



*June 11th, 2019*

## **Announcements**

- TASP Noon Session
- Cases!



*June 11th, 2019*

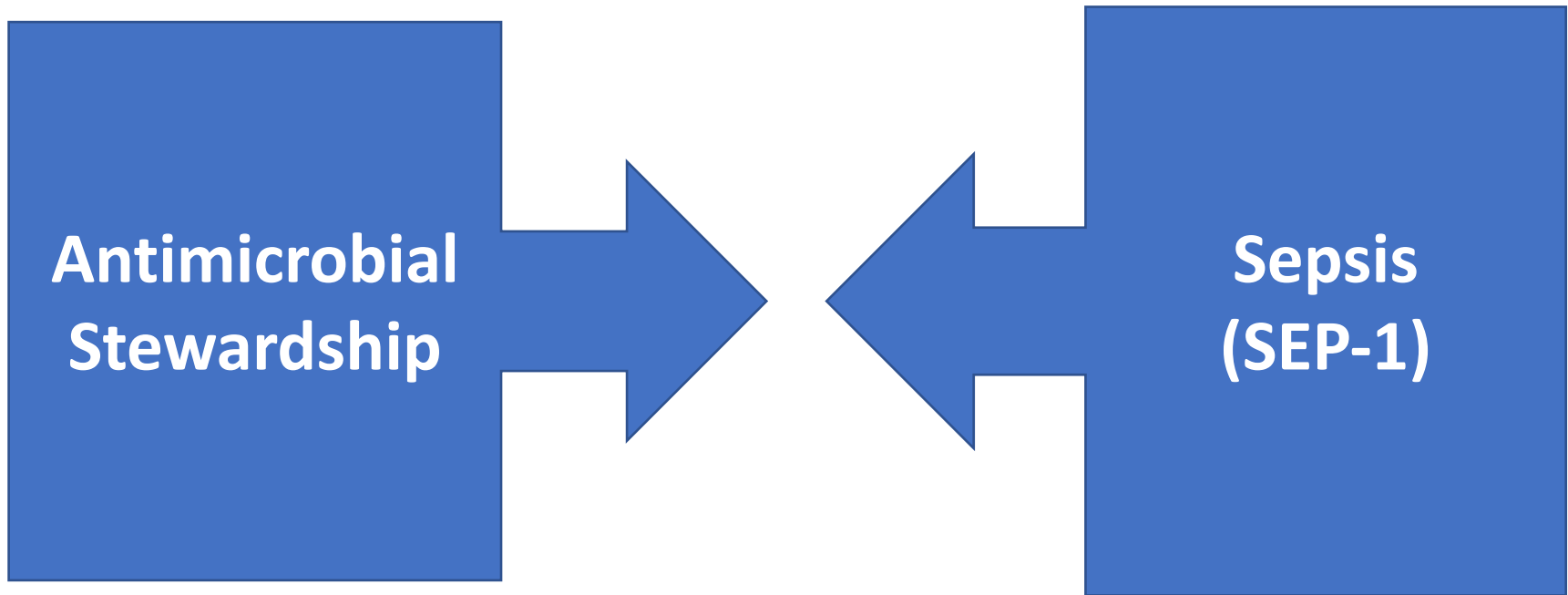
## **Agenda**

- Didactic:

*Sepsis Part 2 - Antibiotic Rights*

- Case Discussions

# Clash of Civilizations?



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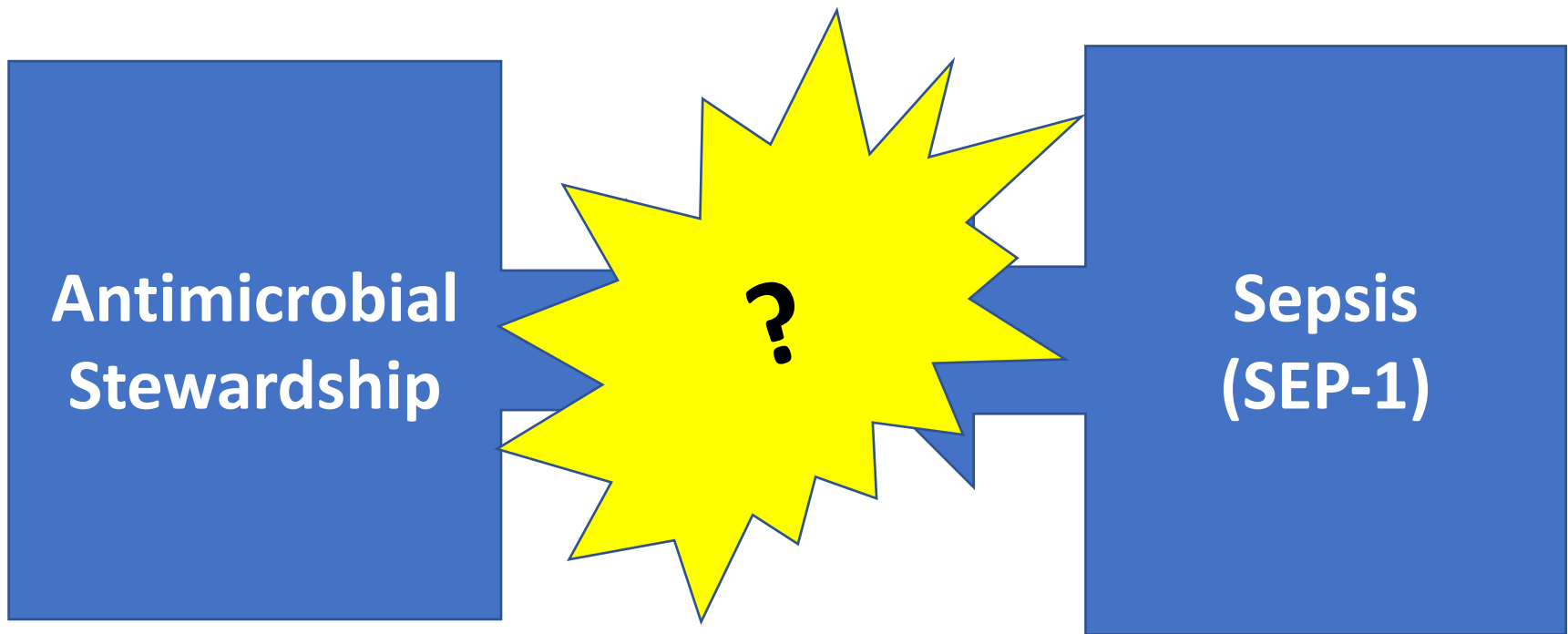
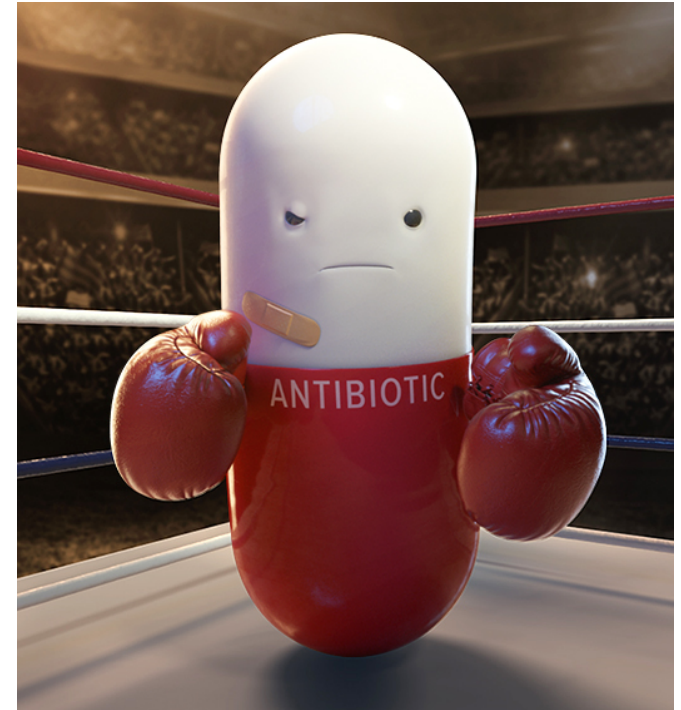


