



August 13th, 2019

Announcements

- Cases and questions

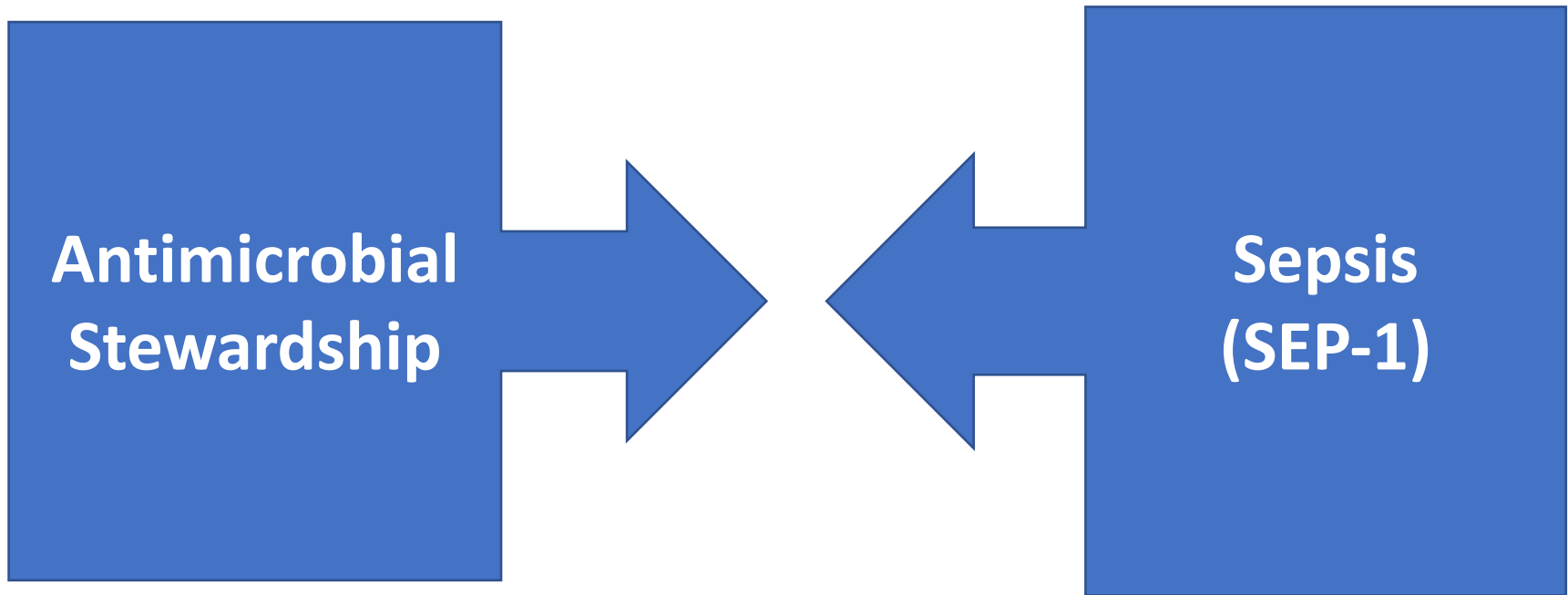


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Didactic

- Sepsis I

Clash of Goals?



Clash of Goals?

