis describing its global epidemiology and impact on the burden of disease, and identifying successful approaches for integrating the timely diagnosis and management of sepsis into existing health systems, by the end of 2018;

(3) to support Member States, as appropriate, to define standards and establish the necessary guidelines, infrastructures, laboratory capacity, strategies and tools for reducing the incidence of, mortality from and long-term complications of sepsis;

¹ See document WHA68/2015/REC/1, Annex 3.

² See document A70/13, paragraph 11: civil society organizations promote a World Sepsis Day on 13 September.

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(4) to collaborate with other organizations in the United Nations system, partners, international organizations and other relevant stakeholders in enhancing access to quality, safe, efficacious and affordable types of treatments for sepsis, and infection prevention and control, including immunization, particularly in developing countries, while taking into account relevant existing initiatives;

(5) to report to the Seventy-third World Health Assembly on the implementation of this resolution.

Ninth plenary meeting, 29 May 2017
A70/VR/9

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Appendix 2 Agenda

2nd Asia Pacific Sepsis Alliance Meeting
Wednesday 14 August 2019 (10:00 – 16:00hrs)
vic3 Hotel, 89 Phahon Yothin Soi 3 Phaya Thai Bangkok 10400 Thailand

Meeting objectives:

- To establish the APSA governance, organisational structure and program management
- To establish the APSA program workgroups
- To confirm workgroup priorities, deliverables, timeframes and work plans

Time	Item	Lead
Session 1 Welcome		
1000	<ul style="list-style-type: none"> • Participant Introductions • Acknowledgement of sponsorship provided by CSL Behring (Australia) • Meeting objectives 	Simon Finfer
1015	GSA update and World Health Assembly resolution (2017)	Konrad Reinhart
1030	National updates on relevant sepsis activities and issues	
1100	Asia Pacific Sepsis Alliance <ul style="list-style-type: none"> • Bangkok Declaration (ratification) • Regional representation 	Simon Finfer
Session 2 APSA Program Management		
1115	Organisational structure	Brett Abbenbroek
1130	Steering Committee <ul style="list-style-type: none"> • Report on outcomes from the 1st meeting • Terms of Reference (ratification) • Membership (ratification) • Election of executive positions 	Simon Finfer
1200	Program logistics <ul style="list-style-type: none"> • Office host location and infrastructure requirements • Staff resourcing and funding • Communications, website, social media and reporting • Annual meeting schedule and format (virtual vs face to face) 	Brett Abbenbroek Lowell Ling
1230	Lunch	
Session 3 Workgroups		
1300	Advocacy and Engagement <ul style="list-style-type: none"> • Confirm lead and ToR • Identify priorities and outcomes and agree on a work plan • World Sepsis Day 	TBC
1330	Epidemiology and Research <ul style="list-style-type: none"> • Confirm lead and ToR • Identify priorities and outcomes and agree on a work plan • APSA and ATG collaboration • SIPS Study 	Rashan Haniffa Bala Venkatesh
1400	Afternoon Tea	
1415	Policy and Guidelines <ul style="list-style-type: none"> • Confirm lead and ToR • Identify priorities and outcomes and agree on a work plan 	Arjen Dondorp
1445	Quality Improvement <ul style="list-style-type: none"> • Confirm lead and ToR • Identify priorities and outcomes and agree on a work plan 	Ratapum Champunot
1515	Other business/next meeting	
1545	Meeting close	