Image: Ministry of Health Singapore

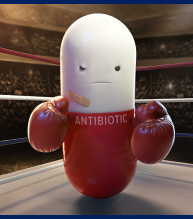


# What are the Antimicrobial Rights?

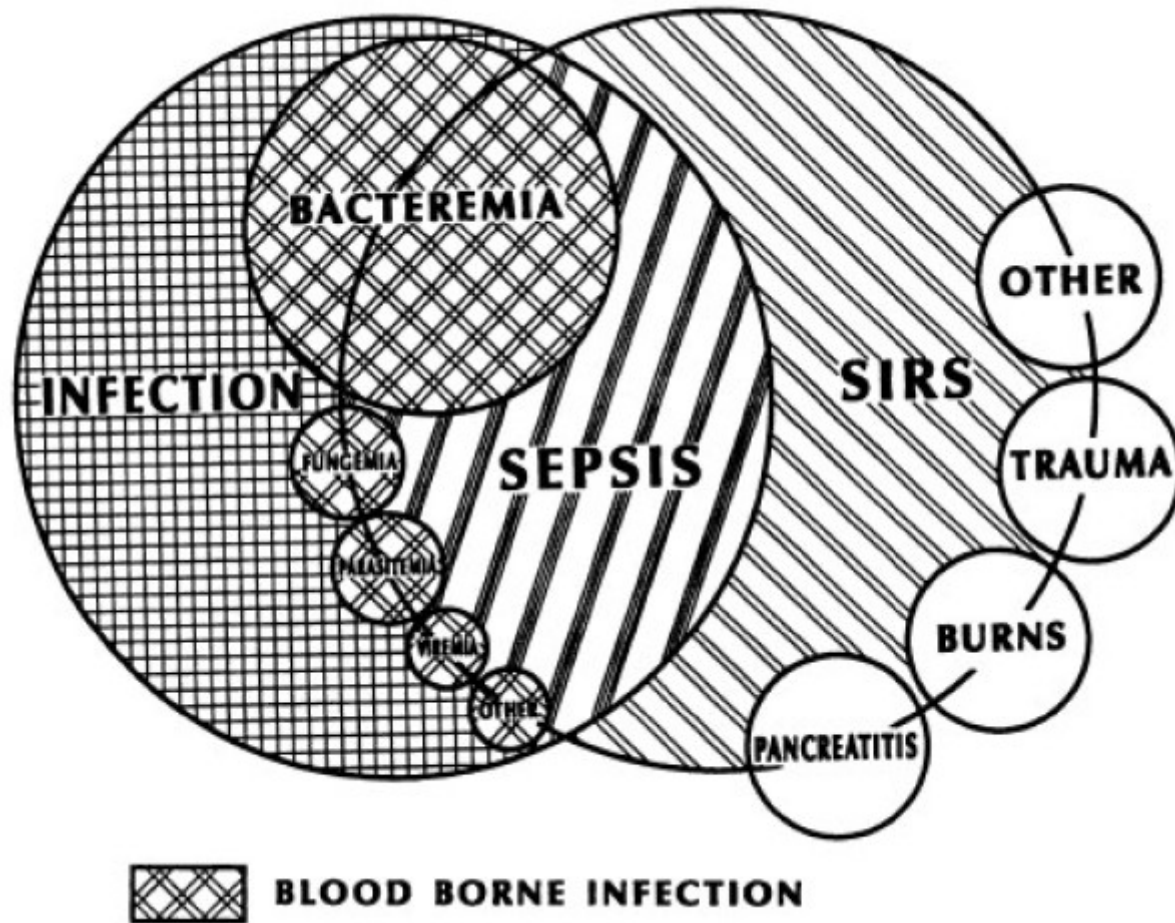
- **Right patient**
- **Right drug**
- **Right time**
- **Right dose**
- **Right duration**
- **And....right allergy assessment**



