

Sepse: Um problema de Saude Publica

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INSTITUTO SÍRIO-LIBANÊS
DE ENSINO E PESQUISA

Definição de Sepse - 2016

Disfunção Orgânica



Causada por



Resposta desregulada do organismo à infecção

Sepsis in the world and Brazil



Meta-analyses Fleischmann *et al*
331 cases/100,000 inhab.

7,2 billion

Sepsis cases

23,8 million



Brazilian population

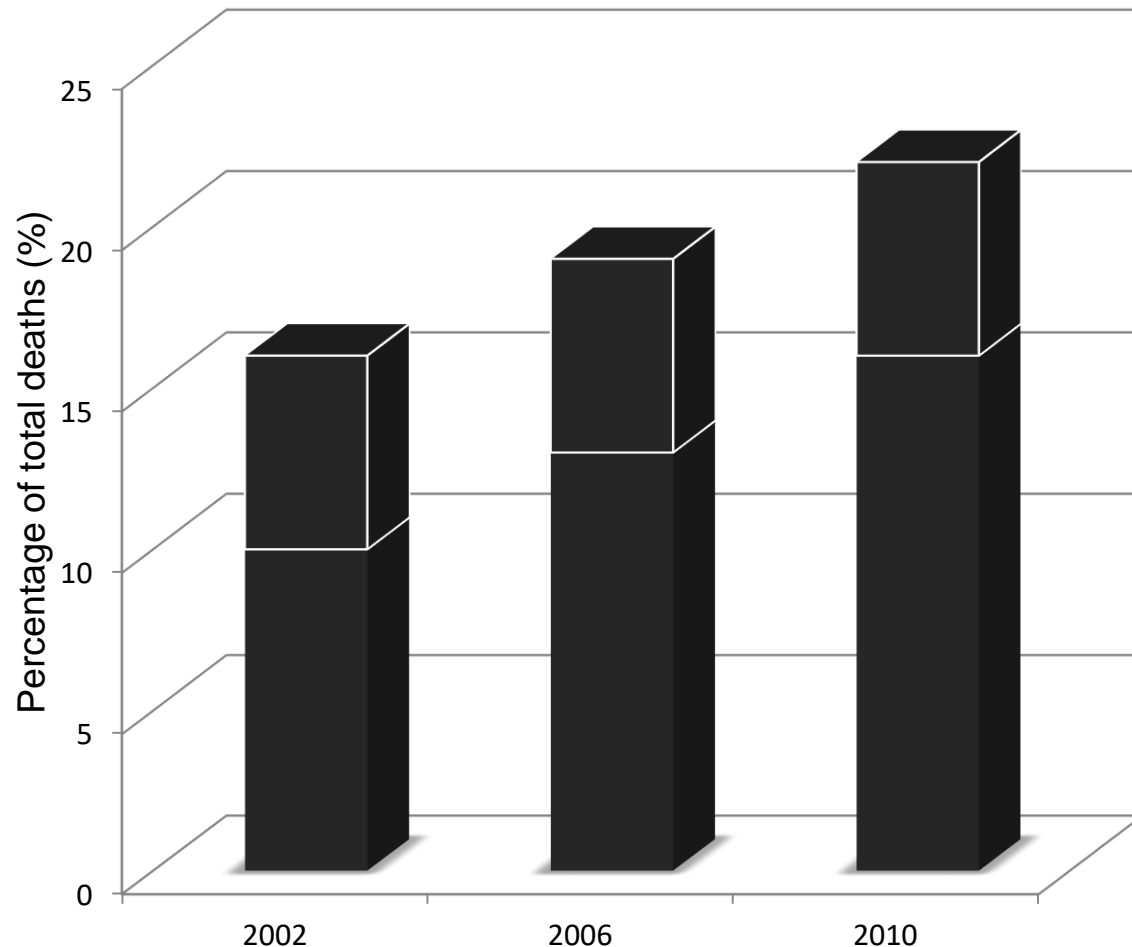
209 million

Sepsis cases

691,000

Sepsis-related deaths in Brazil: an analysis of the national mortality registry from 2002 to 2010

Leandro U Taniguchi^{1,2}, Ana Luiza Bierrenbach^{1,3}, Cristiana M Toscano^{1,4}, Guilherme PP Schettino¹ and Luciano CP Azevedo^{1,2*}