Appendix 3 Actions

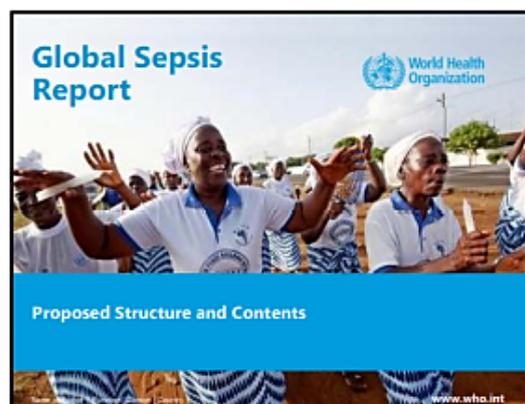
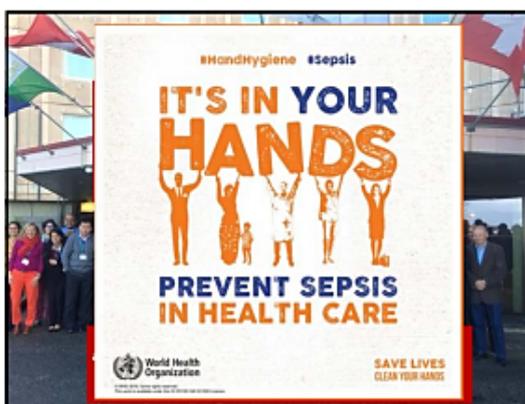
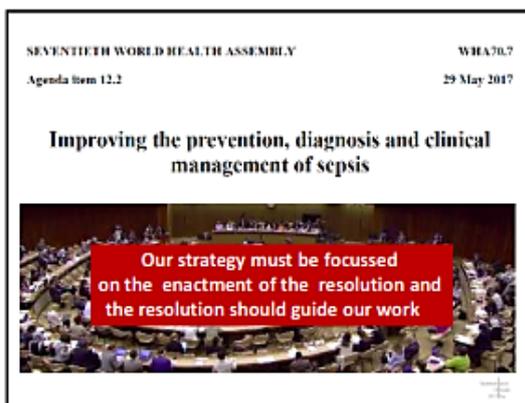
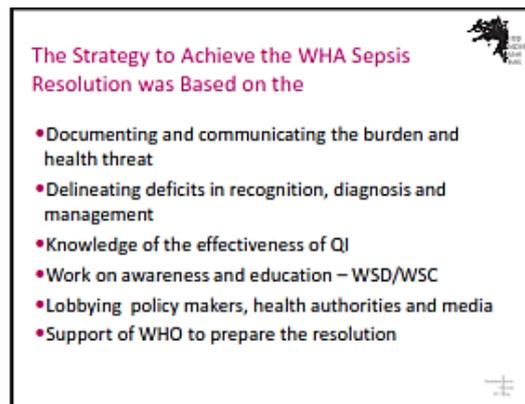
The following list of actions resulting from the 2nd APSA meeting discussions will be progressed out of session

#	Action	Lead	Status
1	Update the Bangkok Declaration and circulate for review and endorsement by APSA participants	APSA Program Team	Updated
2	Map stakeholders across the region to determine additional engagement	APSA Program Team	In progress
3	Revise Steering Committee ToR to incorporate APSA feedback	APSA Program Team	Updated
4	APSA members to ratify revised Terms of Reference	All APSA members	In progress
5	Recommend location for APSA 2020	APSA Program Team	In progress
6	Develop a brief survey to undertake a situational analysis on advocacy and awareness activity across the region	Simon Finfer	In progress
7	Canvass APSA members for an Epidemiology and Research workgroup lead.	Steering Committee	In progress
8	Develop of plan of action for the Epidemiology and Research workgroup	Bala Venkatesh and Barath Kumar	In progress
9	Canvass APSA members for a Guideline and Policy workgroup lead for 2020	Steering Committee	In progress
10	Liaise with SSG review and development team to explore the involvement of APSA in development of LIMC guidelines	Arjen Dondorp	In progress
11	Prepare a draft report on sepsis quality improvement topics and potential consensus recommendations by APSA as a basis for a publication in one year	Ratapum Champunot	In progress

Appendix 4 APSA Participants

Title	Name	Surname	Country
Prof	Bala	Venkatesh	Australia
Dr	Brett	Abbenbroek	Australia
Dr	Naomi	Hammond	Australia
Prof	Simon	Finfer	Australia
Dr	Abul	Faiz	Bangladesh
Dr	Lowell	Ling	Hong Kong (Virtual)
Dr	Bharath	Kumar	India
Prof	Sheila	Nainan Myatra	India
Dr	Rahul	Pandit	India
Prof	Oloan	Tampubolon	Indonesia
A/Prof	Tan	Toh Leong	Malaysia
A/Prof	Gentle	Shrestha	Nepal
Dr	Madiha	Hashmi	Pakistan
Ms	Abi	Beane	Sri Lanka
A/Prof	Tony	Yu-Chang Yeh	Taiwan
Prof	Arjen	Dondorp	Thailand
Dr	Chairat	Permpikul	Thailand
Prof	Rashan	Haniffa	Thailand
Dr	Ratapum	Champunot	Thailand
Dr	Rick	Brown	Thailand
Dr	Yen	Lam Minh	Vietnam
Dr	Louise	Thwaites	Vietnam

