



EARLY RECOGNITION IN SEPSIS CARE

February 15, 2023

SEPSIS WEBSITE

ohiohospitals.org/sepsis



[Events](#) [Staff Directory](#) [Data Center](#)



- About OHA
- Advocacy
- Health Economics
- Patient Safety & Quality**
- Member Services
- News & Publications

Home / Patient Safety & Quality / Statewide Initiatives / Sepsis

- Innovation Leadership**
- Statewide Initiatives**
- Patient Safety & Quality Services



Sepsis

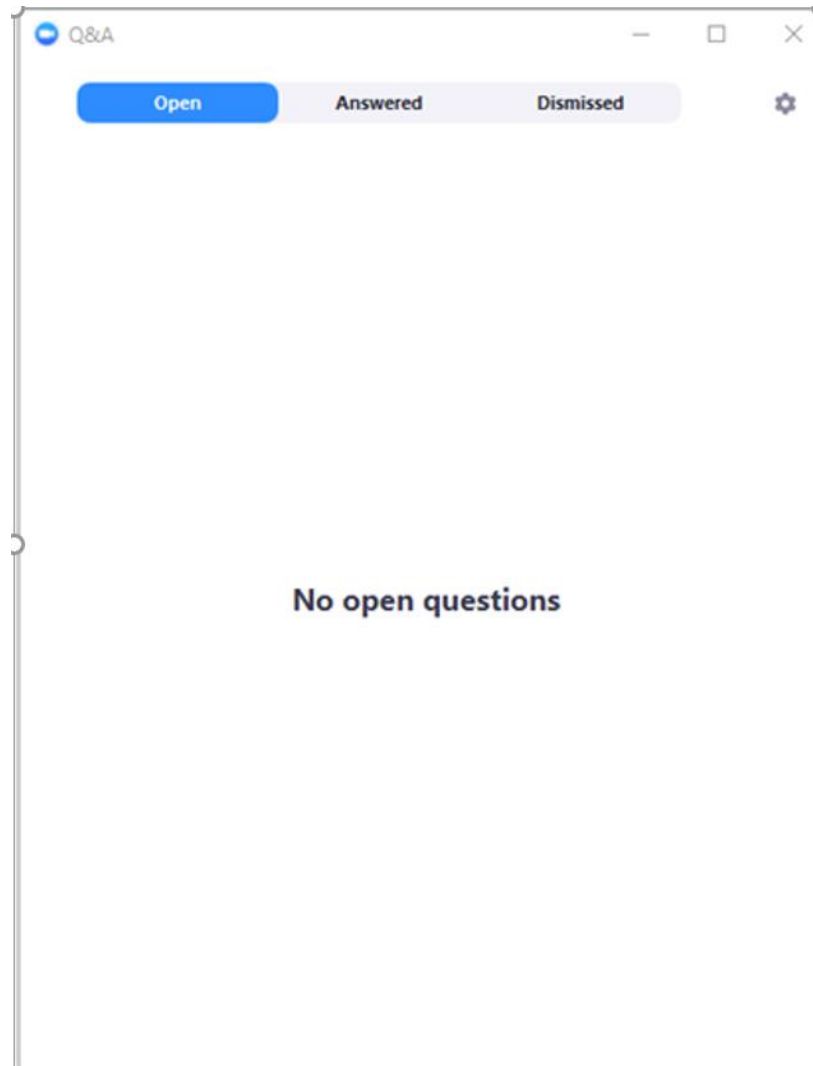
Reducing Sepsis Mortality in Ohio Through Early Recognition, Appropriate Intervention

The OHA Board of Trustees identified reducing sepsis mortality in Ohio as one of the key focus areas for OHA and Ohio hospitals. Sepsis is the body's overwhelming and life-threatening response to infection that can lead to tissue damage, organ failure and death. In other words, it's your body's over active and toxic response to an infection. Sepsis impacted an estimated 41,000 Ohioans in 2017. Early recognition and treatment can reduce the morbidity and mortality of sepsis.

CONTINUING EDUCATION

- The link for the evaluation of today's program is:
<https://www.surveymonkey.com/r/Sepsis-Feb2023>
- Please be sure to access the link, complete the evaluation form, and request your certificate. The evaluation process will remain open **two weeks** following the webcast. Your certificate will be emailed to you when the evaluation process closes after the 2-week process.
- If you have any questions, please contact Dorothy Frabott (Dorothy.Frabott@ohiohospitals.org)

SUBMITTING QUESTIONS



OHA ANNUAL MEETING

Uniting our Voices

OHA 2023 Annual Meeting: June 12-14

- Theme: Uniting Our Voices
- Location Hilton Easton
- June 12-13, 2023
 - Tracks including nursing leadership, with CE
 - Health Care Worker of the Year Award
 - Corporate Partner Exhibits
- June 14: Sepsis Summit
- Call for poster presenters
- Registration will open in mid-March
- No charge for member hospitals



PRESENTER(S)



ALEXANDRIA SADORF

Director of Marketing & Communications
Sepsis Alliance
San Diego, CA



JOHN BEDOLLA, MD

National Director of Risk
US AcuteCare



Sepsis Survivor Week

February 12 – 18, 2023

Presenter:

Alex Sadorf

Director, Marketing & Communications

Sepsis Alliance



Sepsis Survivor Week



In the United States,
MORE THAN 1.4 MILLION PEOPLE SURVIVE SEPSIS EVERY YEAR.
You are not alone.



Learn more at SepsisSurvivorWeek.org.