Declaração de Óbito 17305106-5

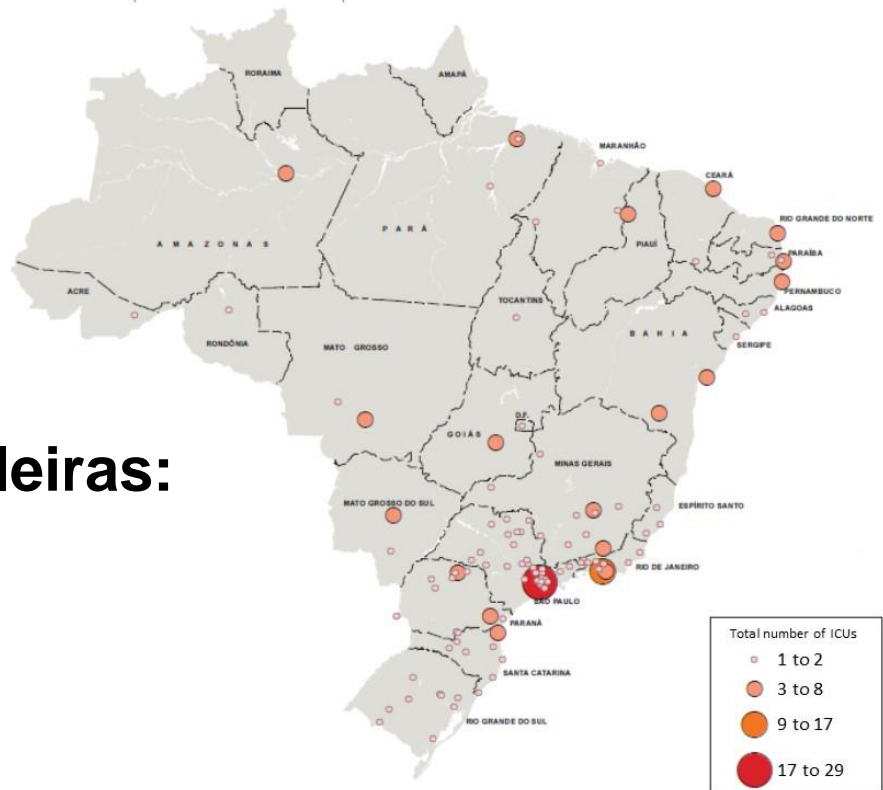
CAUSAS DA MORTE
PARTE I
SEPSIS
PERITONITE
AGRESSÃO POR ARAMA DE FOGO
LAPOSCÓPIA

DIAGNÓSTICO CONFIRMADO POR
LAPOSCÓPIA

09.10.2012

The epidemiology of sepsis in Brazilian intensive care units (the Sepsis PREvalence Assessment Database, SPREAD): an observational study

*Flavia R Machado, Alexandre Biasi Cavalcanti, Fernando Augusto Bozza, Elaine M Ferreira, Fernanda Sousa Angotti Carrara, Juliana Lubarino Sousa, Noemi Caixeta, Reinaldo Salomao, Derek C Angus, Luciano Cesar Pontes Azevedo, on behalf of the SPREAD Investigators and the Latin American Sepsis Institute Network**



**Prevalência sepse UTIs brasileiras:
29,6%**

Taxa Mortalidade: 55%
Sepse - 50%
Choque Septico - 60%

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Patient characteristics				
Age, years	65.5 (49.0-79.0)	61.0 (43.0-75.0)	68.0 (54.5-80.0)	<0.0001
SAPS 3 score	70 (59-82)	65 (54-76)	74 (64-86)	<0.0001
SOFA score	8 (5-10)	7 (4-10)	8 (6-11)	<0.0001
Severity of illness	..	..	..	0.0033
Sepsis	328/792 (41%)	165/327 (50%)	162/327 (50%)	..
Septic shock	464/792 (59%)	184/461 (40%)	277/461 (60%)	..
Type of infection¶	..	..	..	<0.0001
Community	314/792 (40%)	162/311 (52%)	149/311 (48%)	..
Health-care-associated infections	478/792 (60%)	187/477 (39%)	290/477 (61%)	..