Appendix 5 GSA Update



Global report on sepsis epidemiology
Proposed Content



1. Background on resolution and overview of sepsis as a global health problem
2. WHO primary research on sepsis epidemiology
 - Maternal sepsis FPS (Global Maternal Sepsis Study - GLOSS)
 - Causes of maternal death study
 - Multi-Country Survey on Abortion (MCS-A): Abortion-related Morbidity
 - Possible Serious Bacterial Infections (PSBI) African Neonatal Sepsis Trial (AFFINES 1) (AMANH)
 - Global Antimicrobial Resistance Surveillance System (GLASS)
3. Results from WHO systematic reviews on sepsis epidemiology and global burden:
 - Healthcare-associated sepsis (WHORRI)
 - Sepsis in adult population (WHO/Jena Univ - update of Am J Resp Crit Care Med 2016;193(3): 259-72)
 - Neonatal sepsis (WHORRI - update of Lancet Respir Med 2018; 6: 223-30)
 - Sepsis in stillbirth (WHORRI)
 - Maternal sepsis (JSTMB)
4. Methodologies and challenges/limitations in sepsis epidemiology/BOD research:
 - Sepsis definition, methodologies, approaches to detection and diagnosis, sources and processes for data collection
5. Future work on sepsis epidemiology/BOD research
 - Research gaps, sepsis agenda
6. WHO programmes/solutions to tackle sepsis?

Ongoing Studies on Epidemiology of Sepsis Put Together by WHO



- LSHTM
 - FIEBRE study: Causes of febrile illness in adults and children (epidemiology data from 5 African countries)
- IHME Global Research on AMR GRAM Project
 - Focus is on burden of global AMR (Fleming Fund (UK D. of Health, Wellcome Trust, Gates) sepsis is one of the points of entry in this retrospective study)
- African Research Collaboration on Sepsis (ARCS)
 - Baseline African Sepsis Incidence Study (BASIS Sepsis in countries in conflict)
 - Ongoing and planned studies by APSA and ESA missing

Our Strategy to Enact the Resolution Must Not Only Rely on the WHO But:



- Build on the great work of our member organizations and the evolving regional alliances
- Extend success of the World Sepsis Day and the World Sepsis Congress
- Expand our collaboration with IHME/GBDR
- Address big funding organizations as strategic partners
- Bring sepsis to the attention of the World Economic Forum, World Bank etc.



September 2020
18 Bangkok
2019-2020

Optimise the Support of the Work of Our Member Network



- Professionalization of the GSA and the Head Office
- Improving the work of the GSA committees
- Supporting the work of the regional alliances by the Head Office
- Developing and promulgating protocols and policies on sepsis, especially focused on early diagnosis
- Strengthening our collaboration with ED, ID, Microbiology, Nurses and Patient Advocacy groups
- Expanding the World Sepsis Day activities
- Developing the World Sepsis Congress and WSC-Spotlight



"It always seems impossible until it is done"

N. Mandela.



Appendix 6 National Updates

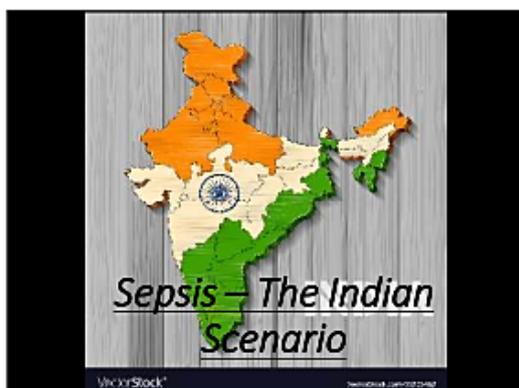
Australia

Overview of the Australian Sepsis Network and Stopping Sepsis National Action Plan.