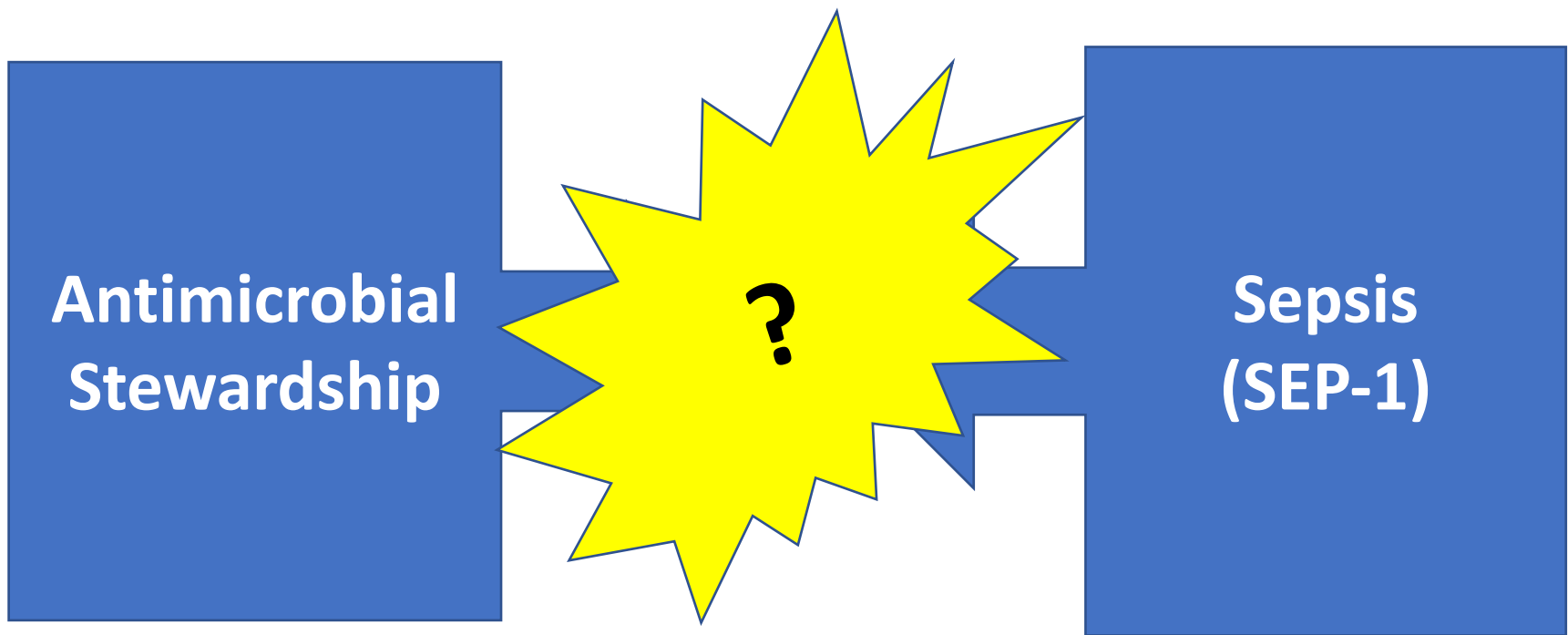
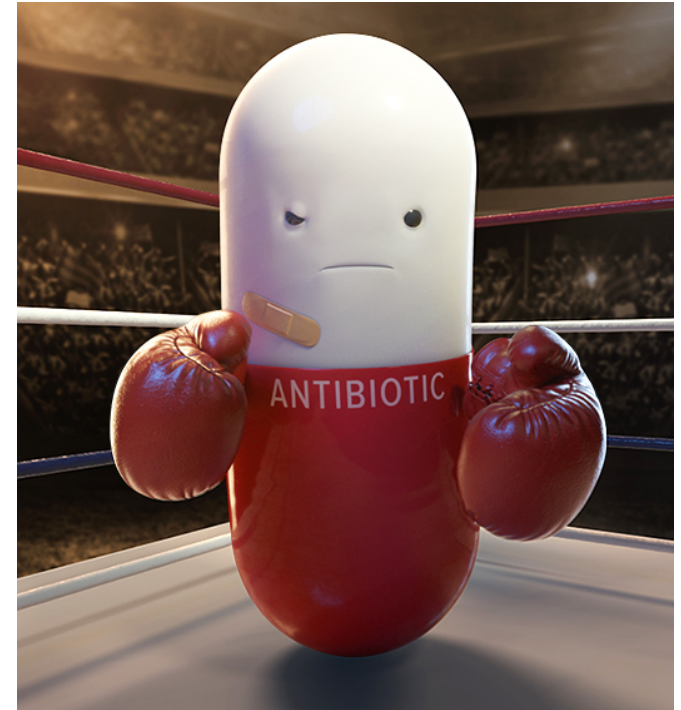


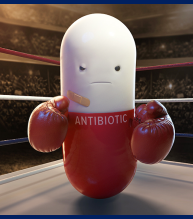
Image: Ministry of Health Singapore

What are the Antimicrobial Rights?

