



Asia
Pacific
Sepsis
Alliance

APSA Bangkok Declaration 2nd Ed.

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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 has the potential to save millions of lives and can be accessed at:

[World Health Assembly \(70/A70\) Resolution on Sepsis \(R7\)](#)

National sepsis action plans aim to:

- 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 provided:

- Internationally by the Global Sepsis Alliance (GSA)
- Regionally by the Latin American, African, Europe, North American and the Eastern Mediterranean alliances, and the Asia Pacific Sepsis Alliance (APSA) which was formed in 2019; and
- National programs, initiatives, professional organisations and support groups.

Formation of the Asia Pacific Sepsis Alliance (APSA) supports national initiatives to enact the WHA resolution and reduce the burden of sepsis across the Asia Pacific Region.

In 2023, at the global World Sepsis Day event on 13 September the Berlin Declaration on Sepsis, an urgent call for the enforcement of the WHA Resolution 70.7 and reinvigorated global action on sepsis. The full Berlin Declaration can be accessed at:

[Global Sepsis Alliance Berlin Declaration on Sepsis: An Urgent call](#)

The Berlin Declaration acknowledges the progress in the fight against sepsis, including:

- Adoption of the historic World Health Assembly Resolution (WHA70.7) in 2017 to improve the prevention, diagnosis, and clinical management of sepsis;

- Prioritisation of sepsis in national health policies, strategies, and/or initiatives by at least 16 countries;
- Underwriting the 2030 World Sepsis Declaration by over 14,000 stakeholders;
- Generation of paramount evidence on the significant global burden of sepsis across 195 countries and territories, as published in Lancet in 2020;
- Publication of the first Global Sepsis Report in 2020 by the WHO;
- Establishment of 5 Regional Sepsis Alliances worldwide, that brings together 120 member organizations of the Global Sepsis Alliance, including medical and public health associations, sepsis survivors, patient organizations, and foundations, and
- Annual commemoration of World Sepsis Day with the engagement of a multitude of stakeholders through global awareness-raising campaigns since 2012;

Despite the progress made and the paramount scientific evidence:

- Sepsis remains a major global health threat, and a leading cause of death, disability, and healthcare spending, accounting for about 20% or 1 in every 5 deaths;
- Sepsis affected 48.9 million people and claimed 11 million lives in 2017;
- Sepsis-related deaths might be even higher, up to 13.7 million, based on the Global Burden of Disease Study, estimating that 7.7 million deaths associated with 33 bacterial pathogens, ranked as the second leading cause of deaths globally in 2019;
- 15.8 million sepsis cases and 5.11 million or nearly half of all sepsis-related deaths occurred in individuals with underlying injuries or non-communicable diseases;
- Most of the estimated 14.9 million excess deaths during the COVID-19 pandemic are attributed to viral sepsis as the final pathway to death from most infectious diseases;
- Sepsis disproportionately affects low- and middle-income countries (LMICs) with 85% of cases occurring in LMICs and remains a lead cause of hospital deaths in high-income countries (HICs);
- Sepsis continues to have a high economic burden, accounting for an estimated mean of 2.65% of the healthcare budget or 0.33% of GNP expenditures;
- Sepsis awareness remains low among policymakers, healthcare professionals, the general public, and other public- and private stakeholders;
- Sepsis burden is especially challenging in the context of the aging population in HICs, as well as prevailing poverty, poor sanitation, hunger, and weak health systems in LMICs, and armed conflicts;
- Sepsis burden will be aggravated by climate change impact with concerning trends in the incidence of dengue, chikungunya, and other vector-borne infections, and
- The enforcement of the WHA70.7 Sepsis Resolution remains low, as less than 10% of the 194 WHO Member States have prioritized sepsis in their national health policies, strategies, and/or initiatives as of 2023.