For further information see <https://www.australiansepsisnetwork.net.au>



India



INDICAPS – 2010- 2011 (ISCCM)

- Till date largest prevalence study of Indian ICU
- 4 Day point prevalence, recording study day data and 30 days outcome data
- 4209 patients from 124 ICU
- Mean age- 54 yrs
- APACHE II- 17

INDICAPS – 2010- 2011 (ISCCM)

- 1455 patients had infection of Suspected infection
- 1144 (28%) had severe sepsis or septic shock
- 2039 Patients had cultures taken- 35.9% Positive
- 1077 Organism identified – 68.9 Gram Neg, 15.9 Gram Positive, 7.5% Fungus
- Mortality in this group 35%
- Alarming- 72% Patients received antibiotics on Study Day, 2583 (60%) had no suspicion of infection

Antibacterial Resistance: India Perspective

In India, Multidrug resistant bacteria have emerged as a major challenge in hospitalized as well as community-based patients

Central India

The incidence of XDR and MDR in Central India are as follows:

- 37.1% bacterial strains were MDR 13.8% strains were XDR
- Hospitalization due to MDR accounted to 4.2% while XDR accounted 1.6% of total incidence

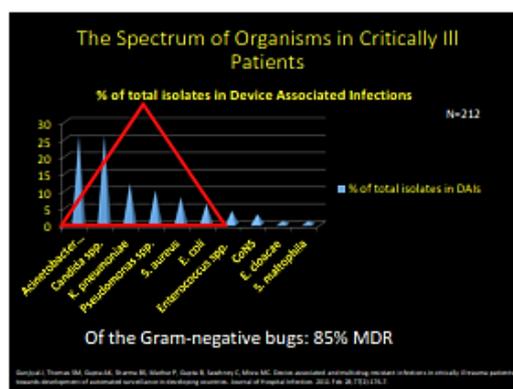
North India

The incidence of PDR, XDR, and MDR in India are as follows:

- 45.2% were XDR
- 27.2% were MDR
- 5.6% were PDR2

Over the past few years, carbapenem-resistant Enterobacteriaceae (CRE) has emerged as one of the most notorious groups due to dissemination of Klebsiella pneumoniae carbapenemase (KPC) and other carbapenemase subtypes like New Delhi metallo-β-lactamase (NDM1), via mobile genetic elements

- There are also KPC variants reported in literature out of which KPC2 and 3 are most common
- Another type of novel carbapenemase is NDM2, which was first reported in 2008



MOSER study ISCCM 2018

- Multidrug resistance was noted in 87.5% of *Acinetobacter*, 75.5% of *Klebsiella*, 61.9% of *Escherichia coli*, and 58.9% of *Pseudomonas* isolates, r

INDICAPS II- Completed Data Collection August 2019



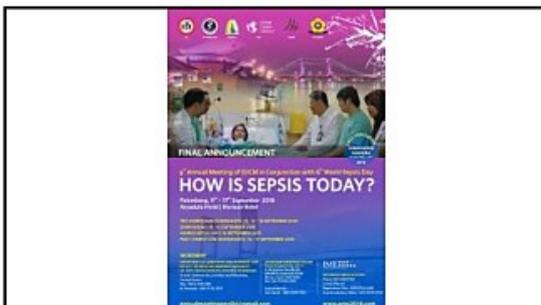
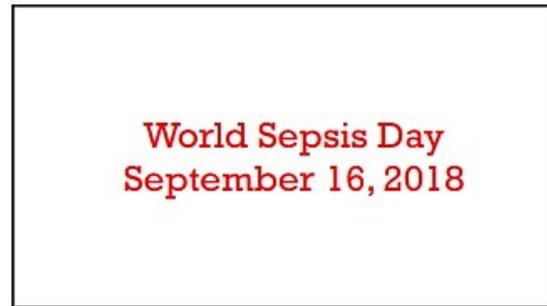
Dear ISCCM members
After the success and publication of...
MARS, INDICAPS and MOSER studies