# Right Patient?



# aka Do I Suspect an Infection?



# A Conceptual Approach

**UTI**

**mild**

**mod**

**severe**

**PNA**

**mild**

**mod**

**severe**

**BSI**

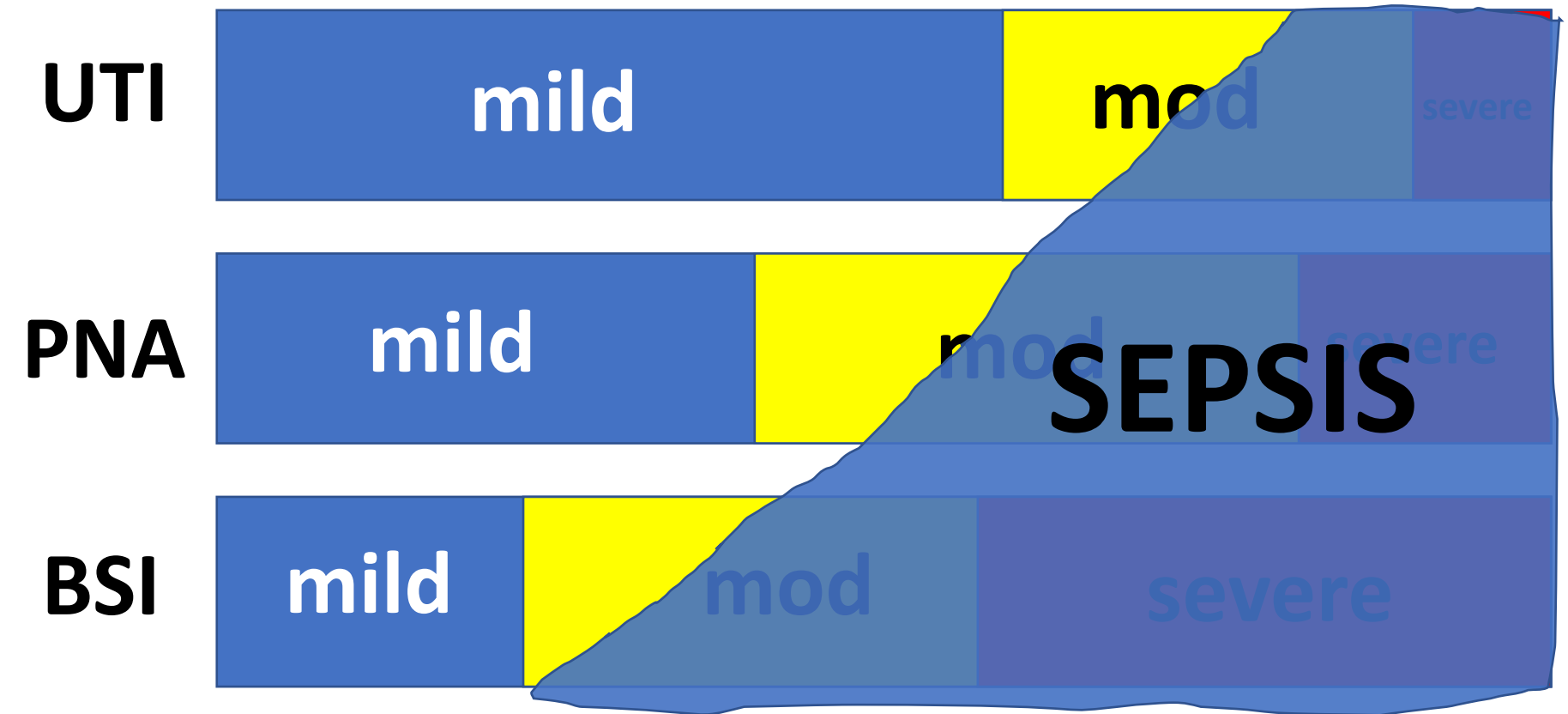
**mild**

**mod**

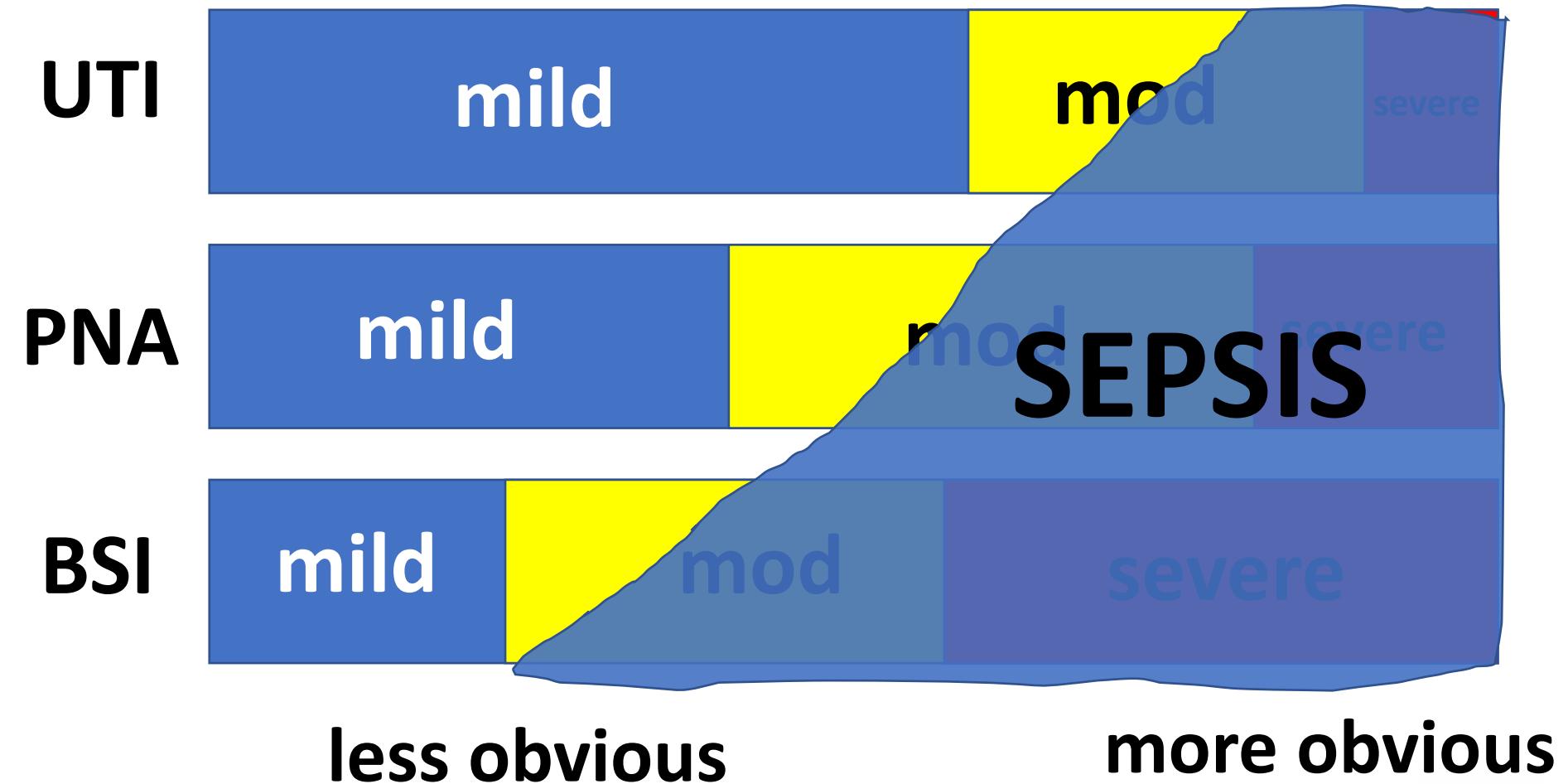
**severe**



# A Conceptual Approach



# A Conceptual Approach



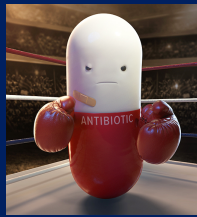
# Right Drug?



