

Changing Prescribing Behavior

Ed Septimus, M.D., FACP, FIDSA, FSHEA

VP Research and Infectious Diseases

Clinical Services Group, HCA

Professor Internal Medicine, Texas A&M College of Medicine

2017 Antibiotics Symposium-Antibiotic Stewardship:
Collaborative Strategy for Animal Agriculture and Human Health

Crisis in Infectious Diseases

Widespread antimicrobial drug resistance

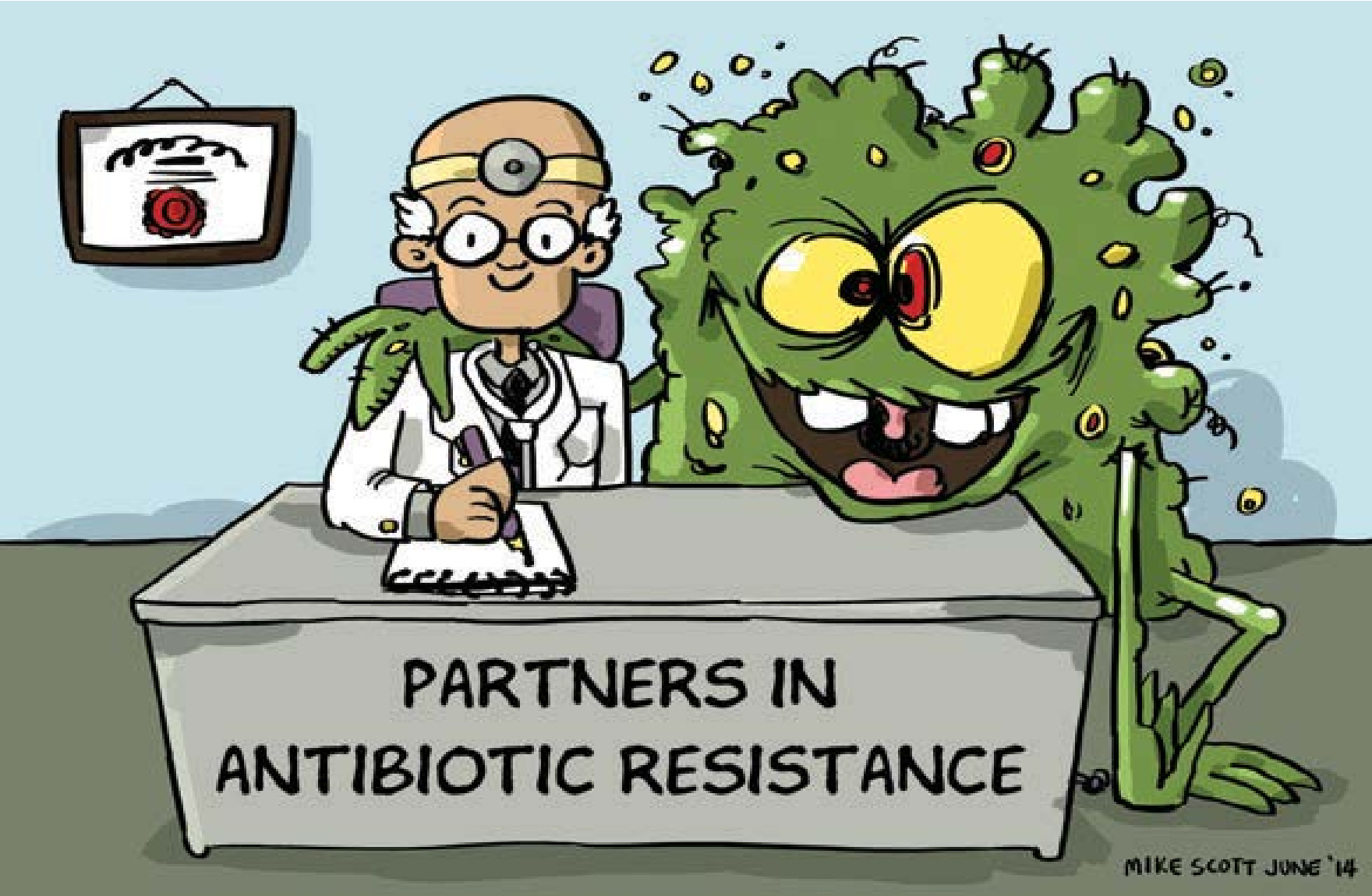
Increasing number of patients who are immunosuppressed

Emergence of new pathogens

Reemergence of older pathogens

Decrease new drug development

Dysbiosis due to antimicrobial therapy



PARTNERS IN
ANTIBIOTIC RESISTANCE

MIKE SCOTT JUNE '14

Common Misconceptions

- If ID consultant approves or uses an antibiotic, it must be appropriate
- Retrospective data collection and analysis can result in change in behavior
- The adoption of IT will automatically make data collection, analysis and change in behavior easy
- Restricting certain antibiotics will reduce antibiotic misuse and overuse

Physician Barriers

- Physician accountability and acceptance of need for improvement
- Misperceptions
- Misalignment of incentives
- Lack of definition of appropriate use of antimicrobial agents
- Lack of standardized, risk-adjusted measures
- Adaptive/behavioral changes needed to change prescribing practices

