

Berlin Declaration on Sepsis

Urgent Call for the Enforcement of the World Health Assembly Resolution (WHA70.7) and Reinvanized Global Action on Sepsis

Delegates and supporter organizations¹ of the 2023 Central World Sepsis Day Event convened in Berlin on September 12 under the Patronage of Dr. Karl Lauterbach, Federal Minister of Health of Germany and Dr. Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization (WHO), and co-organized by the Global Sepsis Alliance, European Sepsis Alliance, Sepsis Foundation, and Deutschland Erkennt Sepsis (Germany Recognizes Sepsis),

Acknowledging the Progress Made in the Fight Against Sepsis, including:

- a. Adoption of the historic World Health Assembly Resolution (WHA70.7)² in 2017 to improve the prevention, diagnosis, and clinical management of sepsis;
- b. Prioritization of sepsis in national health policies, strategies, and/or initiatives by at least 16 countries³;
- c. Underwriting the 2030 World Sepsis Declaration⁴ by over 14,000 stakeholders globally;
- d. Generation of paramount evidence on the significant global burden of sepsis across 195 countries and territories, as published in Lancet in 2020⁵;
- e. Publication of the first Global Sepsis Report in 2020 by the WHO⁶;
- f. 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
- g. Annual commemoration of World Sepsis Day on September 13 with the engagement of a multitude of stakeholders through global awareness-raising campaigns since 2012;

Concerned that Despite the Progress and Paramount Scientific Evidence,

- a. Sepsis remains a major global health threat, and a leading cause of death, disability, and healthcare spending around the world⁷, accounting for about 20% or 1 in every 5 deaths⁵;
- b. Sepsis affected 48.9 million people and claimed 11 million lives of children and adults only in 2017⁵;
- c. 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 would rank as the second leading cause of deaths globally in 2019⁸;
- d. 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 diseases⁵;
- e. Most of the estimated 14.9 million excess deaths during the COVID-19 pandemic⁹ are to be attributed to viral sepsis as the final common pathway to death from most infectious diseases^{2,7,10};
- f. Sepsis disproportionately affects low- and middle-income countries (LMICs) with 85% of cases occurring in LMICs⁵ and remains a lead cause of hospital deaths in high-income countries (HICs);
- g. 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 expenditures¹¹;
- h. Sepsis awareness remains low among policymakers, healthcare professionals, the general public, and other public- and private stakeholders;
- i. 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;
- j. Sepsis burden will be further aggravated by the climate change impact with concerning trends in the incidence

- of dengue, chikungunya, and other vector-borne infections¹², and
- k. The enforcement of 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;

Realizing that,

- a. 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;
- b. Policymakers rightly prioritizing 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 infections rendered untreatable due to AMR, and
- c. 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;

1. Call on the UN Member States to ensure urgent and full-scale enforcement of the commitments declared in the 2017 WHA70.7 Sepsis Resolution, namely to:

- a. Include prevention, diagnosis, and treatment of sepsis in national health systems strengthening in the community and in healthcare settings;
- b. Develop and implement standard and optimal care and strengthen medical countermeasures for diagnosing and managing sepsis in health emergencies;
- c. Increase public awareness of the risk of progression to sepsis from infectious diseases;
- d. 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;
- e. 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;

2. Request the Director-General of WHO to ensure oversight for full-scale implementation of the following articles of WHA70.7 Resolution:

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

3. Call 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. GlobalGiving, One Campaign, UNITAID), as well as the business sector, academia, professional associations, and civil society to:

- a. 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 low⁸;

- b. 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;
- c. 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;
- d. 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 day¹³;
- e. 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;
- f. Prioritize the establishment of country-led coordination mechanisms for the design and implementation of national sepsis strategies, action plans, and patient-centered clinical pathways¹⁴ (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
- g. Ensure the establishment of a global academic network on sepsis for generation, consolidation, and dissemination of the proven and emerging evidence, knowledge, and innovations;

4. Finally, *Call on G7 and G20 Leaders*, building on the example of the 2022 Berlin Communiqué of the G7 Health Ministers¹⁵, 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.