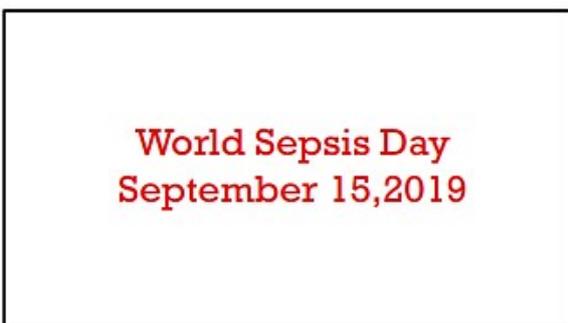
Let us enroll in the
"HERMES Study"
Hemodynamic Resuscitation and **M**onitoring in **E**arly Sepsis
a multicentre observational study on
practice patterns of hemodynamic resuscitation in septic shock.

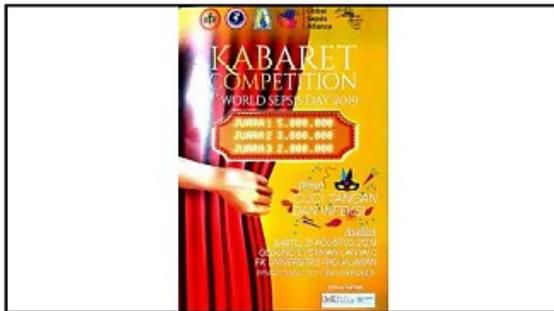
Study details on ISCCM Website
<https://isccm.org/HERMES.aspx>

Thank you
ISCCM Research Committee

Indonesia







Malaysia

Sepsis in Malaysia: A National Update

By Dr Tan Toh Leong
 Assoc. Professor, MD, MEmMed, AMM
 Universiti Kebangsaan Malaysia
 President of Malaysian Sepsis Alliance

Hello from Malaysia

Our Journey

- SIGMARIS Research Group (A small sepsis SIG)
 - Established 2014
 - Clinicians and scientists with various expertise
 - Emergency Medicine Physicians, Anaesthetists, Infectious Diseases Physicians, Infection Control Specialists, Pathologists, Biomedical Engineers, Chemists and Biochemists
- 2018: official registered society with Registrar of Societies, Malaysia: "Malaysian Sepsis Alliance" (MySepsis)

Malaysian Sepsis Alliance (MySepsis)

- aims to work with APSA & GSA, and WHO, to enact the 2017 WHA resolution to improve the outcomes of patients with sepsis in Malaysia and Asia Pacific Region

Our Mission	Our Vision
<ul style="list-style-type: none"> • Provide Malaysian leadership to reduce the Malaysian burden of sepsis 	<ul style="list-style-type: none"> • A world free of sepsis

Training

- 1 program for "Trainer of trainer" in sepsis management update
- 2 seminars on sepsis identification & management update
 - target group: Emergency Medicine physicians and trainees
- "2nd Malaysian Sepsis Evolution (MySE) Seminar"
 - Upcoming National level seminar
 - 20-21 August 2019 (next week)
 - targeted audience: Emergency Medicine physicians, Anaesthetists, and Infectious Diseases physicians and trainees



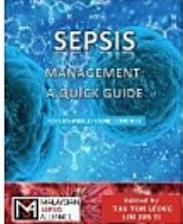
Education

- We host a Malaysian Website (Free Access) to promote all sepsis-related research, updates, clinical management, information
- URL: www.mysepsis.org



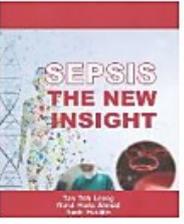
Sepsis management: A Quick Guide

- MySepsis will be launching a sepsis management quick guide (eBook) suitable for low-middle income countries
 - available/on sale online via Google Book Store
 - https://books.google.com.my/books/about/7id-rv5iDwAAGBAJ&redir_esc=y
- This book will be launched during the 2nd Malaysia Sepsis Evolution (MySE) Seminar



Sepsis: The New Insight

- A research book that compilation of information on sepsis:
 - History, epidemic, pathogenesis, comorbidities, diagnostic
 - Introductory handbook for clinicians, paramedics, medical and healthcare students, researchers



