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SEPSIS

Polish and worldwide
data

- **Sepsis is life-threatening organ dysfunction due to a dysregulated host response to infection.** It is considered a major cause of health loss, but data for the global burden of sepsis are limited. As a syndrome caused by underlying infection, **sepsis is not part of standard Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) estimates.**
- Multiple cause-of-death data from 109 million individual death records were used to calculate mortality related to sepsis among each of the 282 underlying causes of death in GBD 2017.
- Age-standardised sepsis incidence fell by 37·0% (95% UI 11·8–54·5) and mortality decreased by 52·8% (47·7–57·5) from 1990 to 2017. Despite declining age-standardised incidence and mortality, **sepsis remains a major cause of health loss worldwide and has an especially high health-related burden in sub-Saharan Africa.**

SEPSIS



Hospital-treated sepsis in adults

Incidence: 189 per 100 000 person-years

Overall mortality: 26.7%

Mortality of ICU-treated sepsis: 42.0%

Hospital-acquired sepsis cases

1 in 4 cases

of sepsis were acquired in the hospital

Patients with hospital-acquired sepsis had a longer length of stay and high AMR rates, which can significantly impact on patient outcomes.

Sepsis worldwide in 2017

48.9 million

cases of sepsis

11 million

sepsis-related deaths

20%

of all global deaths

Sepsis incidence in 2017 and children

Sepsis incidence was biphasic; it peaked in early childhood and again in elderly adults.

41.5% (20.3 million)

of incident sepsis cases

26.4% (2.9 million)

deaths related to sepsis

children younger than 5 years

Sepsis regional and economic disparities

85.0% of sepsis cases and 84.8% of sepsis related deaths occurred in countries with low, low-middle, or middle sociodemographic indices, particularly in sub-Saharan Africa and South-East Asia.

Hospital-acquired sepsis cases

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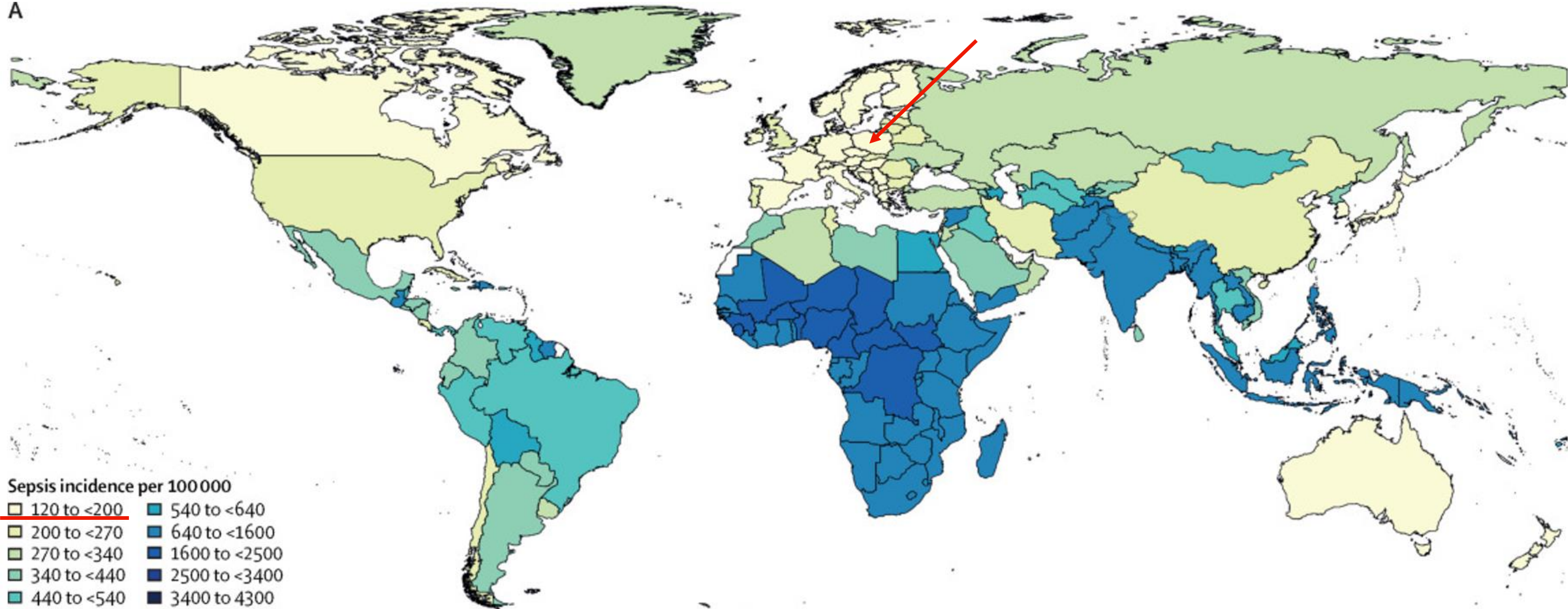
Sepsis incidence by location for all ages, both sexes, and all underlying causes, 1990 and 2017