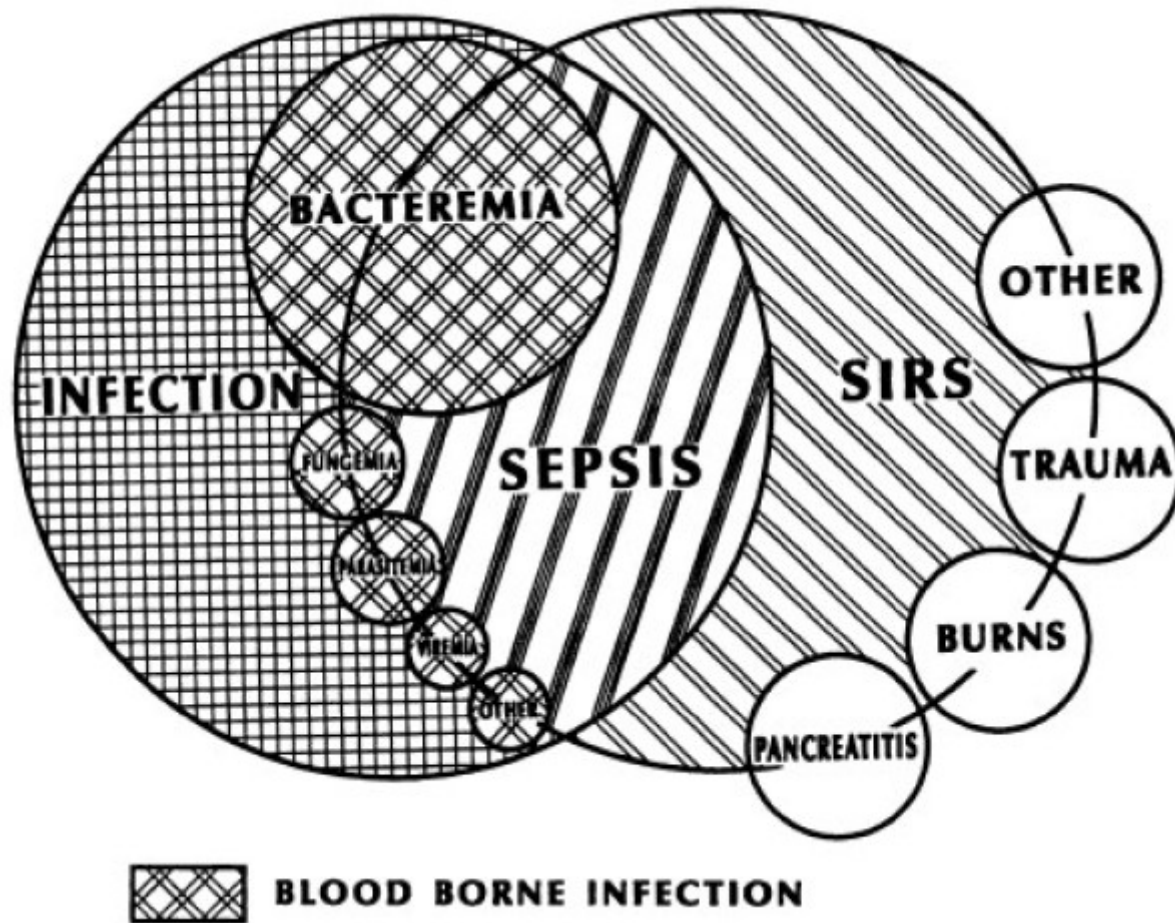
- **Right patient**
- **Right drug**
- **Right time**
- **Right dose**
- **Right duration**
- **And....right allergy assessment**



Right Patient?



aka Do I Suspect an Infection?



Definitions remain broad

- 18 yo with meningococemia, coagulopathy and hypoxemia
 - 45 yo tourist returning from SE Asia with malaria, renal dysfunction and hyperbilirubinemia
 - 90 yo with worsening mental status, decrease UO and CAUTI
- All can fall into the exact same categories of sepsis and septic shock