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	OR (95% CI)	p value
SAPS 3	1.03 (1.02–1.04)	<0.0001
Resource availability*
High	1.00	..
Intermediate	1.20 (0.72–1.98)	0.484
Low	1.67 (1.02–2.75)	0.045
Health-care-associated infection	1.55 (1.13–2.12)	0.0069
Septic shock	1.71 (1.24–2.37)	0.0013
Compliance with bundles	..	..
Non-compliance with antibiotics	1.00	..
Compliance at least with antibiotics	0.63 (0.44–0.89)	0.0090
Compliance with 6-h bundle	0.56 (0.37–0.84)	0.0059

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eTable 10– Multivariate analysis of factor associated with mortality according to the type of infection.

Variable	Community-acquired infections (n = 314)		Healthcare associated infections (n = 478)	
	OR (95%CI)	P value	OR (95%CI)	P value
SAPS 3	1.031(1.013 - 1.049)	0.001	1.032(1.019 - 1.045)	0.001
Resource availability ^a				
High	1.0	-	1.0	-
Intermediate	1.448 (0.714 – 2.934)	0.306	0.967 (0.509 – 1.837)	0.919
Low	1.441 (0.684 – 3.037)	0.338	1.856 (0.988 – 3.486)	0.056
Location at sepsis onset				
Compliance with bundles				
Non-compliance with ATB	1.0	-	1.0	-
Compliance at least with ATB	0.533 (0.302 – 0.940)	0.031	0.716 (0.455 – 1.127)	0.150
Non-compliance with ATB	1.0		1.0	
Compliance at least with ATB	0.533 (0.302 – 0.940)	0.031	0.716 (0.455 – 1.127)	0.150
Compliance with 6-h bundle	0.539 (0.277 – 1.048)	0.07	0.590 (0.346 – 1.007)	0.054

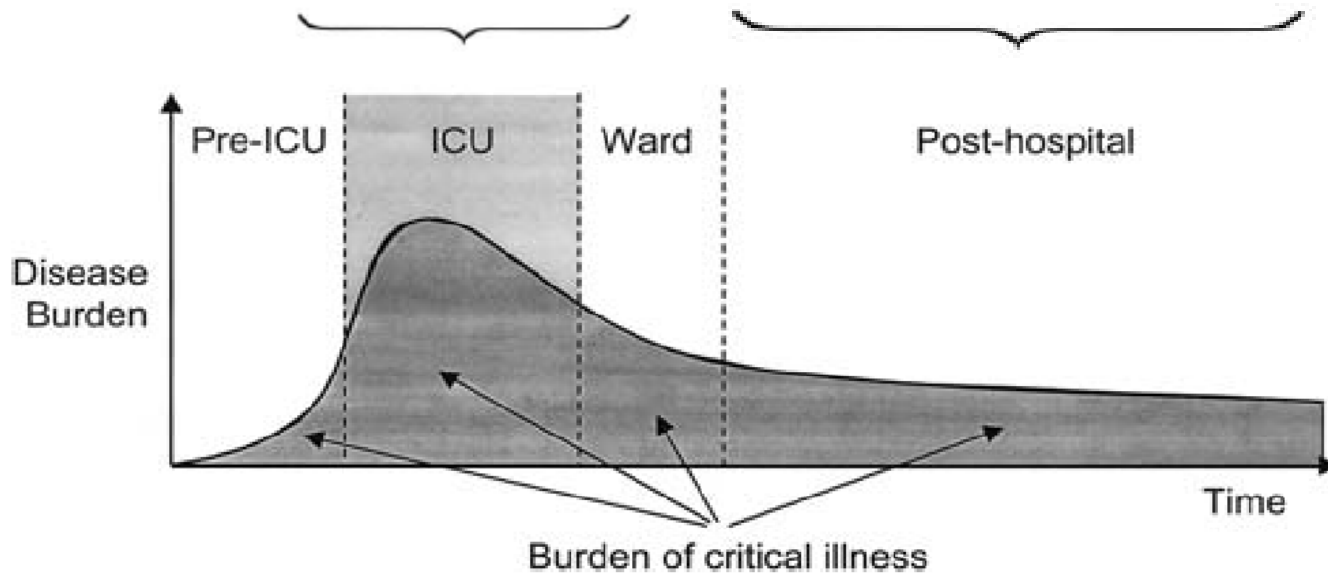
OR = odds ratio, CI = confidence interval, SAPS = Simplified Acute Physiology Score, ICU = intensive care