Sepsis Survivor Week



- **Second week of February**
- **We partner with sepsis survivors to honor their experience by sharing individual stories of survival while bringing awareness to the unseen mental, emotional, and physical challenges many survivors face every day.**
- **We share information on social media, in emails and newsletters, in webinars, and in media.**

Sepsis Survivor Week



- **SepsisSurvivorWeek.org**

- Download graphics that you can share on your social media
- Find Faces of Sepsis™ experiences
- Find facts and information about sepsis survivorship
- Find downloadable resources that you can share to help others learn about sepsis and life after sepsis
- Watch videos from sepsis survivors about their experience
- Download the Sepsis Survivor Week poster, to share in your office and community



SEPSIS
ALLIANCE

Sepsis.org



Sepsis Early Detection: A Time-Forward Pragmatic Process

John Bedolla MD FACEP

Chief Decision Scientist
National Director of Risk
US Acute Care Solutions
CMO F1, McLaren, MGP

February 14, 2023

Overview

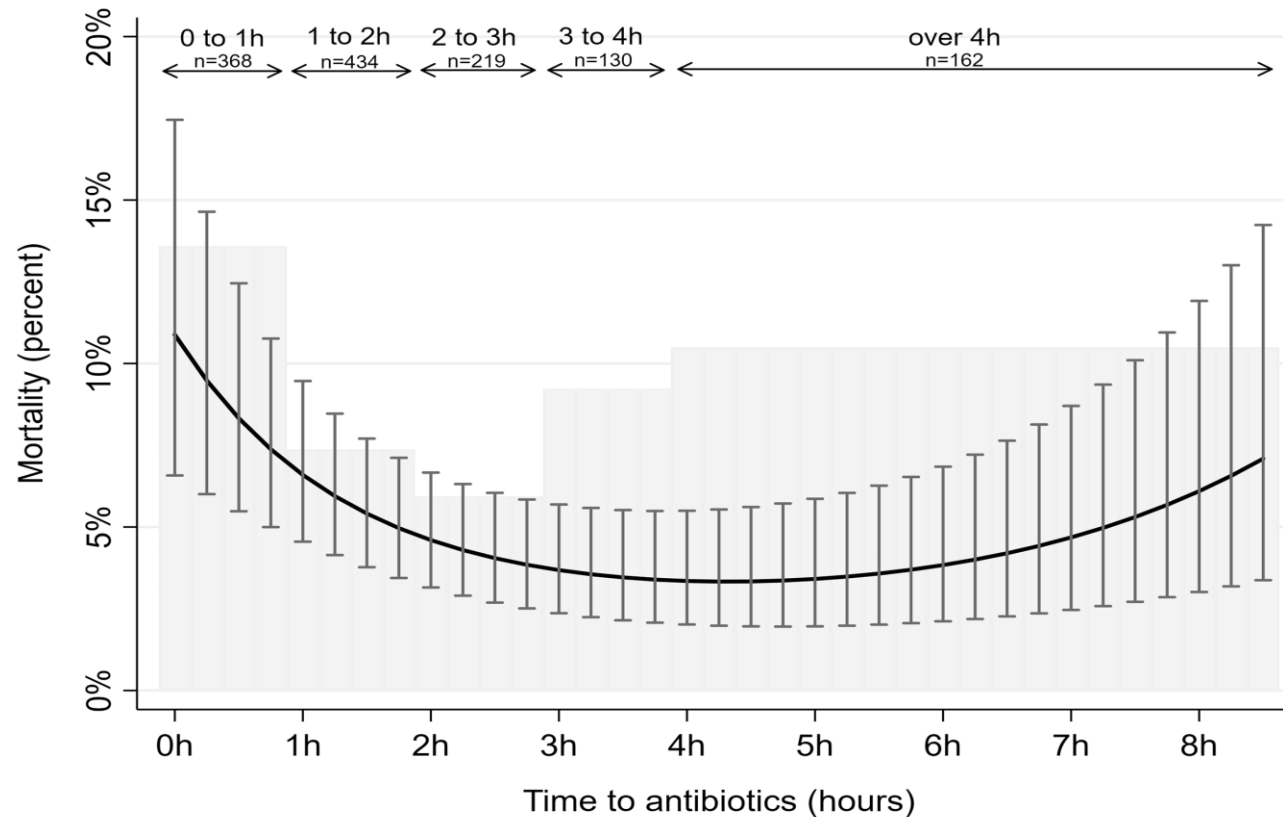
1. Why we want to be more sensitive for sepsis
2. Sepsis: Essential Basic Science
3. Process for improved screening
4. Summary and Conclusions
5. Q and A



WHY

Sepsis Mortality

- Sepsis: 12.5% Mortality--sepsis without organ dysfunction 5.6%; septic shock 34%
- 14% of sepsis is missed on first contact. (PMID 33840511)
- Earlier diagnosis and treatment prevents progression to septic shock