MONOTHERAPY	OR	Column A +	Column B
Doripenem		Amikacin	Cefazolin
Ertapenem		Gentamicin	Cefoxitin
Imipenem/Cilastatin		Tobramycin	Cefuroxime
Meropenem		Aztreonam	Clindamycin IV
Cefotaxime		Ciprofloxacin	Daptomycin
Ceftazidime			Telavancin
Ceftriaxone			Vancomycin
Ceftazidime			Linezolid
Cefepime			Azithromycin
Ceftaroline fosamil			Erythromycin
Moxifloxacin			Ampicillin
Levofloxacin			Nafcillin
Amoxicillin/clavulanate			Oxacillin
Ampicillin/sulbactam			Penicillin G
Piperacillin/tazobactam			



# Right Drug?



MONOTHERAPY	OR	Column A +	Column B
Doripenem		<del>Amikacin</del>	Cefazolin
Ertapenem		Gentamicin	<del>Cefazolin</del>
Imipenem/Cilastatin		<del>Tobramycin</del>	<del>Cefazolin</del>
Meropenem		<del>Amikacin</del>	<del>Clindamycin IV</del>
<del>Cefotaxime</del>		Ciprofloxacin	Daptomycin
<del>Ceftazidime</del>			Telavancin
Ceftriaxone			Vancomycin
<del>Ceftazidime</del>			Linezolid
Cefepime			Azithromycin
Ceftaroline fosamil			<del>Erythromycin</del>
Moxifloxacin			Ampicillin
Levofloxacin			Nafcillin
<del>Ampicillin/clavulanate</del>			Oxacillin
Ampicillin/sulbactam			<del>Penicillin G</del>
Piperacillin/tazobactam			





# Antibiotic Therapy for Severe Sepsis/Septic Shock

ABX choice should be based on site of infection and risk factors for drug resistant organisms (prior abx, SNF, LTACH, h/o MDROs)

## Single drug therapy options:

- Ceftriaxone
- Cefepime
- Piperacillin/Tazobactam
- Ertapenem
- Meropenem
- Levofloxacin

(ADD VANCOMYCIN if risk factors for MRSA present)

## For patients with severe beta-lactam allergy:

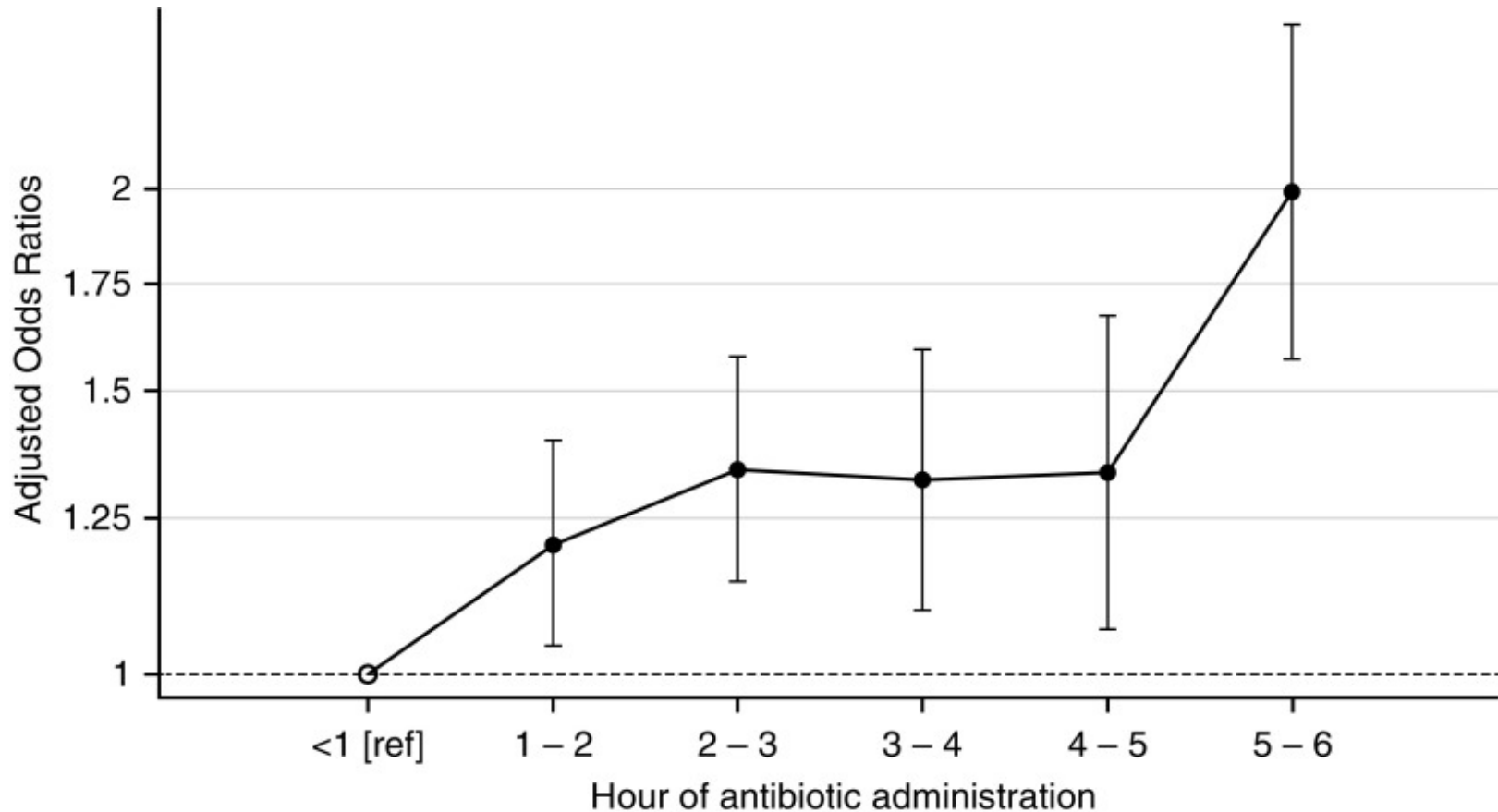
Aztreonam OR Ciprofloxacin OR Aminoglycoside