Sepsis does not end at hospital discharge

Life quality



Long term dysfunction



SPREAD ED



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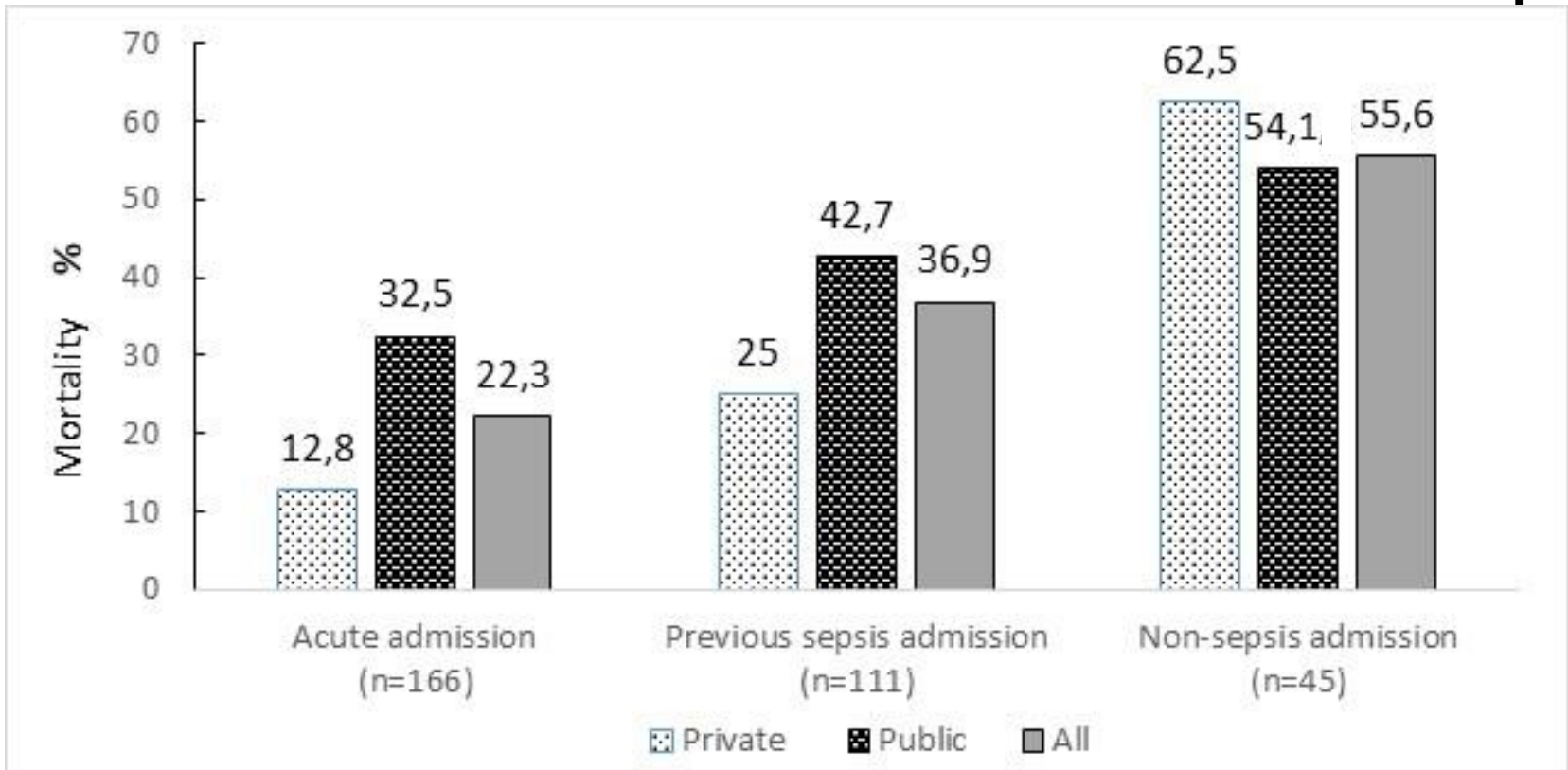
Sepse

APOIO:



- Prospective, multicenter, observational (three days) study, with a cohort and follow up to assess mortality and prognostic factors.
- Convenience sampling, all Brazilian regions

SPREAD ED



Percentage of type 3 patients
Private: 5.8% Public: 19.2%
P < 0.0001

Mortality-associated factors / SPREAD ED

Table 3 – Multivariate analysis of factor associated with mortality.