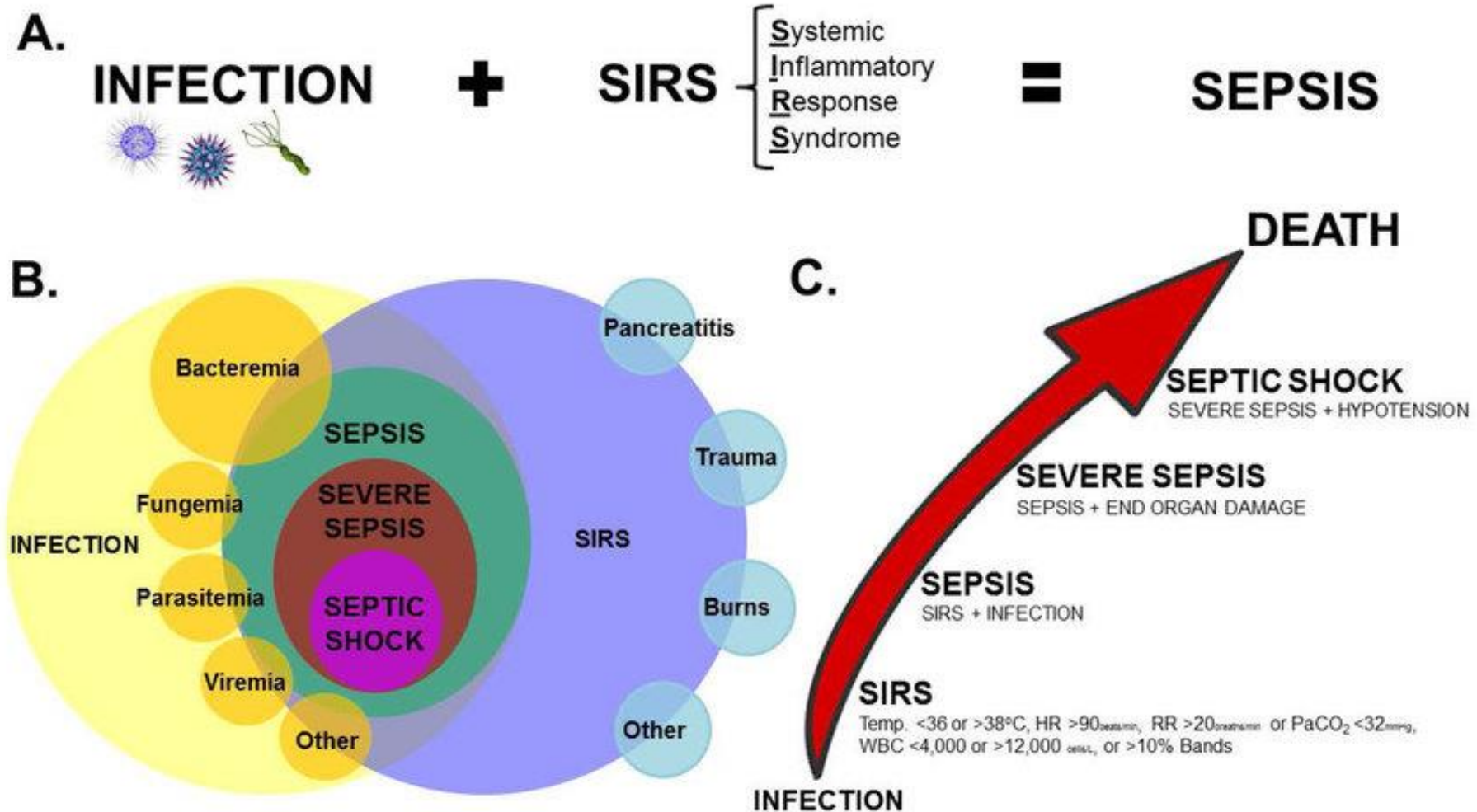




Basic Science

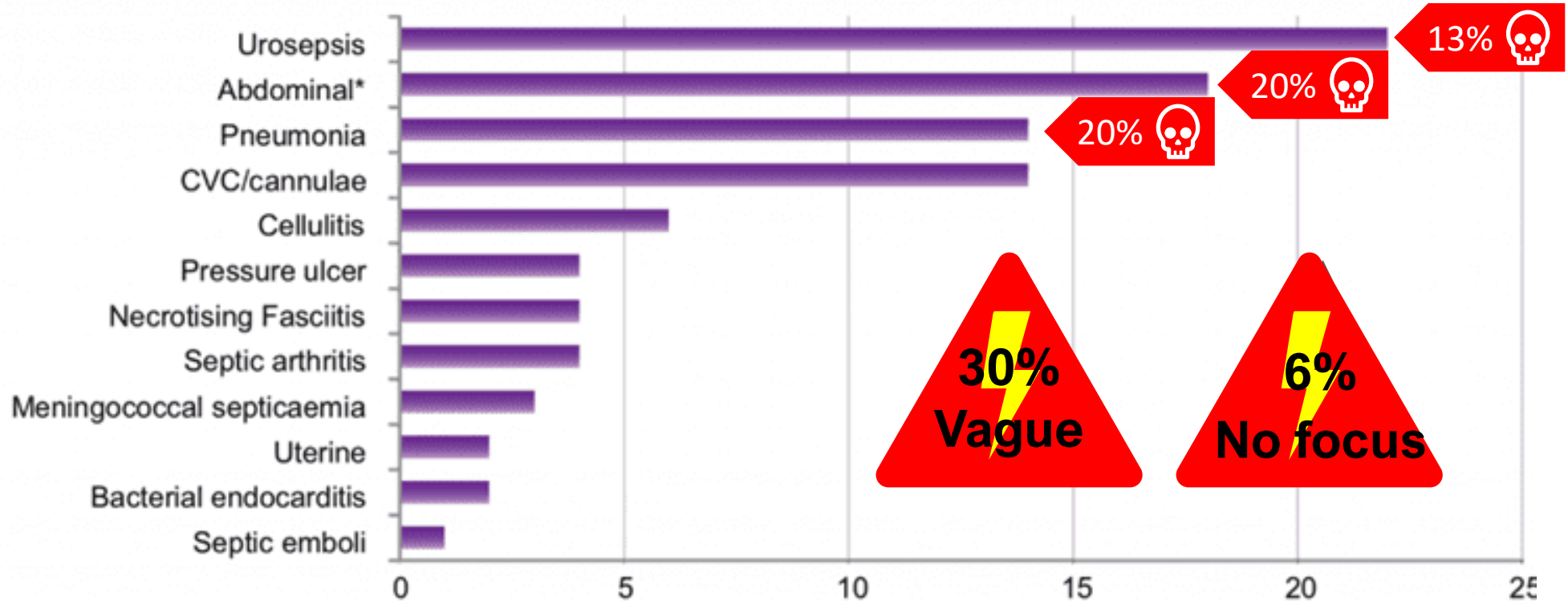
Sepsis:

Systemic reaction to infection that progressively inhibits vital cellular metabolism and, if unchecked, causes death of the organism through multiple organ failure.



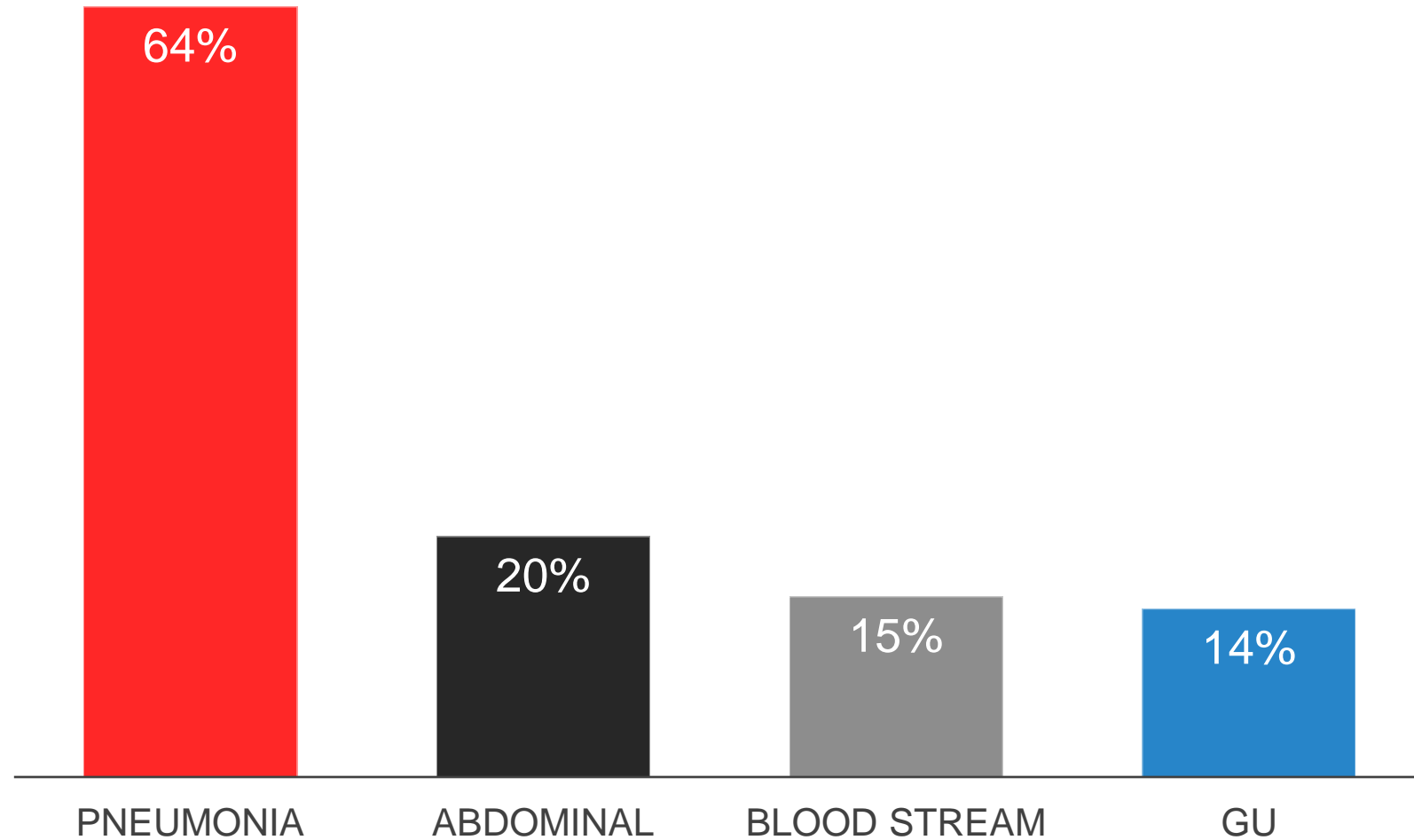
Suspected/Suggested Infection Source

cec.health.nsw.gov.au



* Includes post operative abdominal sepsis

Prevalence of Sepsis in Infections



Recap Sepsis Fundamental Constraints

Sepsis → inhibited cellular metabolism → organ dysfunction → death

Incidence: 1,700,000/year, 12-34% mortality, time-dependent

30% of presentations are vague, 6% occult. 14% are missed

Pneumonia and intra-abdominal have the highest (prevalence)x(mortality)

Gestalt alone is 70%

Gestalt + Tools is 80%



A Process for Improved Screening

Design Strategy

1. Use fundamental science
2. Have specific goals
3. Find and choose constraints:
 - a. Based on physical exam
 - b. Translatable to any ED
 - c. Aim for 95-99% confidence
 - d. Use the tools you have, not the tools you wish you had
4. Hierarchy
 - a. Highest yield first
 - b. Lower yield second
5. Simplicity