1 Supporter organizations of the 2023 Central World Sepsis Day Event in alphabetical order: Aktionsbündnis Patientensicherheit e.V., AOK-Bundesverband, AOK Hessen, AOK Nordost, Berliner Medizinische Gesellschaft e.V., Berufsverband Deutscher Anästhesistinnen und Anästhesisten e.V., Chilean Society of Critical Care and Emergency Medicine (RedIntensiva), DAK-Gesundheit, Deutsche Gesellschaft für Allgemein- und Viszeralchirurgie (DGAV), Deutsche Gesellschaft für Anästhesiologie und Intensivmedizin e.V., Deutsche Gesellschaft für Chirurgie e.V., Deutsche Gesellschaft für Fachkrankenpflege und Funktionsdienste e.V., Deutsche Gesellschaft für Nephrologie (DGfN), Deutsche Interdisziplinäre Vereinigung für Intensiv- und Notfallmedizin (DIVI), Eastern Mediterranean Sepsis Alliance (EMSA), European Shock Society, European Society of Clinical Microbiology and Infectious Diseases (ESCMID), Gesellschaft für Neonatologie und Pädiatrische Intensivmedizin e.V., Indian Society of Critical Care Medicine (ISCCM), Instituto Latino Americano de Sepse (ILAS), InfectControl, Medical Women's International Association (MWIA), Nepalese Society of Critical Care Medicine (NSCCM), Netzwerk Patientensicherheit für das Saarland, Patient Safety Movement Foundation, Robert-Koch-Institut, Sepsis Alliance, Sepsis Dialog der Universitätsmedizin Greifswald, Spanish Edusepsis Network, Stiftung Charité, Techniker Krankenkasse, Tbilisi Medical Academy, UK Sepsis Trust, UNITE Parliamentarians Network for Global Health, Verband der Universitätsklinika Deutschlands e. V. (VUD), Virchow Foundation for Global Health, WIR! Stiftung, World Health Summit <https://www.worldsepsisday.org/sponsors-and-supporters> (accessed September 4, 2023, to be updated accordingly).

2 Improving the prevention, diagnosis and clinical management of sepsis, Seventieth World Health Assembly (WHA70.7), Agenda item 12.2, 29 May 2017, https://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_R7-en.pdf (accessed August 17, 2023).

3 The following 16 countries have prioritized Sepsis in national health policies, strategies and/or sepsis-related initiatives as of August 2023: Austria, Canada, England, France, Ireland, Italy, Saudi Arabia, Scotland, Spain, Sudan, Sweden, Switzerland, Turkey, Thailand, USA and Wales. Source: GSA database, 2023.

4 Supporters of the World Sepsis Declaration <https://www.worldsepsisday.org/supporters> (accessed August 17, 2023).

5 Rudd KE, Johnson SC, Agesa KM, Shackelford KA, Tsoi D, Kievlan DR, Colombara DV, Ikuta KS, Kissoon N, Finfer S, Fleischmann-Struzek C, Machado FR, Reinhart KK, Rowan K, Seymour CW, Watson RS, West TE, Marinho F, Hay SI, Lozano R, Lopez AD, Angus DC, Murray CJL, Naghavi M. Global, regional, and national sepsis incidence and mortality, 1990-2017: analysis for the Global Burden of Disease Study. *Lancet*. 2020 Jan 18; 395(10219):200-211. doi: 10.1016/S0140-6736(19)32989-7. PMID: 31954465; PMCID: PMC6970225.

6 Global report on the epidemiology and burden of sepsis: current evidence, identifying gaps, and future directions. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO <https://www.who.int/publications/i/item/9789240010789> (accessed August 17, 2023).

7 Shappell C, Rhee C, Klompas M. Update on Sepsis Epidemiology in the Era of COVID-19. *Semin Respir Crit Care Med*. 2023 Feb;44(1):173-184. doi: 10.1055/s-0042-1759880. Epub 2023 Jan 16. PMID: 36646093.

8 GBD 2019 Antimicrobial Resistance Collaborators. Global mortality associated with 33 bacterial pathogens in 2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet*. 2022 Dec 17;400(10369):2221-2248. doi: 10.1016/S0140-6736(22)02185-7. Epub 2022 Nov 21. PMID: 36423648; PMCID: PMC9763654

9 <https://www.who.int/news/item/05-05-2022-14.9-million-excess-deaths-were-associated-with-the-covid-19-pandemic-in-2020-and-2021> (accessed August 19, 2023).

10 Karakike E, Giamarellos-Bourboulis EJ, Kyprianou M, Fleischmann-Struzek C, Pletz MW, Netea MG, Reinhart K, Kyriazopoulou E. Coronavirus Disease 2019 as Cause of Viral Sepsis: A Systematic Review and Meta-Analysis. *Crit Care Med*. 2021 Dec 1;49(12):2042-2057. doi: 10.1097/CCM.0000000000005195. PMID: 34259663; PMCID: PMC8594513.