Variable	OR (95%CI)	P value
SOFA	1.493 (1.321 - 1.686)	< 0.001
Chemotherapy	5.253 (1.579 – 17.478)	0.0068
Sepsis as a complication of ED stay	2.620 (1.1016 – 6.753)	0.046
Compliance with blood cultures	0.343 (0.156 – 0.754)	0.008
Compliance with antimicrobials	0.321 (0.148 – 0.696)	0.004

Sepsis: A Threat That Needs a Global Solution

Flavia Ribeiro Machado, MD, PhD^{1,2,3}; Luciano Cesar Pontes Azevedo, MD, PhD^{2,4}

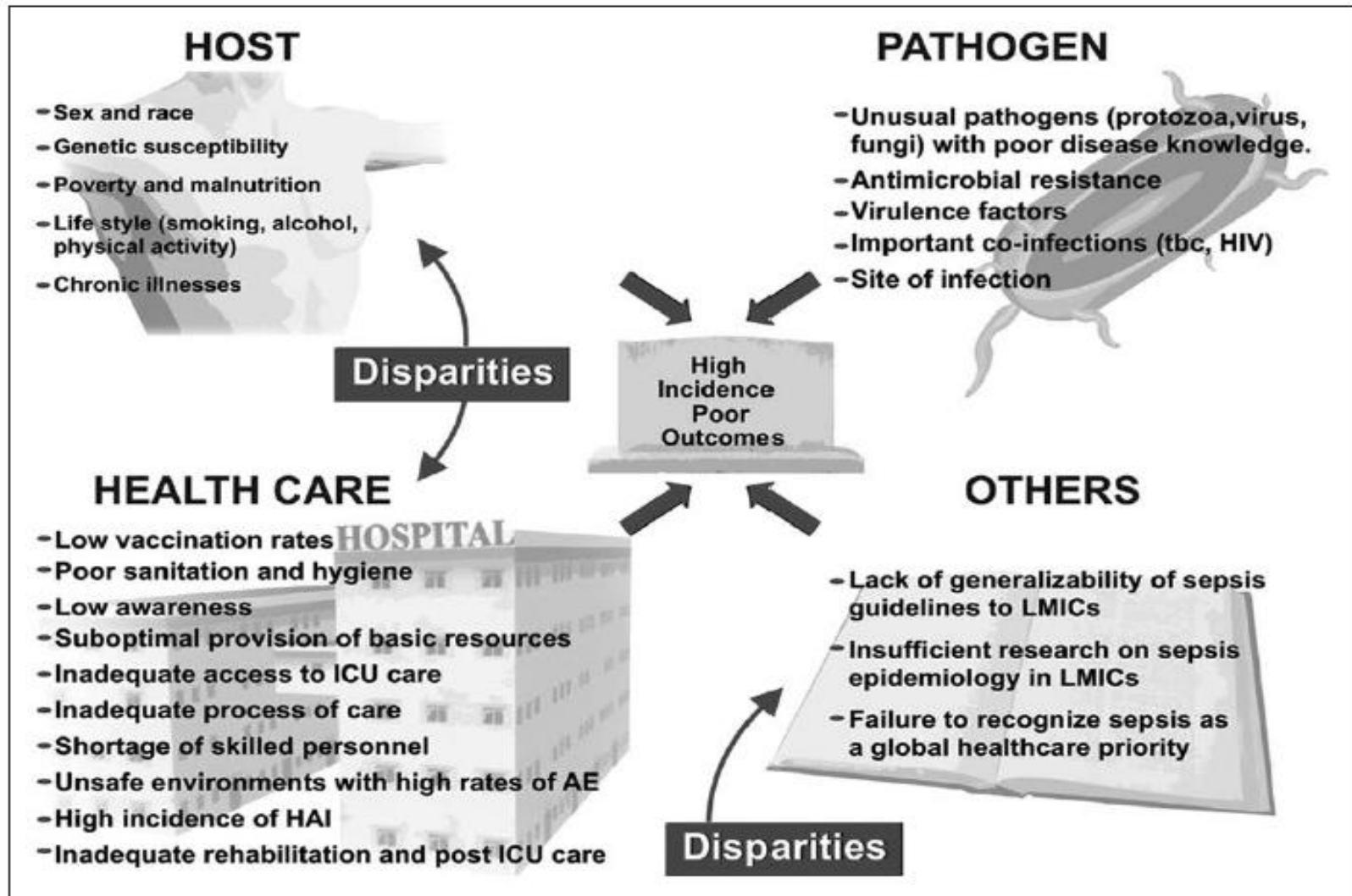
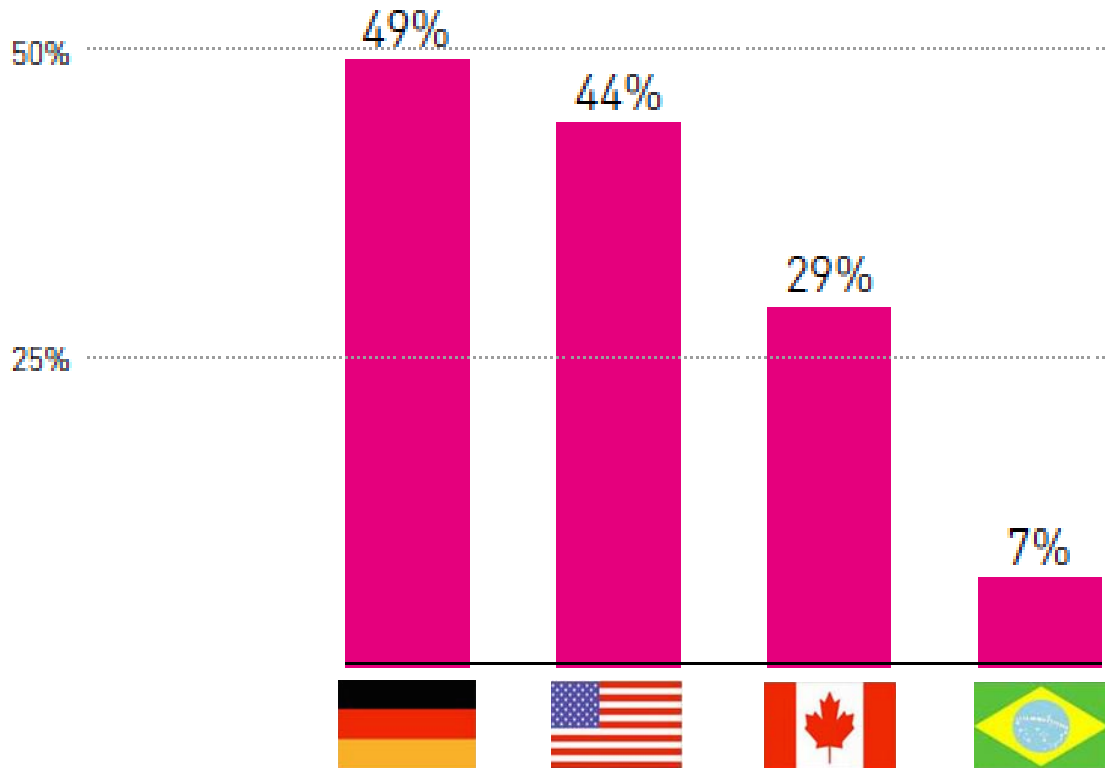