Important context to be taken into consideration in addressing the sepsis burden is that:

- Health-related Sustainable Development Goals and aspirations for Universal Health Coverage (UHC), Antimicrobial Resistance (AMR), and the Pandemic Prevention, Preparedness, and Response (PPPR) cannot be achieved without reinvigorated actions against sepsis at national, regional, and global levels;

- Policymakers rightly prioritising AMR, including in the outcome documents of the G7 and G20 Health Ministers' Meetings in 2023, must address and equally prioritize sepsis as the ultimate final pathway to death from most infections, including those rendered untreatable due to AMR, and
- Improved prevention, early diagnosis, and timely treatment of sepsis, through enhanced vaccination, nutrition, and hygiene practices, education of health professionals and the general public, and effective AMR stewardship, can contribute to strengthening holistic and patient-centered national health systems;

As such, the Berlin Declaration calls on member states to ensure urgent and full-scale enforcement of the commitments declared in the 2017 WHA70.7 sepsis resolution, namely to:

- Include prevention, diagnosis, and treatment of sepsis in national health systems strengthening in the community and in healthcare settings;
- Develop and implement standard and optimal care and strengthen medical countermeasures for diagnosing and managing sepsis in health emergencies;
- Increase public awareness of the risk of sepsis from infectious diseases;
- Develop training for all health professionals on infection prevention and control (IPC) and patient safety, and 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;
- 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.

The Berlin Declaration requests the Director-General of WHO to ensure oversight for full-scale implementation of the following articles of WHA70.7 resolution:

- To develop WHO guidance including guidelines, as appropriate, on sepsis prevention and management;
- 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, and
- 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;

The Berlin Declaration calls on key stakeholders in global health, including the UN Member States, UN agencies (UNDP, UNFPA, UNICEF, UN Women, WHO, and the World Bank), bi- and multi-lateral development agencies, the leading public-private partnerships (PPPs), and philanthropic foundations in global health (e.g. BMGF, CHAI, GAVI, The Global Fund, Rockefeller Foundation), innovative financing platforms (e.g. Global Giving, One Campaign,

UNITAID), as well as the business sector, academia, professional associations, and civil society to:

- Urgently prioritize appropriate positioning of sepsis in the Global Health Architecture, including in high-level forums (World Health Assembly, UN General Assembly, World Health Summit, Davos Economic Forum, G7, G20), as despite the paramount evidence on the significant burden of sepsis and its contribution to the deaths toll from HIV, Malaria, TB, and other priority infectious diseases, political and financial investments in the global sepsis response remain disproportionately low (8);
- Urgently prioritize the development of Global and National Sepsis Strategies and Action Plans within the holistic policies for IPC, UHC, AMR, and PPPR, and ensure synergy of policy advocacy and action;
- Establish regular (annual or bi-annual) monitoring and reporting mechanisms on the enforcement of WHA70.7 Sepsis Resolution, and strengthen data collection and surveillance systems for sepsis;
- Initiate the 2nd WHA Resolution on Sepsis for submission to the 78th Session of WHA, with more specific and measurable targets, call for WHO to prioritize sepsis leadership in its organizational structure at all levels, call for synergies in policies and action for sepsis, UHC, AMR, and PPPR, and to recognize the World Sepsis Day as the fourteenth official WHO global health day (13);
- Ensure increased and sustainable funding for sepsis at all levels, through domestic budgetary allocations, international development assistance, integration of sepsis in health system strengthening portfolios of global PPPs, private sector, and innovative financing platforms;
- Prioritize the establishment of country-led coordination mechanisms for the design and implementation of national sepsis strategies, action plans, and patient-centered clinical pathways (14) (stand-alone or as part of broader sectoral policies) under the leadership of national health authorities and with the engagement of all relevant stakeholders on the ground, and
- Ensure the establishment of a global academic network on sepsis for generation, consolidation, and dissemination of the proven and emerging evidence, knowledge, and innovations;

Lastly, the Berlin Declaration calls on G7 and G20 leaders, building on the example of the 2022 Berlin Communiqué of the G7 Health Ministers, to intensify efforts for strengthening the detection, diagnostics, and therapy of sepsis, synergize sepsis responses with antimicrobial stewardship and IPC, and ensure increased and sustainable funding for reinvigorated global action on sepsis.

Taking into account the progress made, the gravity of sepsis burden and the call for action presented in the Berlin Declaration, the APSA Bangkok Declaration 2019 was reviewed to ensure alignment and translation of the goals espoused in the Berlin Declaration. To the Asia Pacific region.

Bangkok Declaration 2023

Bangkok Declaration 2023 builds on the original Bangkok Declaration 2019, emphasising that APSA will continue to work with WHO, regional agencies and national governments to advocate for and enact the recommendations from the WHA resolution. Strategically APSA works across two key domains simultaneously i.e. 1. At the Executive/Government level; and 2. At the grass roots level with clinical champions and associated professional societies working to reduce the burden of sepsis in their respective countries and health care settings.