Public advocacy

- We partnered with 3 major health newspapers "The Health", "Al-Siha" and "The Health (Chinese)" to promote public awareness on sepsis



Public advocacy: section for public education and awareness on sepsis in our website



Research and Development

- We will be initiating a Malaysian Sepsis Epidemiology Research. The proposal is still being drafted, project will be initiated in stages
- We invented an alpha prototype rapid point-of-care diagnostic test kit (SepsiDot™) for bedside diagnosis of sepsis and to distinguish bacterial infection for less than 10min with 1 drop of blood



Implementation of WHA RESOLUTION

Public Sector

- Essential Medicines & Health Products
- Immunisation & Vaccines
- W.A.S.H
- Maternal Sepsis
- New born, child and adolescent health

Private Sector

- AMR, Antibiotic stewardship
- IPC, HIC
- Innovation access & use

CAPACITY BUILDING

- ▶ **Laboratory facilities** to identify sepsis and guide end points of resuscitation
- ▶ Readily available **microbiologic testing**
- ▶ **Strengthen health systems** including referrals to tertiary care centres with developed critical care facilities

Vietnam




Vietnam Update



Oxford University
Clinical Research Unit
Ho Chi Minh City
Hanoi
Jakarta
Kathmandu



Sepsis Work

- Network of hospitals
- Community preventative medicine
- National reference laboratory
- Training
- Research



National/local guidelines



HƯỚNG DẪN CHẨN ĐOÁN VÀ ĐIỀU TRỊ MỘT SỐ BỆNH TRUYỀN NHIỄM

Viện Vệ Sinh An Toàn Thực Phẩm và Dinh Dưỡng, Viện Vệ Sinh Y học Nhiệt Đới, Viện Vệ Sinh và Kiểm Soát Môi Trường, Viện Vệ Sinh và Kiểm Soát Môi Trường, Viện Vệ Sinh và Kiểm Soát Môi Trường

VIETNAM ANTIMICROBIAL RESISTANCE SURVEILLANCE PORTAL

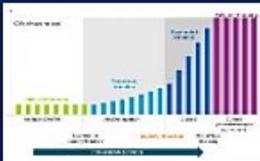
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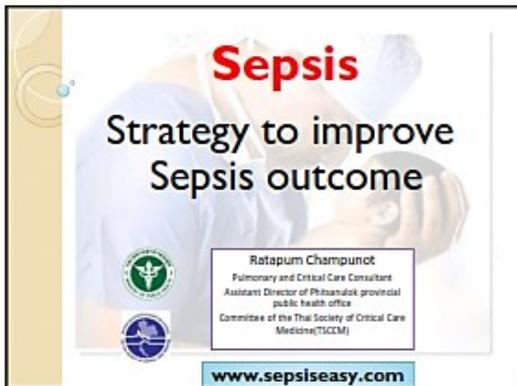
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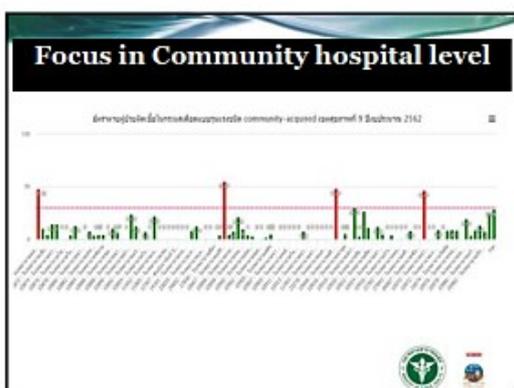
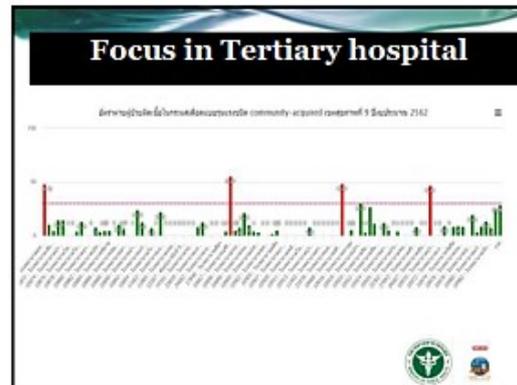
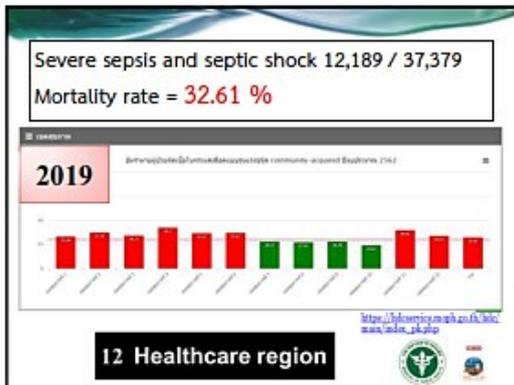
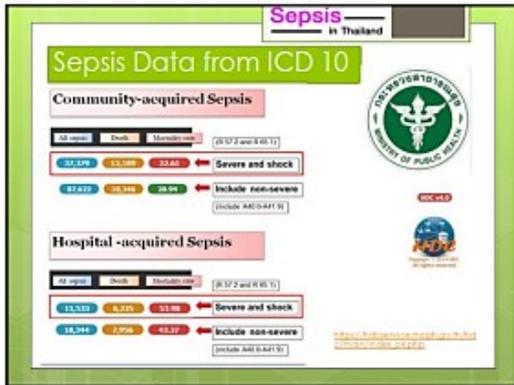
Transitioning to self-financing