A Conceptual Approach

UTI

mild

mod

severe

PNA

mild

mod

severe

BSI

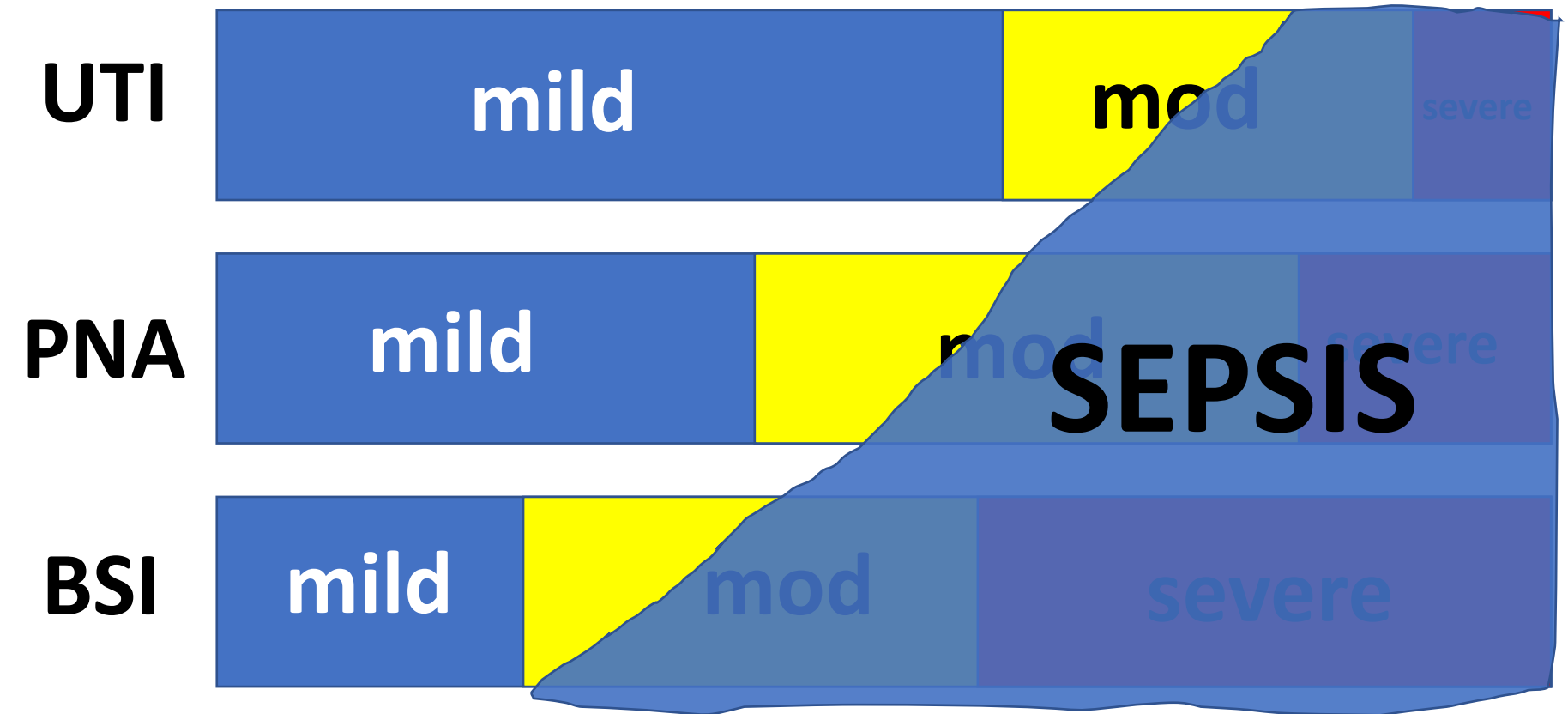
mild

mod

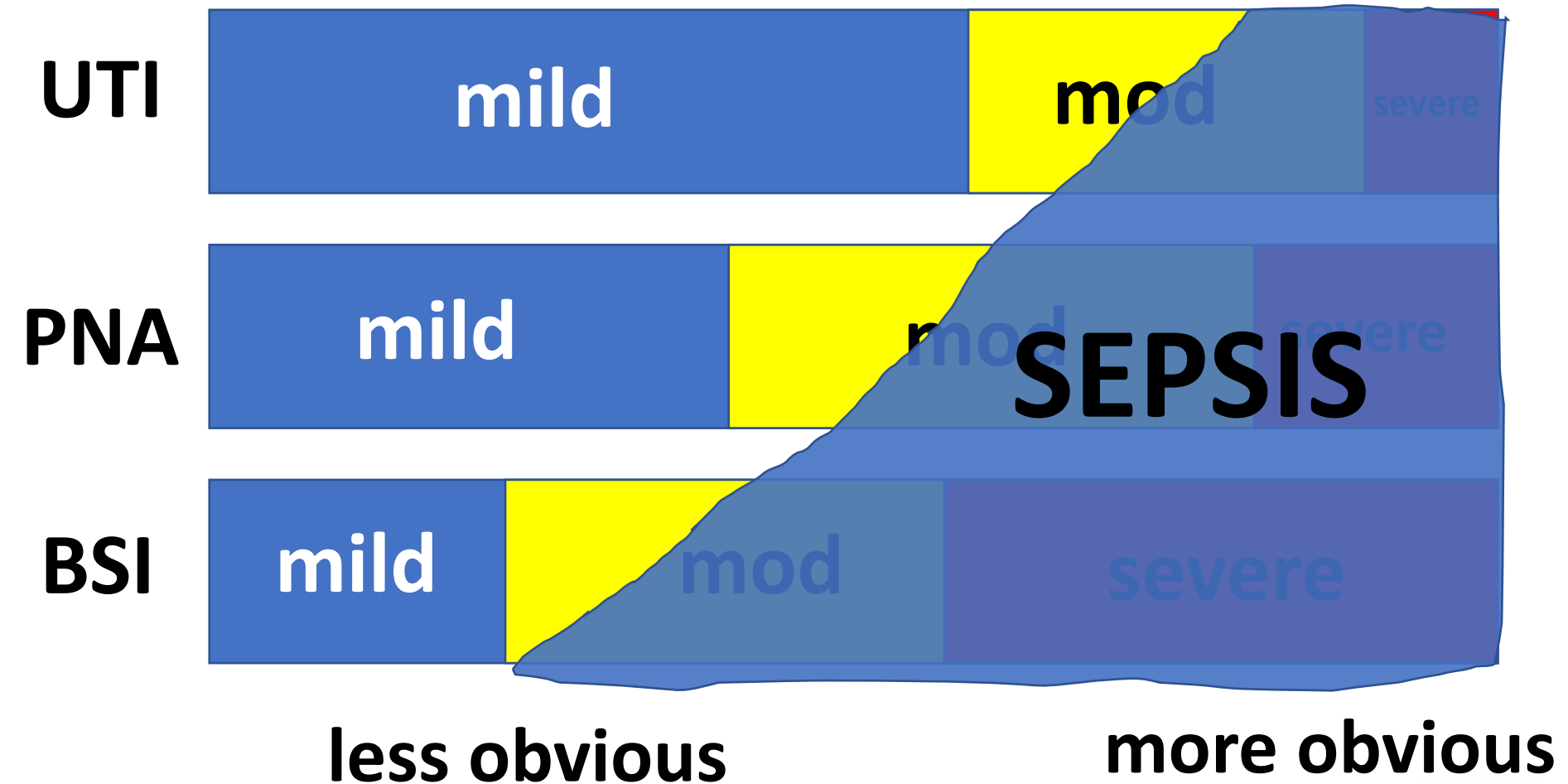
severe



A Conceptual Approach



A Conceptual Approach



Sepsis treatment in practice

- Low adherence to guidelines (ex. 10% of patients do not receive prompt antibiotic therapy)
- All recommended interventions occur ~30% of patients