Bangkok Declaration 2023

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. In 2023, the Bangkok Declaration was reviewed to

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 WHA2017 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.

APSA Program Management

Program Structure

In 2019, the GSA appointed regional alliances coordinator and liaison. The role fosters cooperation, collaboration and knowledge sharing, providing a central point of contact for regional alliance support on administration matters, program management, communications and engagement.

An overview of the APSA program structure is in 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.



NB. Updated 10032020 to reflect merged workgroups

Figure 1 APSA Program Structure

APSA Steering Committee Terms of Reference

Table 1 APSA Steering Committee Term of Reference

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.</p> <p>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

	<ul style="list-style-type: none"> ○ 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 ● Deputy Director ● Treasurer ● Lead, Guideline and Quality Workgroup ● Lead, Research and Advocacy Workgroup ● Program Manager/Secretary
Secretariat	Program Manager (employed position)
Tenure	All elected roles will be for 2 years. At each 1 year interval 50% of elected positions will be re-elected to provide program continuity.
Program Management	<p>Quorum - half the number of members plus one, must be in attendance for decision-making</p> <p>Meetings - two virtual and one face-to-face meeting plus workgroup project meetings</p> <p>Reporting - internal and to the GSA</p>

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 Advocacy
- Guidelines and Quality

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 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 ? allied health
 - Infectious disease and anti-microbial resistance disciplines
 - General practice and primary care
 - Consumers

Research and Advocacy

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.

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.
 - ? Explore opportunities for conducting multi-center/multi-national trials in high consequent and high prevalent infectious diseases in the APSA regions

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.

Guidelines and Quality

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.

Notes:

- Next iteration of the Surviving Sepsis Campaign Guidelines (SSCG) 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>
- Many country specific guidelines are already being developed in the region using the SSCG 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

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.
- Pandemic preparedness across the region

Notes:

- 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.

APSA Workgroup Participants

APSA seeks to engage with all countries across the Asia Pacific region and partner relevant professional organisations to collaborate on initiatives that address the requirements of the World Health Assembly Sepsis Resolution 2017 and reduce the burden of sepsis. APSA Current participants shown in Table 2 and Table 3.

Table 2 Guidelines and Quality Workgroup – APSA participants

Title	Name	Surname	Country
Dr	Louise	Thwaites	Vietnam
Dr	Brett	Abbenbroek	Australia
Prof	Abul	Faiz	Bangladesh
Prof	Sheila	Myatra	India
Dr	Prashant	Nasa	UAE (Delphi Study)
Dr	Sinto	Robert	Indonesia
Prof	Toh Leong	Tan	Malaysia
Dr	Lundeg	Ganbold	Mongolia
A/Prof	Gentle	Shrestha	Nepal
Dr	Madiha	Hashmi	Pakistan
Dr	Eeling	Goh	Singapore
Dr	Ratapum	Champunot	Thailand
A/Prof	Tony	Yu-Chang Yeh	Taiwan
Dr	Vu Quoc	Dat	Vietnam

Table 2 Research and Advocacy Workgroup – APSA participants

Title	Name	Surname	Country
A/Prof	Lowell	Ling	Hong Kong
Prof	Simon	Finfer	Australia
Prof	Bala	Venkatesh	Australia
A/Prof	Naomi	Hammond	Australia
Dr	Ashwani	Kumar	Australia
Dr	Brett	Abbenbroek	Australia
Dr	Jimba	Jatsho	Bhutan
Dr	Bharath	Kumar	India
Prof	Sheila	Myatra	India
Dr	Yash	Javeri	India
Dr	Sinto	Robert	Indonesia
Dr	Satoshi	Nakagawa	Japan
Dr	Naoyuki	Matsuda	Japan
Dr	Paul	Huggan	New Zealand
Dr	Robert	Martynoga	New Zealand
Prof	Sebastian	Tan Toh Leong	Malaysia
Prof	Ganbold	Lundeg	Mongolia
A/Prof	Gentle	Shrestha	Nepal
Dr	Kevin	De Asis	Philippines
Dr	Eeling	Goh	Singapore
Dr	See Kay	Choong	Singapore
Dr	Ratapum	Champunot	Thailand
Prof	Rashan	Haniffa	Thailand
A/Prof	Tony	Yu-Chang Yeh	Taiwan
A/Prof	Louise	Thwaites	Vietnam