Appendix 7 Quality Improvement

Thailand

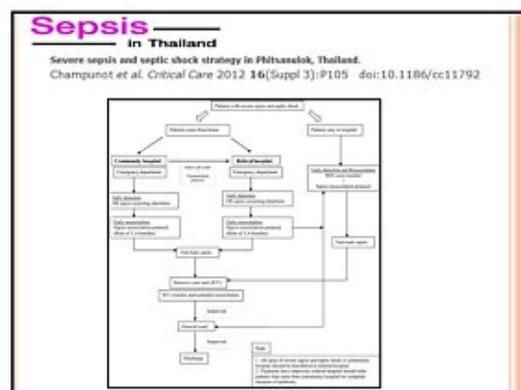
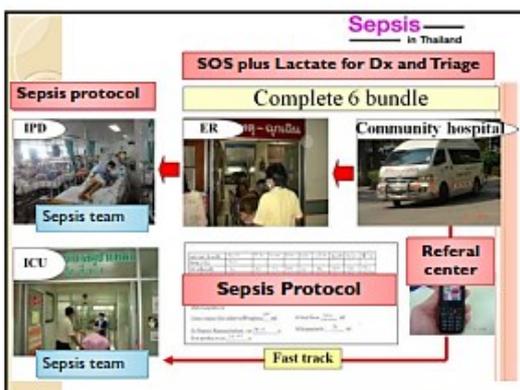


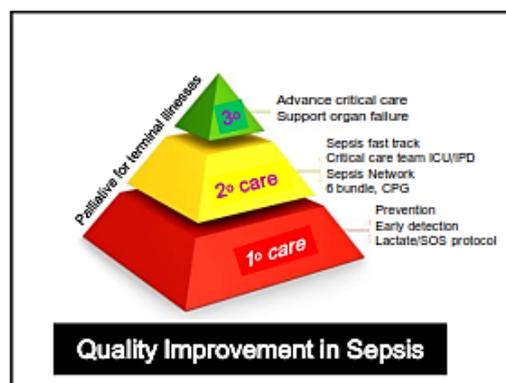
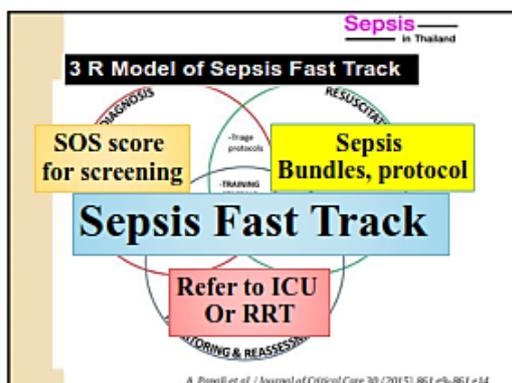