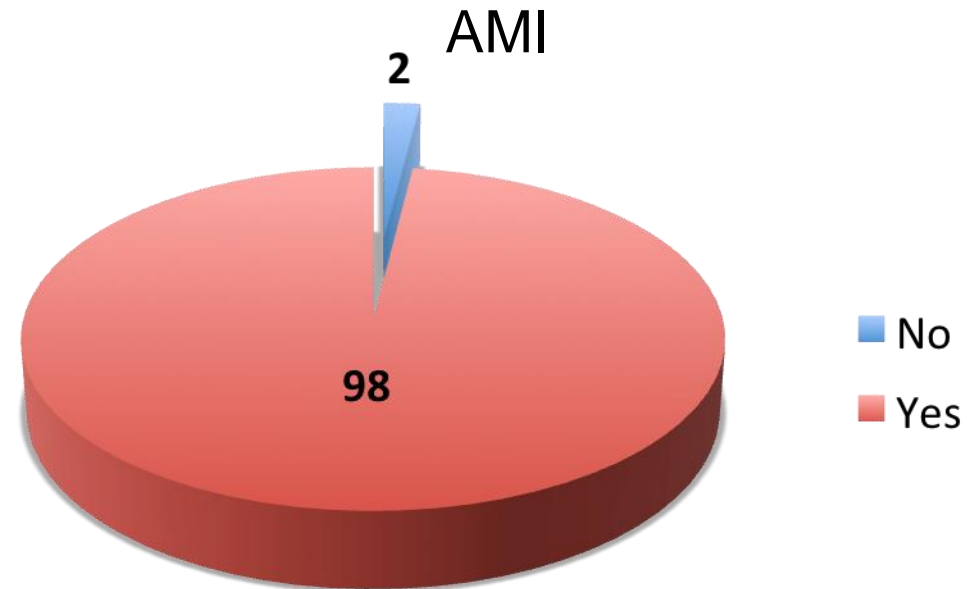
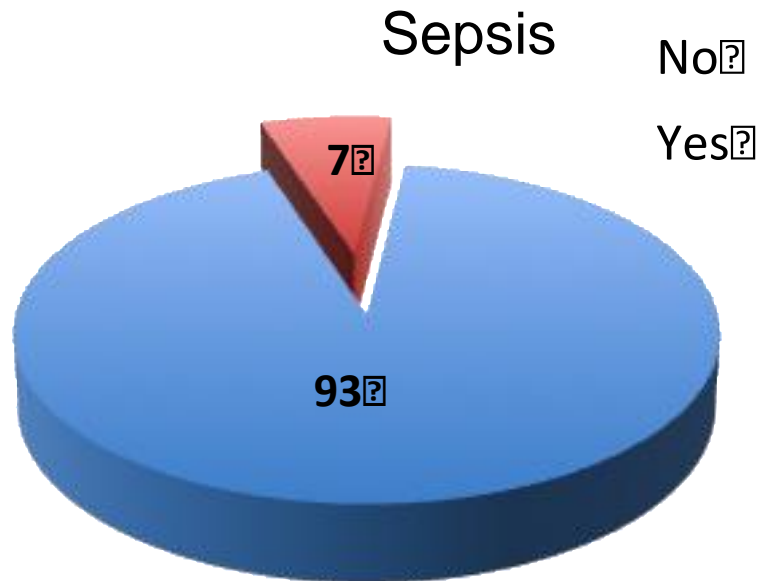
Figure 1. Major factors influencing sepsis incidence and mortality. Disparities are present and may be related to the host, healthcare systems and other factors. AE = adverse events, HAI = healthcare-associated infection, LMIC = low-income country.

Sepsis International Awareness Survey - WSD 2014

P1: - Do you know the word Sepsis?



Have you ever heard the word Sepsis and AMI?