11 van den Berg M, van Beuningen FE, Ter Maaten JC, Bouma HR. Hospital-related costs of sepsis around the world: A systematic review exploring the economic burden of sepsis. *J Crit Care*. 2022 Oct;71:154096. doi: 10.1016/j.jcrc.2022.154096. Epub 2022 Jul 12. PMID: 35839604.

12 Ryan SJ, Carlson CJ, Mordecai EA, Johnson LR (2019) Global expansion and redistribution of Aedes-borne virus transmission risk with climate change. *PLoS Negl Trop Dis* 13(3): e0007213. <https://doi.org/10.1371/journal.pntd.0007213>

13 <https://www.who.int/campaigns> (accessed August 19, 2023).

14 Strålin K, Linder A, Brink M, Benjaminsson-Nyberg P, Svefors J, Bengtsson-Toni M, Abelson C, Offenbartl K, Björkqvist K, Rosenqvist M, Rönkvist A, Svård-Backlund J, Wallgren K, Tydén J, Wallgren U, Vicente V, Cajander S, Lipcsey M, Nauclér P, Kurland L. Design of a national patient-centred clinical pathway for sepsis in Sweden. *Infect Dis (Lond)*. 2023 Oct;55(10):716-724. doi: 10.1080/23744235.2023.2234033. Epub 2023 Jul 21. PMID: 37477232.

15 G7 Health Ministers' Communiqué 20 May 2022, Berlin. <https://www.global-sepsis-alliance.org/news/2022/5/23/g7-health-ministers-commit-to-boost-the-implementation-of-the-wha-707-resolution-on-sepsis> (accessed August 17, 2023).

First Signatories of the Declaration

- African Sepsis Alliance (ASA)
- Aktionsbündnis Patientensicherheit
- Asia Pacific Sepsis Alliance (APSA)
- Australasian Society for Infectious Diseases (ASID)
- Australian College of Critical Care Nurses
- Canadian Sepsis Foundation
- Center for Sepsis Control and Care Jena
- Chilean Society of Intensive Care
- Consortium of Universities for Global Health (CUGH)
- Eastern Mediterranean Sepsis Alliance (EMSA)
- Emergency Medicine Association of the Democratic Republic of Congo (AMURDC)
- END SEPSIS
- Erin Kay Flatley Memorial Foundation
- European Sepsis Alliance (ESA)
- European Shock Society (ESS)
- European Society of Anaesthesiology and Intensive Care (ESAIC)
- Georgian Association of Critical Care and Catastrophe Medicine
- German Sepsis Society
- Global Alliance for Infections in Surgery
- Indian Society of Critical Care Medicine (ISCCM)
- Indonesia Society of Intensive Care Medicine
- Institute for Infectious Diseases and Infection Control, Jena University Hospital/ Friedrich Schiller University
- International Fluid Academy (IFA)
- International Sepsis Forum (ISF)
- Italian Society of Anesthesia, Analgesia, Reanimation and Intensive Care (SIAARTI)
- Japan Sepsis Alliance (JaSA)
- Lambaréné Medical Research Center (CERMEL)
- Latin American Sepsis Institute (LASI)
- Latin American Society of Pediatric Emergency
- Latin American Society of Pediatric Intensive Care
- Malaysian Sepsis Alliance
- Nepalese Society of Critical Care Medicine (NSCCM)
- New Zealand Sepsis Trust
- Northwell Health
- Patient Safety Movement Foundation (PSMF)
- Physician-Patient Alliance for Health & Safety (PPAHS)
- Red Colaborativa Pediátrica de Latinoamérica (LA-Red Network)
- Rwanda Emergency Care Association (RECA)
- Rwanda Sepsis Alliance (RSA)
- Salvadoran Association of Critical Medicine and Intensive Care (ASALMECCI)
- Saudi Critical Care Society
- Sepsis Alliance
- Sepsis Australia
- Sepsis Canada
- Sepsis en daarna
- Sepsis México S.C.
- Sepsisfonden
- Sidra Medicine
- Society for Continuing Medical Education Belgrade
- Spanish Edusepsis Network
- Sudan Sepsis Alliance
- Swedish National Sepsis Organization
- Taiwan Society of Critical Care Medicine
- The Global Antibiotic Research & Development Partnership (GARDP)
- The Medical Women's International Association (MWIA)
- The Romanian Society of Anaesthesia-Intensive Care
- Turkish Society of Intensive Care
- UK Sepsis Trust
- UNITE Parliamentarians Network for Global Health
- Virchow Foundation for Global Health
- World Alliance Against Antibiotic Resistance (WAAAR)
- World Federation of Pediatric Intensive & Critical Care Societies (WFPICCS)
- World Federation of Societies of Anaesthesiologists (WFSA)
- World Health Summit