| Location | All underlying causes | | | Underlying infection | | | Underlying non-communicable disease | | | Underlying injury | | |
|----------|--------------------------------------|--|---|--------------------------------------|--|---|--------------------------------------|--|---|--------------------------------------|--|---|
| | Incident sepsis cases (95% UI), 2017 | Percentage change in sepsis ASIR (95% UI), 1990-2017 | Sepsis ASIR per 100,000 population (95% UI), 2017 | Incident sepsis cases (95% UI), 2017 | Percentage change in sepsis ASIR (95% UI), 1990-2017 | Sepsis ASIR per 100,000 population (95% UI), 2017 | Incident sepsis cases (95% UI), 2017 | Percentage change in sepsis ASIR (95% UI), 1990-2017 | Sepsis ASIR per 100,000 population (95% UI), 2017 | Incident sepsis cases (95% UI), 2017 | Percentage change in sepsis ASIR (95% UI), 1990-2017 | Sepsis ASIR per 100,000 population (95% UI), 2017 |
| Poland | 100,478 (82,825 - 126,495) | -47.4 (-61.5 - -29.1) | 181.3 (147.3 - 229.7) | 41,790 (28,394 - 64,322) | -44.2 (-70.1 - -5.5) | 80.4 (54.1 - 120.8) | 53,365 (43,119 - 67,116) | -48.3 (-64.9 - -28.5) | 89.6 (70.9 - 116.9) | 5,323 (3,646 - 7,673) | -48.3 (-70.4 - -18.6) | 11.3 (7.8 - 16.3) |

Sepsis-related mortality by location for all ages, both sexes, and all underlying causes, 1990 and 2017