Low awareness by healthcare professionals

Sepsis

Severe Sepsis



56%

76%



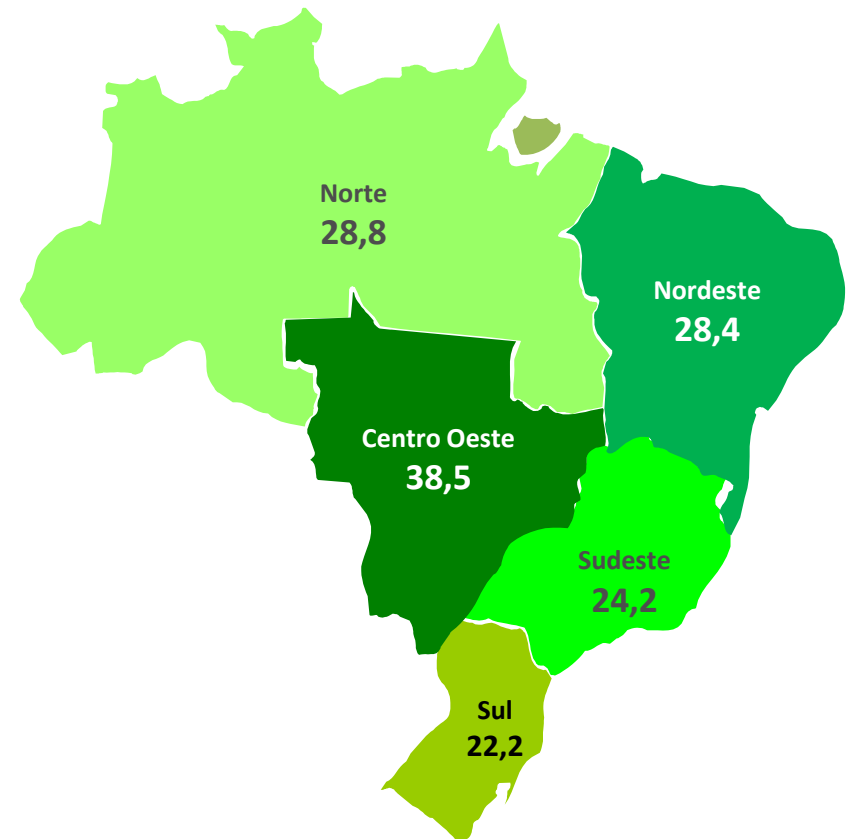
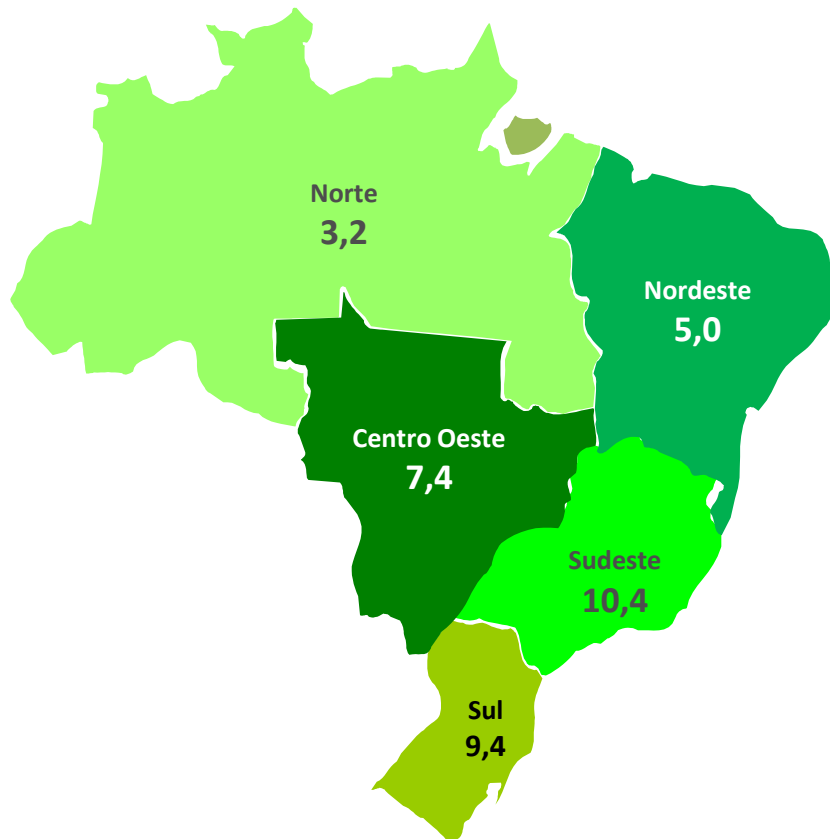
16%

52%

Access to ICU beds according to Brazilian regions

National public healthcare system
7.6 ICU beds for 100,000 population

Private healthcare system
25.5 beds for 100,000 population



How can we improve?



Conclusions

- ✓ There is an excessive early burden for sepsis in Brazil with high hospital mortality.
- ✓ Septic patients have increased use of healthcare resources and significant morbidity and mortality after hospital discharge.
- ✓ Possible causes of this burden include low awareness of lay public and healthcare professionals and unfavorable characteristics of the healthcare system.
- ✓ Pathways to improve may include increase the awareness, early recognition and adherence to guidelines, insert sepsis in the political agenda.

Latin American

Sepsis

Institute



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