Starting Point - definitions

Sepsis Category	Sepsis – 3	CMS SEP – 1
• Sepsis	SOFA > 2 + suspected infection	2/4 SIRS + suspected infection
• Severe Sepsis	N/A	Sepsis + sepsis induced organ dysfunction
• Septic Shock	Lactate > 2 Vasopressor to keep MAP ≥ 65	Lactate > 4 SBP < 90, not IVF responsive MAP < 70, not IVF responsive

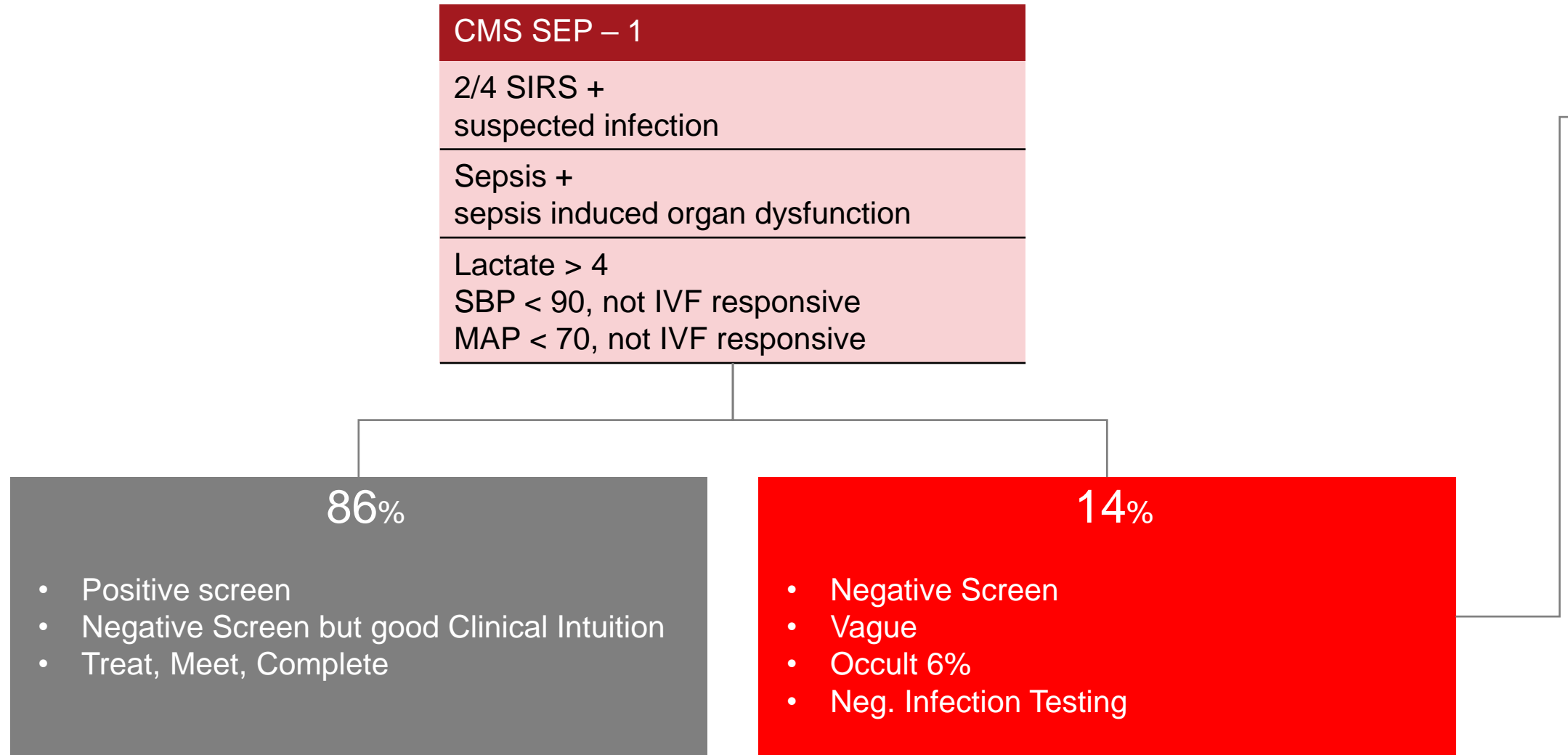
Advantage:

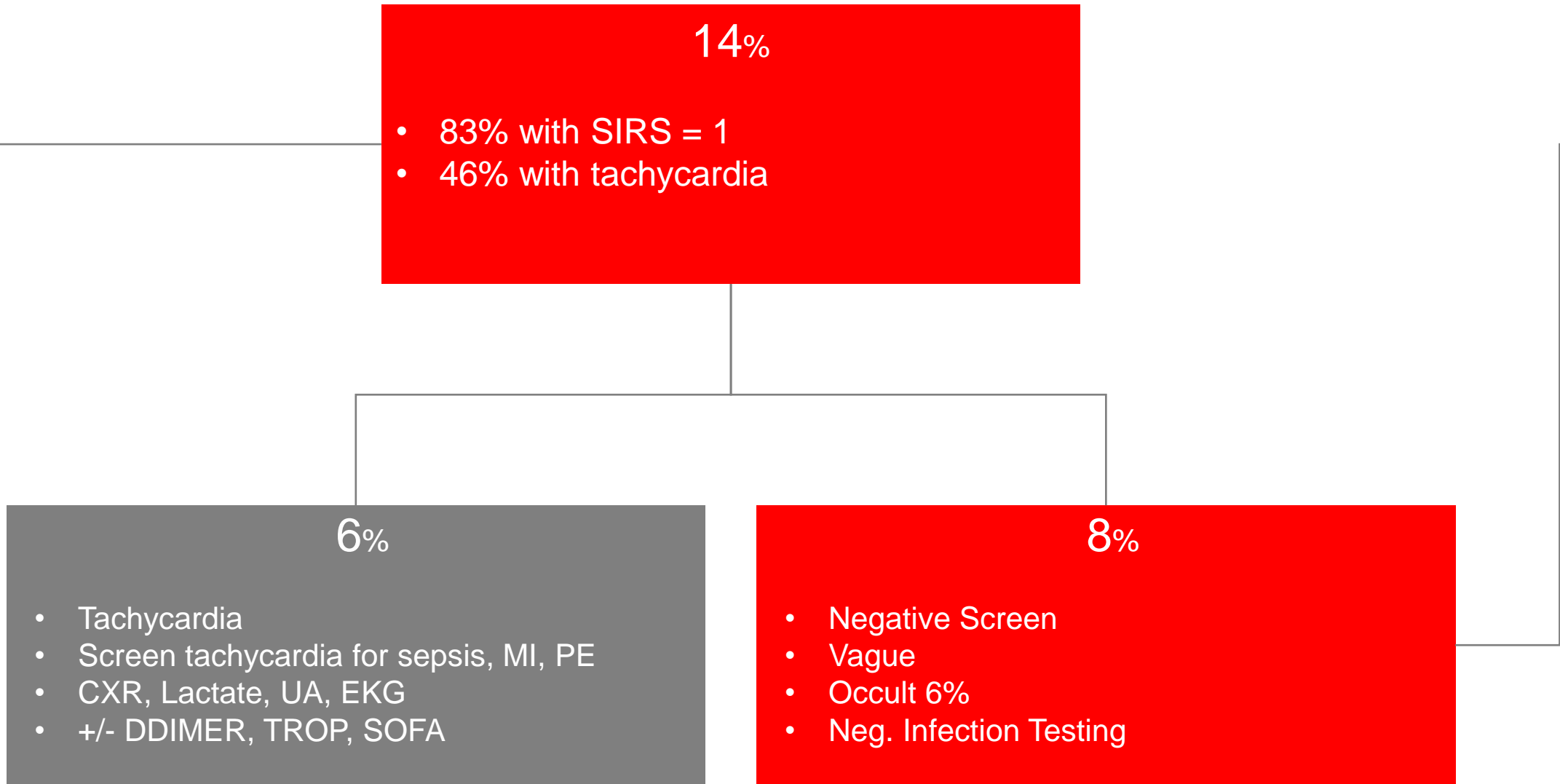
- both pathways are good for predicting mortality and guiding treatment.

Disadvantages:

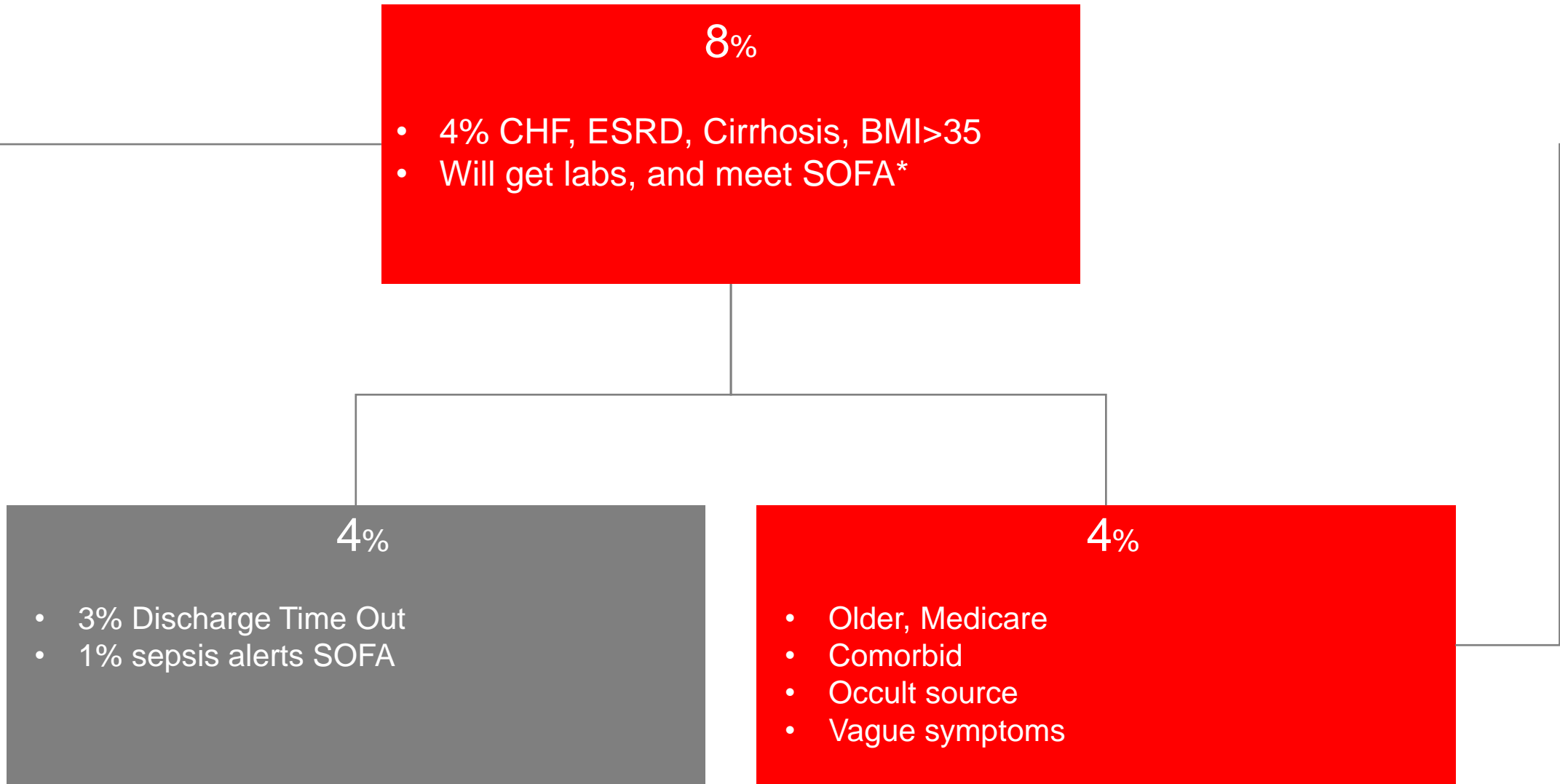
- Neither one helps you if you don't already suspect infection.
- They are mortality predictors, not infection predictors.
- One of them pays the bills.