**PLUS Vancomycin regardless of risk factors for MRSA**

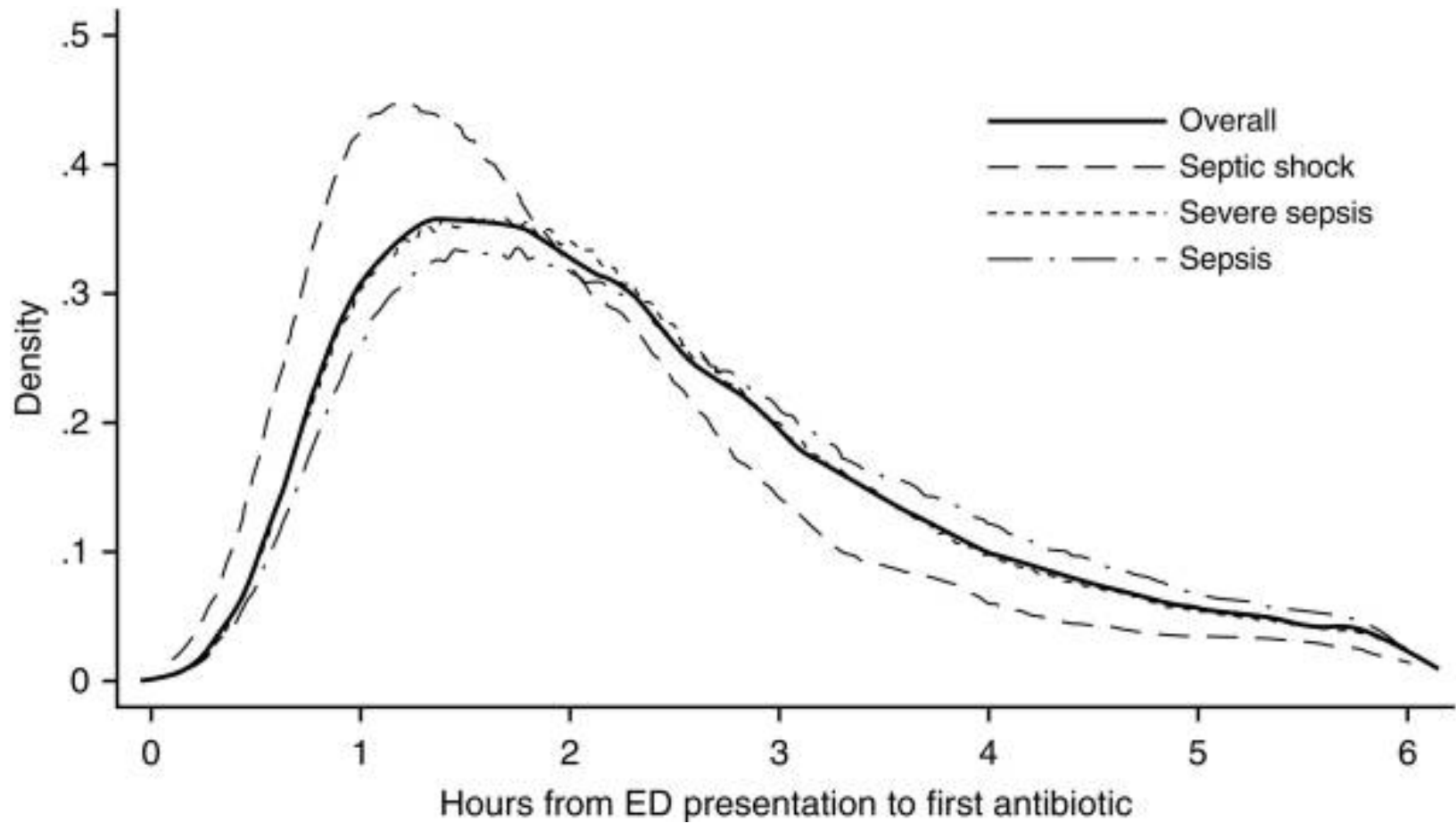
Contact Infectious Disease Consult or Antimicrobial Stewardship with questions