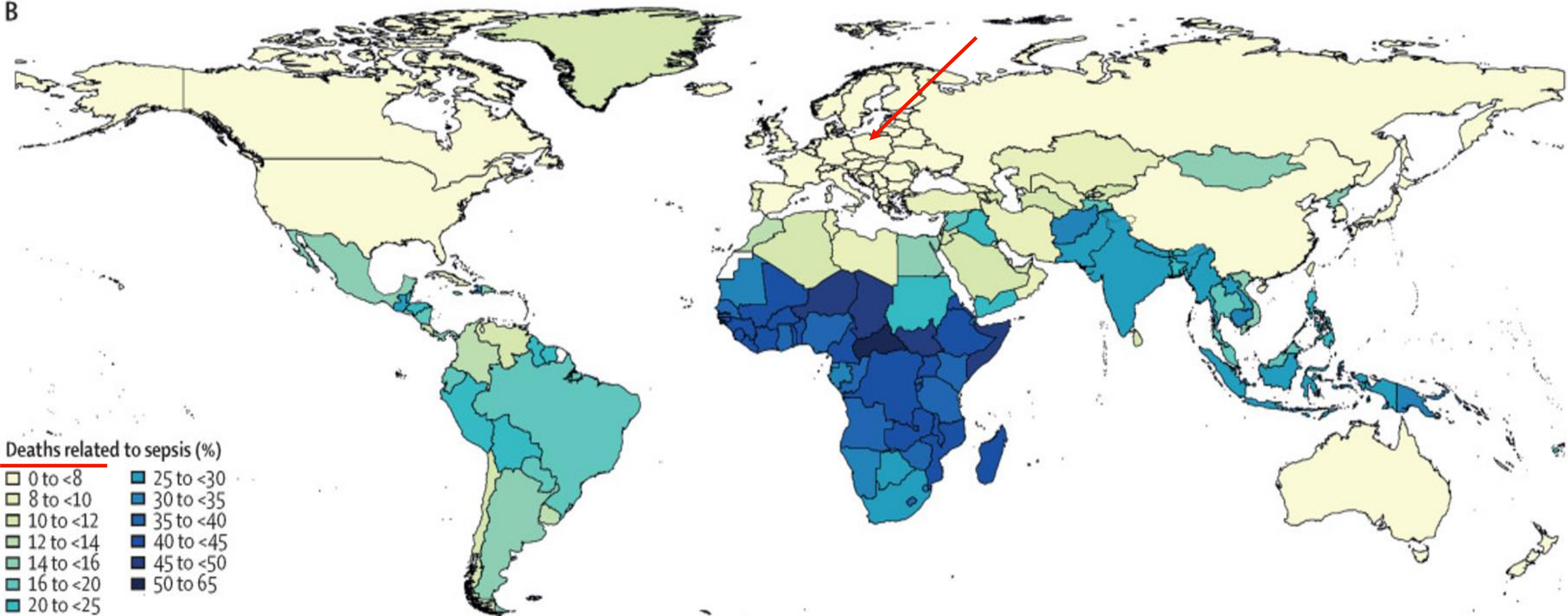
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|----------|--|---|--------------------------------------|--|---|--------------------------------------|--|---|--------------------------------------|--|---|--------------------------------------|
| | Percentage change in sepsis ASMR (95% UI), 1990-2017 | Sepsis ASMR per 100,000 population (95% UI), 2017 | Sepsis-related deaths (95% UI), 2017 | Percentage change in sepsis ASMR (95% UI), 1990-2017 | Sepsis ASMR per 100,000 population (95% UI), 2017 | Sepsis-related deaths (95% UI), 2017 | Percentage change in sepsis ASMR (95% UI), 1990-2017 | Sepsis ASMR per 100,000 population (95% UI), 2017 | Sepsis-related deaths (95% UI), 2017 | Percentage change in sepsis ASMR (95% UI), 1990-2017 | Sepsis ASMR per 100,000 population (95% UI), 2017 | Sepsis-related deaths (95% UI), 2017 |
| Poland | -62.0 (-67.9 - -55.3) | 38.2 (33.7 - 43.3) | 25,833 (22,657 - 29,362) | -55.5 (-68.1 - -40.8) | 12.9 (9.7 - 16.3) | 8,685 (6,453 - 11,091) | -65.3 (-72.0 - -57.3) | 24.7 (21.3 - 28.7) | 16,906 (14,511 - 19,906) | -70.8 (-80.2 - -58.6) | 1.8 (1.4 - 2.4) | 1,036 (767 - 1,409) |

A



Age-standardised sepsis incidence per 100 000 population for both sexes, in 2017

B



Percentage of all deaths related to sepsis, age-standardised for both sexes, in 2017

26 August 2020

How to prevent sepsis

The role you can play in health care and communities

#sepsis #handhygiene

What is sepsis?

Sepsis arises when an infection alters the body's normal response causing injury to tissue and organs

life-threatening illness

injures tissues and organs



Every year sepsis affects

30 million people worldwide

3 million newborns

1.2 million children

can kill 6 million people

kills up to 500 000 newborns

causes 1 in 10 maternal deaths

Who is at risk?

Anyone with an infection can develop sepsis but some are more at risk than others



PREGNANT WOMEN



NEONATES



THE ELDERLY



THE IMMUNOSUPPRESSED



PATIENTS WITH CHRONIC DISEASES



HOSPITALIZED PATIENTS

How and where do we prevent sepsis?

Sepsis can be prevented by

preventing infection

preventing the evolution of infection to sepsis



The main ways to prevent infection are:



Good hygiene

↓ 40% DIARRHOEA



Safe water and sanitation

↓ 10% GLOBAL DISEASE BURDEN



Safe food preparation and good nutrition



↓ 50% DIARRHOEA

↓ 30% RESPIRATORY INFECTIONS IN CHILDREN



Vaccinations

Prevent 2-3 million deaths every year



Practicing the 5 Moments for hand hygiene

↓ 50% INFECTION



A clean, well-functioning environment and equipment



Safe water and sanitation



Infection prevention and control programmes and teams

↓ 30% INFECTION



Infection prevention measures



Evolution of an infection to sepsis can be prevented by:

Early detection of sepsis signs and symptoms



Prompt seeking of medical care



Prompt antimicrobial treatment and its reassessment



Together we can help prevent sepsis and save millions of lives every year



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