Assume Sepsis

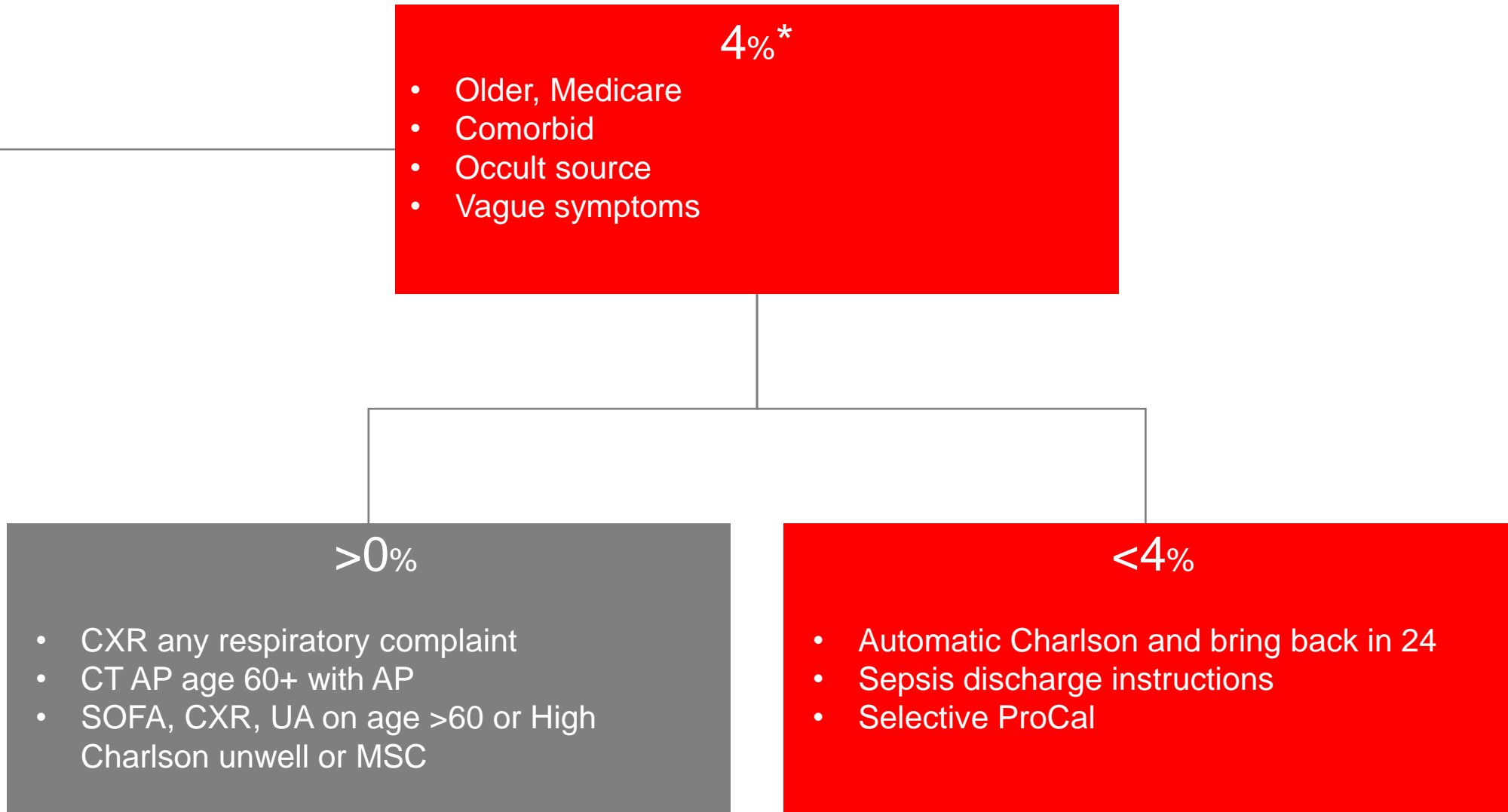




PMID 30744579



*PMID 33872430



*PMID 35142831



Summary & Conclusions

Summary of Interventions

1. Use SIRS
2. Selective Full SOFA and Lactate
3. Do not discharge tachycardia without considering sepsis, MI, PE
4. Discharge Time Out: review the labs, consider SOFA
5. CXR:
 - ✓ Advanced age not feeling or acting right
 - ✓ Comorbidities
 - ✓ Increased RR or increased O₂ demand
6. CT abdominal complaints in age 60+
7. Full SOFA Screen on age 60+ not feeling right or acting right