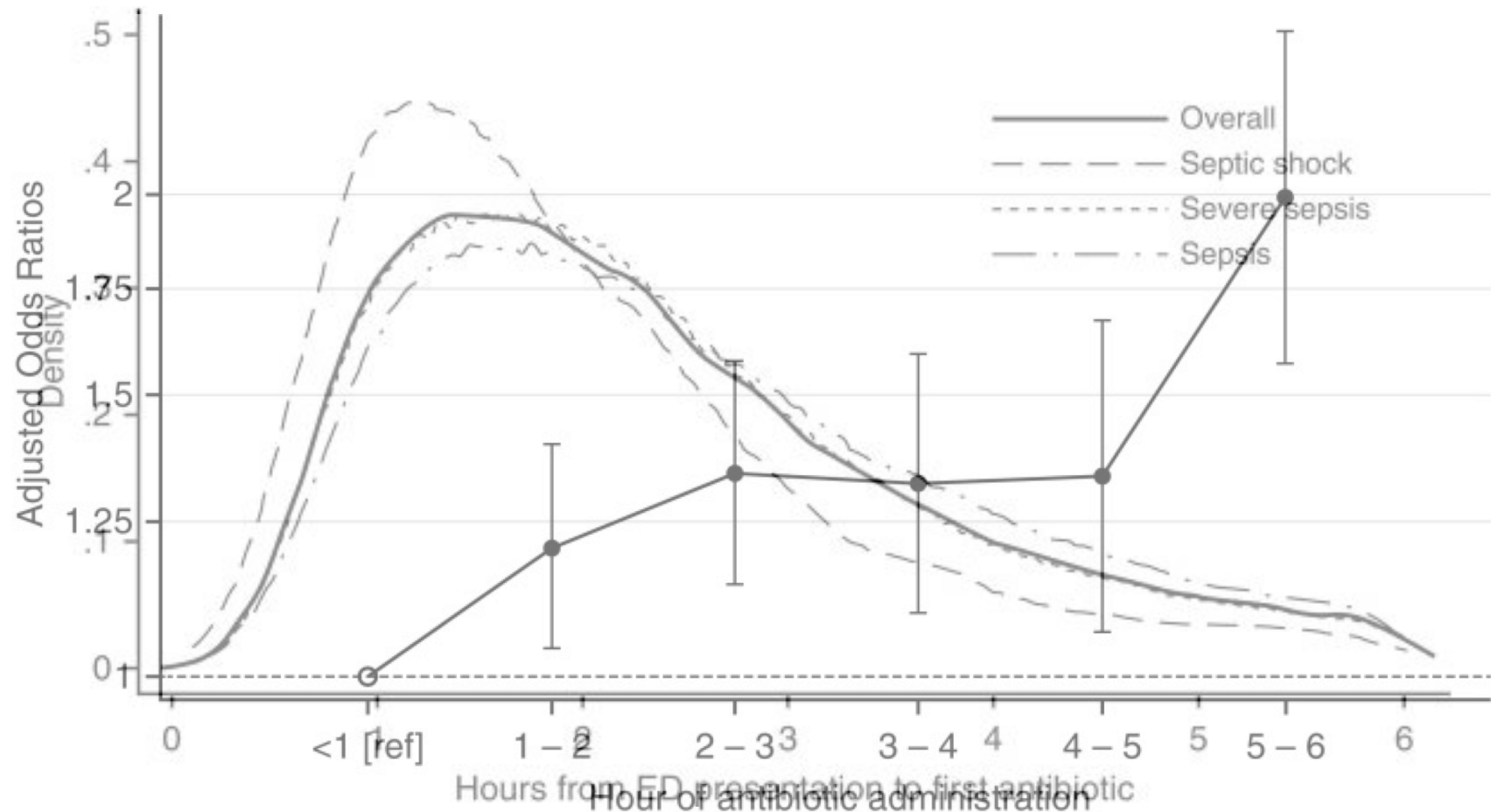
# Right Timing



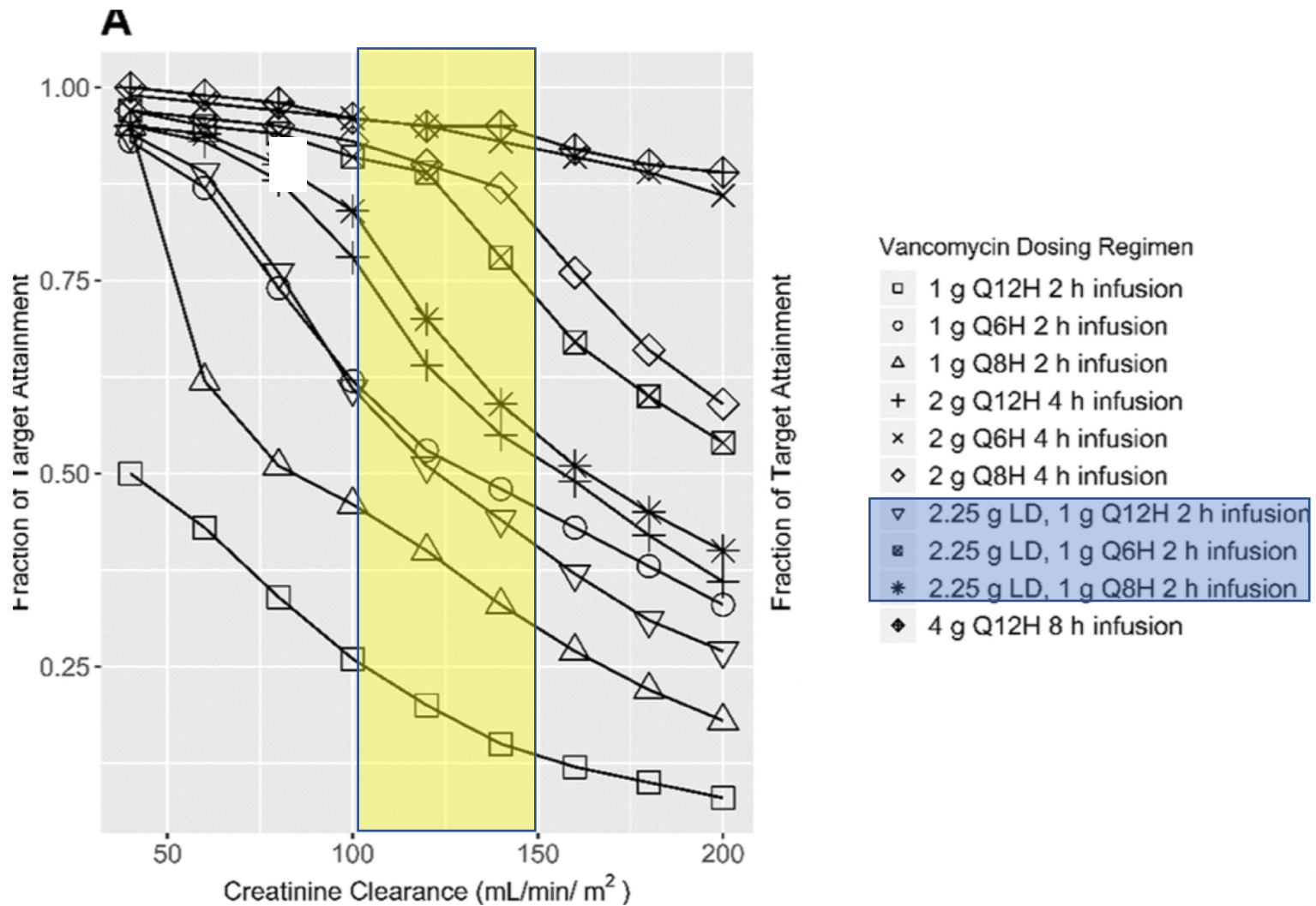
# Right Timing



# Right Timing



# Right Dose



# Right Duration

## Stewardship: Shorter = Better

Diagnosis	Short (d)	Long (d)	Result
CAP	3 or 5	7, 8, or 10	Equal
HAP	7	10-15	Equal
VAP	8	15	Equal
Pyelo	7 or 5	14 or 10	Equal
Intra-abd	4	10	Equal
Gram Neg Bacteremia	7	14	Equal
AECB	$\leq 5$	$\geq 7$	Equal
Cellulitis	5-6	10	Equal
Osteo	42	84	Equal
Septic Arthritis	14	28	Equal
Neutropenic Fever	AF x 72 h	+ANC > 500	Equal

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# Right Allergies

A reported penicillin allergy is associated with:

- Increase time to antibiotic administration
- Increased breadth of antimicrobials administered
- Increased use of 2<sup>nd</sup> and 3<sup>rd</sup> line agents
- Increase morbidity
- Increased mortality
- Increased length of stay
- And.....is usually wrong!



# Discussion, questions, comments?