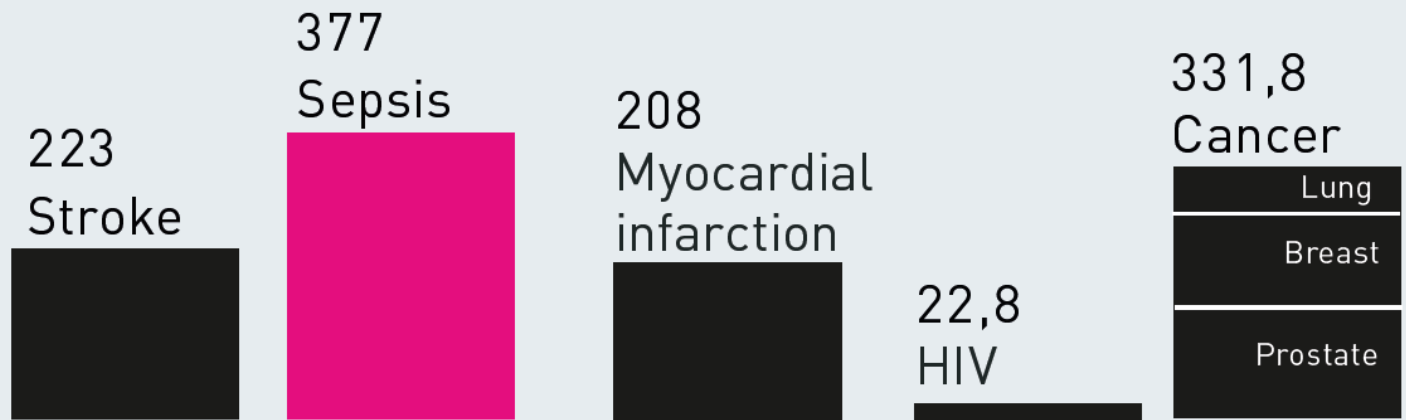


Sepsis

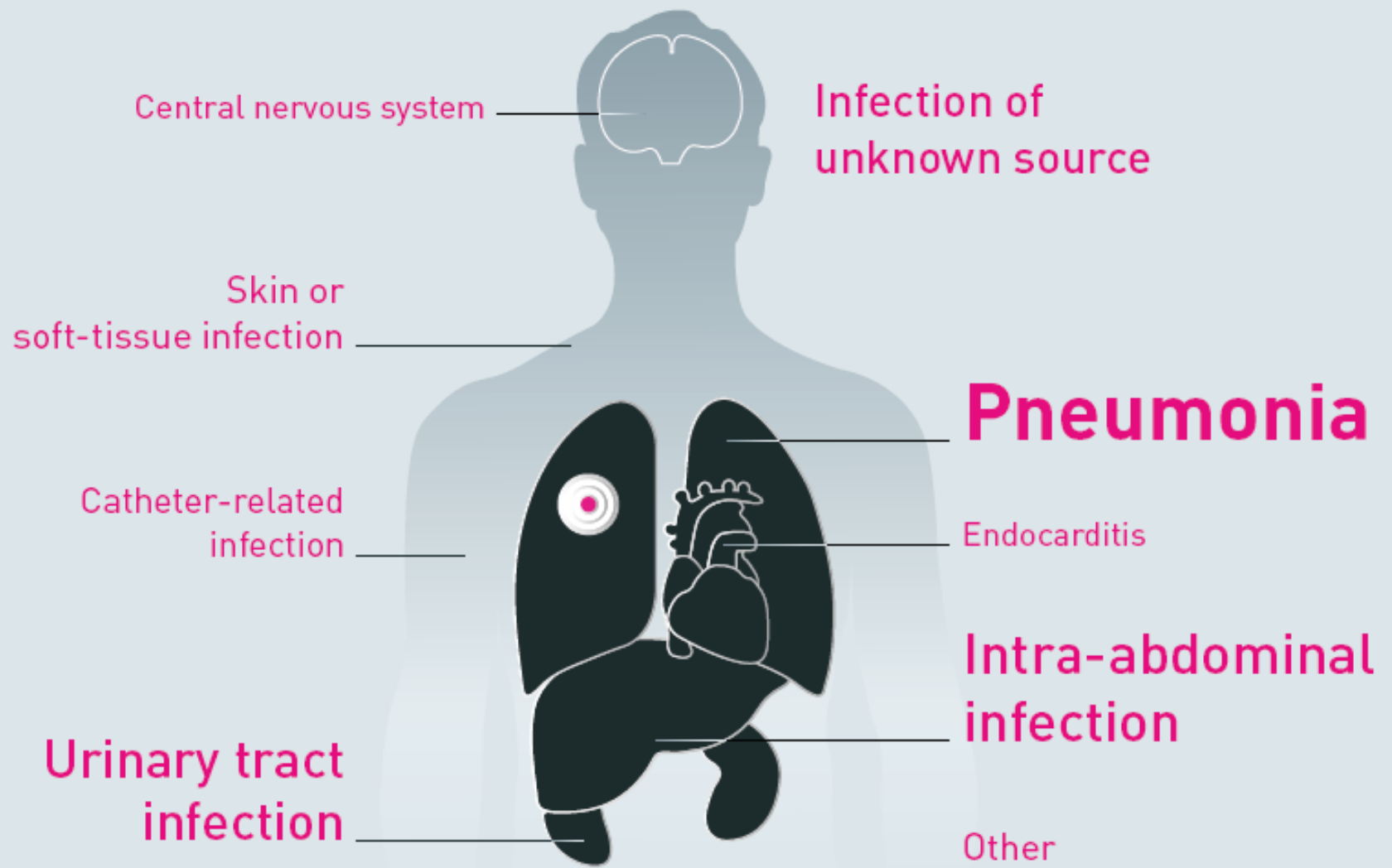
- >1,000,000 patients per year in the USA, ~27,000,000 globally
- \$20.3 billion / 5.2% of total hospital costs
- Mortality rate = 28% - 50% (8,000,000/world)
- ~50% of hospitals deaths attributable to sepsis
- Many survivors have long-lasting complications