Conclusion

1. It is possible to decrease the miss rate by >60% with tools at hand
2. Basic science and demographics
3. Intentional Discharge Time Out.
 - ✓ Review vitals
 - ✓ Review labs – remember abnormal labs can be +SOFA
4. Don't discharge tachycardia
5. Mind the 6% rate of occult sepsis – especially in the elderly, frail
6. Mind the patient's frailty
7. CXR, CT AP, SOFA Screening

John Bedolla MD FACEP

Chief Decision Scientist
National Director of Risk
US Acute Care Solutions
CMO F1, McLaren, MGP

bedollaj@usacs.com
m. +1-512-903-5755

Q and A

Appendix

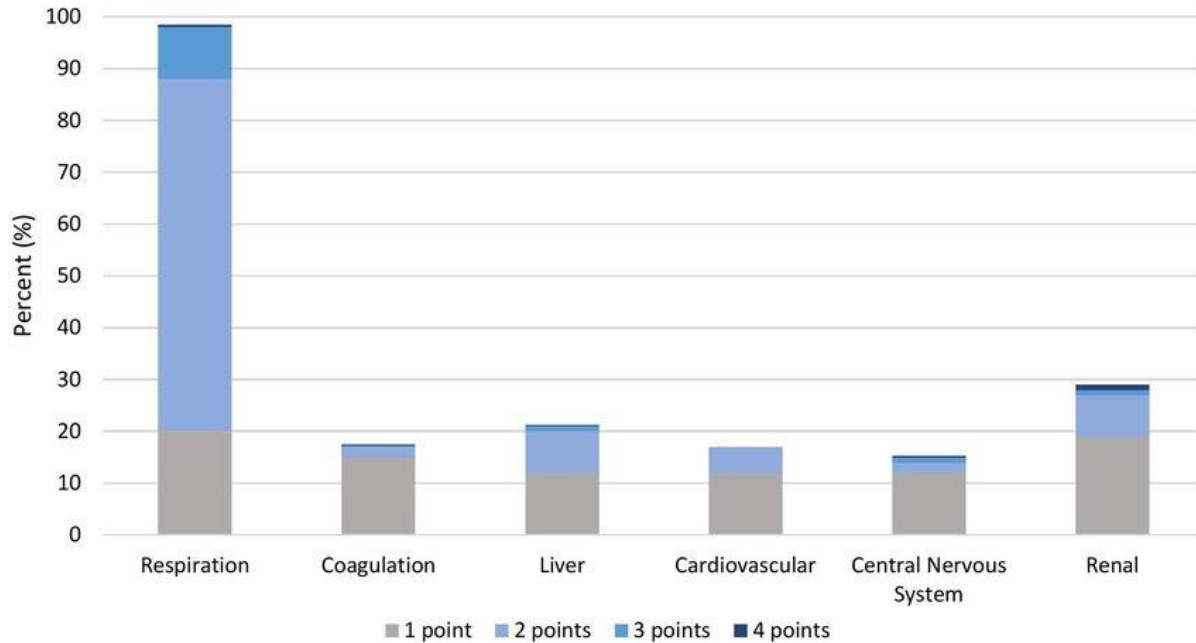


Table 2. Distribution of Signs Meeting SIRS Criteria in Patients with Severe Sepsis, According to SIRS-Positive and SIRS-Negative Status.*

Variable	All Patients (N = 109,663)	Patients with SIRS-Positive Severe Sepsis (N = 96,385)	Patients with SIRS-Negative Severe Sepsis (N = 13,278)
SIRS criterion met — no. (%) [†]			
Abnormal temperature	64,365 (58.7)	62,430 (64.8)	1,935 (14.6)
High	33,059 (30.1)	32,605 (33.8)	454 (3.4)
Low	36,130 (32.9)	34,599 (35.9)	1,531 (11.5)
Increased heart rate	83,493 (76.1)	80,747 (83.8)	2,746 (20.7)
Increased respiratory rate or decreased P _a CO ₂	76,558 (69.8)	74,043 (76.8)	2,515 (18.9)
Abnormal white-cell count	76,823 (70.1)	73,365 (76.1)	3,458 (26.0)
High	64,720 (59.0)	61,602 (63.9)	3,118 (23.5)
Low	12,967 (11.8)	12,616 (13.1)	351 (2.6)

OHA collaborates with member hospitals and health systems to ensure a healthy Ohio

James Guliano, MSN, RN, NPD-BC, NEA-BC, FACHE
Vice President, Operations & Chief Clinical Officer
James.Guliano@ohiohospitals.org

Dorothy Frabott, BA, MBA
Manager, Administrative and Clinical Programs
Dorothy.Aldridge@ohiohospitals.org

Kelsey Brown, BSN, RN
Director, Clinical Support Services
Kelsey.Brown@ohiohospitals.org

Ohio Hospital Association
155 E. Broad St., Suite 301
Columbus, OH 43215-3640

T 614-221-7614
ohiohospitals.org



HelpingOhioHospitals



@OhioHospitals



www.youtube.com/user/OHA1915