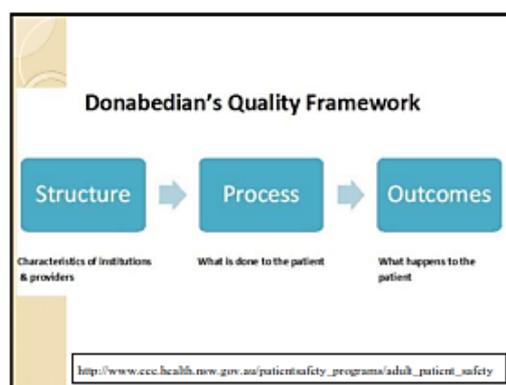
Sepsis in Thailand

Everyone should know about it





- Strategy to improve quality of care in sepsis**
- Sepsis team, Sepsis case manager
 - Early detection by screening tools eg. qSOFA, SOS, MEWS
 - Early Resuscitation by Protocol or Checklists
 - Sepsis Network for best referral system
 - Sepsis Fast Track (Early ICU Care, RRT)
 - Data and Knowledge Management for sepsis
 - Continuous Monitoring by Health Data Center



Process Outcome

IMPROVE RECOGNITION		IMPROVE RESPONSE		REDUCE DEATH & DISABILITY	
PROCESS (to be revised)	EVALUATION	PROCESS (to be revised)	EVALUATION	OUTCOME	EVALUATION
Track and trigger observation chart	Audit completion	Clinical Review	Measure rate of calls Audit appropriateness of calls	Reduce overall deaths	Measure death rate
Standard calling criteria	Audit breaches	Rapid Response	Measure rate of calls Audit appropriateness of calls	Reduce unexpected deaths	Measure rate of unexpected deaths ¹
Education packages	Access training resources			Reduce unexpected preventable deaths	Measure rate of unexpected preventable deaths ²
				Reduce cardiac/respiratory arrests	Measure rate of cardiac/respiratory arrests

Note: ¹Unexpected deaths = all deaths minus expected deaths (Patients Not for Resuscitation)
²Essentially preventable deaths = Unexpected deaths that had breaches of calling criteria not acted on

http://www.ccc.health.nsw.gov.au/patientsafety_programs/adult_patient_safety

- Quality metrics for the evaluation of sepsis care : Proceed from the 2nd APSA meeting**
- Aims**
- **Develop a core quality metrics for evaluation of sepsis care**
 - Published in 1 year
 - Sponsorship.....
- Asia Pacific Sepsis Alliance

Quality metrics for the evaluation of sepsis care : Proceed from the 2nd APSA meeting

Working group

- QI group of APSA
- APSA committee membership

Working process

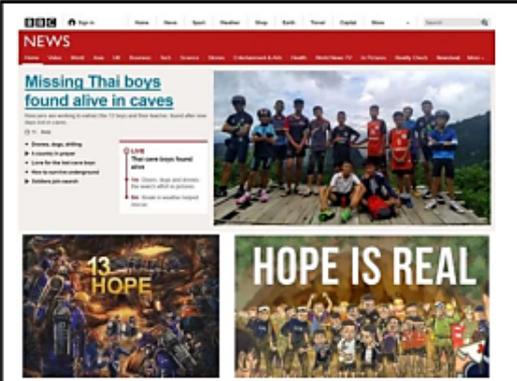
- Draft topic and contents by QI group of APSA
- Consensus and grading by APSA committee membership
- Summary for publish by QI group of APSA



Quality metrics for the evaluation of sepsis care : Proceed from the 2nd APSA meeting

Contents of metrics

- The metrics will cover structural, process and outcomes indicators
- Process of care will cover pre-hospital, in-hospital and post-hospital care
- Levels of recommendations were graded by Consensus of committee

www.sepsiseasy.com

FIGHT Against sepsis

Prevention Recognize Resuscitate Refer Palliative

Sepsis in Thailand

Save Lives Stop Sepsis

Thal Sepsis Alliance



Sepsis in Thailand

Thank you

www.sepsiseasy.com

Thal Sepsis Alliance