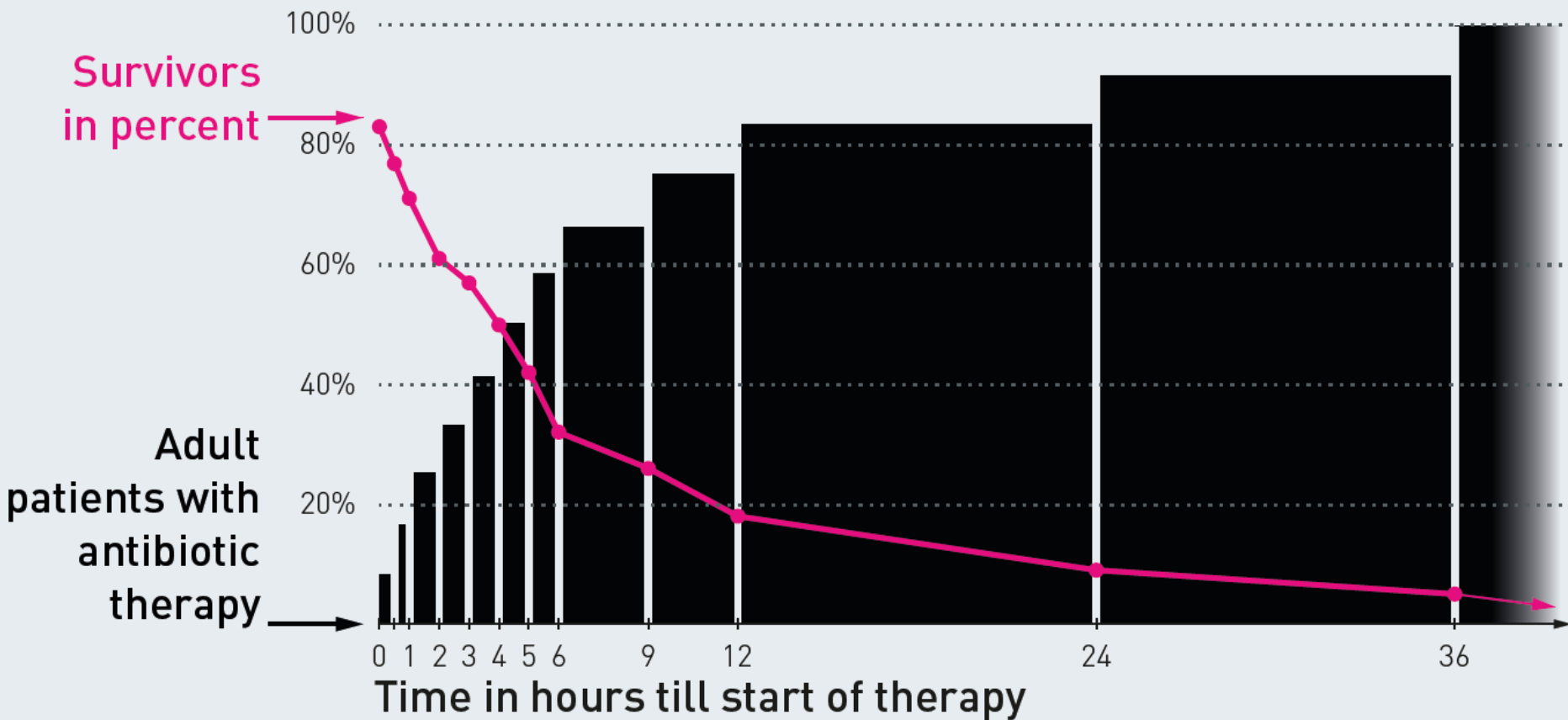


Cases per
100,000 /
USA¹



The most common sources of sepsis are:





Pathophysiology of Sepsis

- More complicated than “inflammation”
- Likely involves immunosuppression
- Involves non-immune physiology
- Organ dysfunction and “hibernation”



Risk Factors for Sepsis

- Extremes of age
- Immunocompromised state (chronic steroids, cancer, SCT, SOT)
- Trauma or burn
- Devices (catheters)
- Genetics



Evolution of Definitions – SEPSIS III



References

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