# Overview of Stanford Antimicrobial Safety & Sustainability (SASS) Antimicrobial Stewardship Program

**Stan Deresinski MD · Marisa Holubar MD · Emily Mui PharmD · Lina Meng, PharmD**

**Who?**

*We are a 4-member team consisting of 2 physicians and 2 pharmacists. We work closely with clinicians, Infection Control, Quality, and the Antimicrobial Subcommittee.*

**Why?**

- Antimicrobial misuse is widespread: ~30-50% not needed or suboptimal
- Our goal is to optimize the utilization of antimicrobial agents and patient outcome while minimizing unintended consequences of antimicrobial usage, including toxicity, the selection of pathogenic organism, and the emergence of resistance.

**What?**

Create clinical pathways/ guidelines | ABX formulary management | Dose optimization & protocols | Case reviews: restricted ABX, C.diff, etc. | Education | IV to PO interchange

- **Guidelines and protocols** http://bugsanddrugs.stanford.edu
  - E.g. Sepsis ABX Guide, *C.diff* Treatment Guidelines, IV-to-PO interchange protocol, ABX Dosing
- **2 free CME modules** https://med.stanford.edu/cme
  - **Antibiotic Timeout Module -** link
  - **ASP Module -** link

**Where?**

- Email ABX@stanfordhealthcare.org phone: x11908
- Find us on http://bugsanddrugs.stanford.edu and intranet
- We also have an intranet portal page under "Organization" → "Antimicrobial Stewardship Program" http://portal.stanfordmed.org/depts/AntimicrobialStewardshipProgram

**How can you help?**

- **Your** practice is important in curbing the development of MDROs and the rise of *C.diff* infections
- When you prescribe antibiotics:
  - Draw appropriate cultures prior to starting antibiotics
  - Use published guidelines and the antibiogram to make informed decisions – Lane Library link
  - Document your decision-making!
  - Commit to an antibiotic TIMEOUT @ 48-72 hours after starting empiric abx
- ID Team pagers
  - General ID: 24308 ICU-ID: 27190 ICHS: 17000 ITA/lung transplant: 17008

**ABX Timeout Key Questions**

1. **True** infection?
2. **Right** antibiotic?
3. **Right** dose?
4. **Right** route?
5. **Right** duration?

## Restricted ABX: 2 categories

### ID Consult ONLY

- Ceftaroline
- Ceftazidime/avibactam
- Ceftolozane/tazobactam
- Dalbavancin
- Inhaled ribavirin (NF)

***no doses released without ID consult***

### Non-ID Consult Use Allowed if it Meets Restriction Criteria

- Colistin/Polymyxin B
- Daptomycin†
- Fidaxomicin
- Fosfomycin
- Isavuconazole
- Linezolid†, Tedizolid†
- Peramavir
- Posaconazole IV

**† 72 hour empiric use limit:**
If no microbiological target is identified by 48- 72h, ID consultation is required to continue **NO CURBSIDES!**

## Comparisons of PO ABX Bioavailability

| Oral Bioavailability | | |
|---|---|---|
| <50% | 50-80% | 80-100% |
| **Azithromycin** (38%) | Cefpodoxime | Amoxicillin |
| | **Ciprofloxacin** | Cephalexin |
| | | **Clindamycin (90%)** |
| | | **Doxycycline (~complete)** |
| | | **Fluconazole (>90%)** |
| | | **Levofloxacin (99%)** |
| | | **Linezolid (99%)** |
| | | **Metronidazole** |
| | | **Moxifloxacin (>90%)** |
| | | **SMX/TMP (>90%)** |

**Items in bold are part of the SHC IV to PO Interchange Protocol**

## Dose optimization: Extended Infusion β-lactams

| | Conventional dosing | Extended infusion |
|---|---|---|
| Piperacillin-tazobactam | 3.375-4.5g q6h over 30 mins. | 3.375g q8h over 4 hours |
| Meropenem | 1g q8h over 30 mins.<br>CNS: 2g q8h | **Same dose** over 3 hours* |
| Cefepime | 1-2 g q8h over 30 mins | **Same dose** over 4 hours* |

Note: all new starts begin with a one-time 30' order
All dosing regimens above have dose adjustments for renal function

*preferred if suspected Acinetobacter and Pseudomonas infections