(Mis)Perception of the Problem

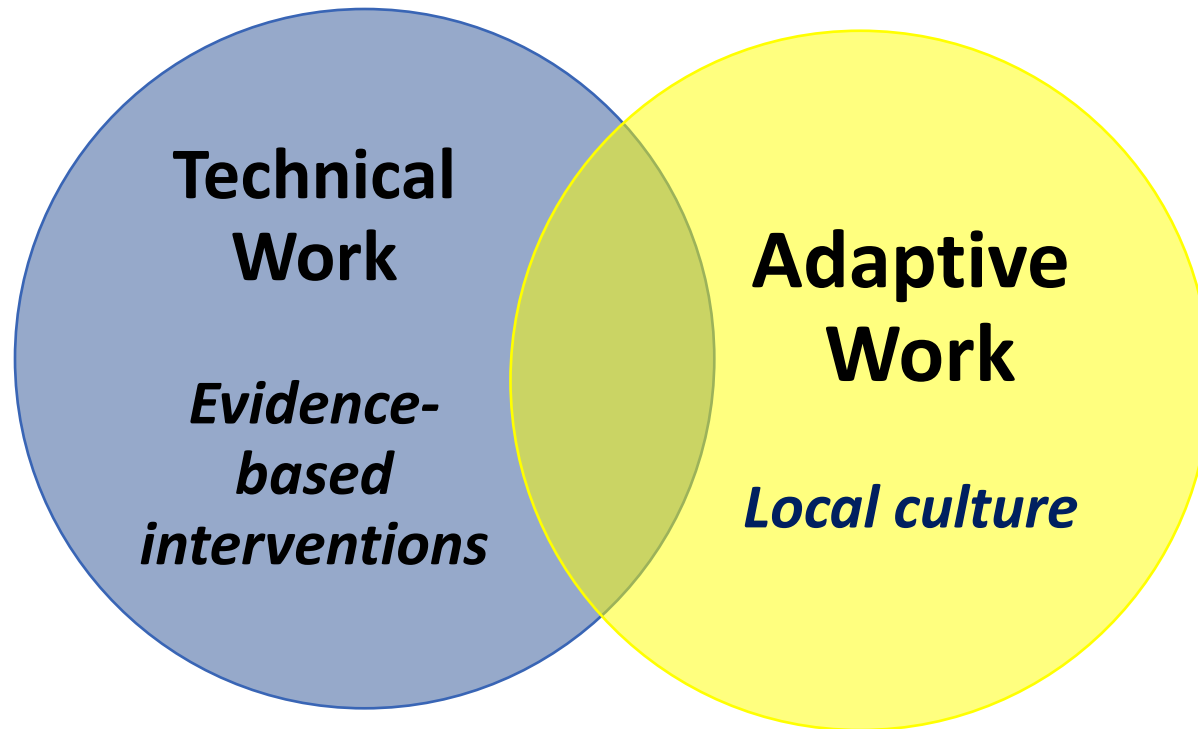
- Numerous survey studies find that clinicians perceive antimicrobial overuse is a problem generally, but not locally^{1,2}
- Other medical specialties responsible for overuse³
- Antimicrobial resistance is a macro problem but of limited concern at the bedside
 - Resistance is a “theoretical”⁴ or “intellectual”⁵ concern, not a practical one

1. Giblin et al. Arch Intern Med 2004:164
2. Wood et al. J Antimicrob Chemother 2013:68
3. Szymczak et al. ICHE 2014:35
4. Bjorkman et al. Qual Saf Health Care 2010:19

Changing Prescriber Behavior

- Engagement of senior physician leadership (clinical and administrative) is critical
- Choose an effective physician champion
- Address stewardship message to the clinical leadership within existing clinical groups (rather than just the trainees or the ID doctors)
- ID should not be excluded from stewardship process
- Understand local culture and patient population

How Will We Get There?



Why does Culture Matter?

- Safety culture influences the effectiveness of other safety and quality interventions
 - Can enhance or inhibit effects of other interventions
- Safety culture can change through intervention
 - Best evidence so far for culture interventions that use multiple components (e.g.: CUSP, Positive Deviance)

Lessons Learned for Successful Stewardship

Although ASP interventions have had limited success at some facilities, we can do better

- Direct (passive) educational approaches generally do not result in sustained reductions in prescribing¹
- Restrictive policies can be circumvented
 - “Stealth dosing”²
 - Misrepresenting clinical information^{3,4}
- Audits can be “gamed”⁵

To bring about lasting change, clinicians need to hard wire new culture about what is considered prudent antimicrobial prescribing⁶

1. Arnold et al. Cochrane Database of Systematic Reviews 2005:4
2. LaRosa et al. ICHE 2007:28
3. Calfee et al. J Hosp Infect 2003:55
4. Linkin et al. ICHE 2007:28
5. Szymczak et al. ICHE 2014:35
6. Bosk et al. Lancet 2009:374

Lessons Learned for Successful Stewardship (ASP) continued

When developing any quality improvement intervention, we need to understand attitudes, motivation and intentions of those whose behavior we wish to change¹ and the local social/environmental context²

Despite evidence to suggest the importance of social and behavioral factors, this is frequently overlooked in design and implementation of AS interventions³

1. Pronovost BMJ 2011:20
2. Aveling et al. J Health Organ Manag 2012:26
3. Charani et al. Clin Infect Dis 2011:53

Stewardship is a Team Sport



- **Indicators of High Performing Teams**
 - A high degree of **interaction and communication** among all members with mutual respect
 - The team directs **energy towards the team vision and goals** and less energy towards individual's own agenda
 - A sense of common ownership
 - Commitment and trust
 - Members **feel great personal satisfaction** from belonging to the team
 - Team members **share loyalty** and group identification

Facilities work together to protect patients.

Common Approach *(Not enough)*

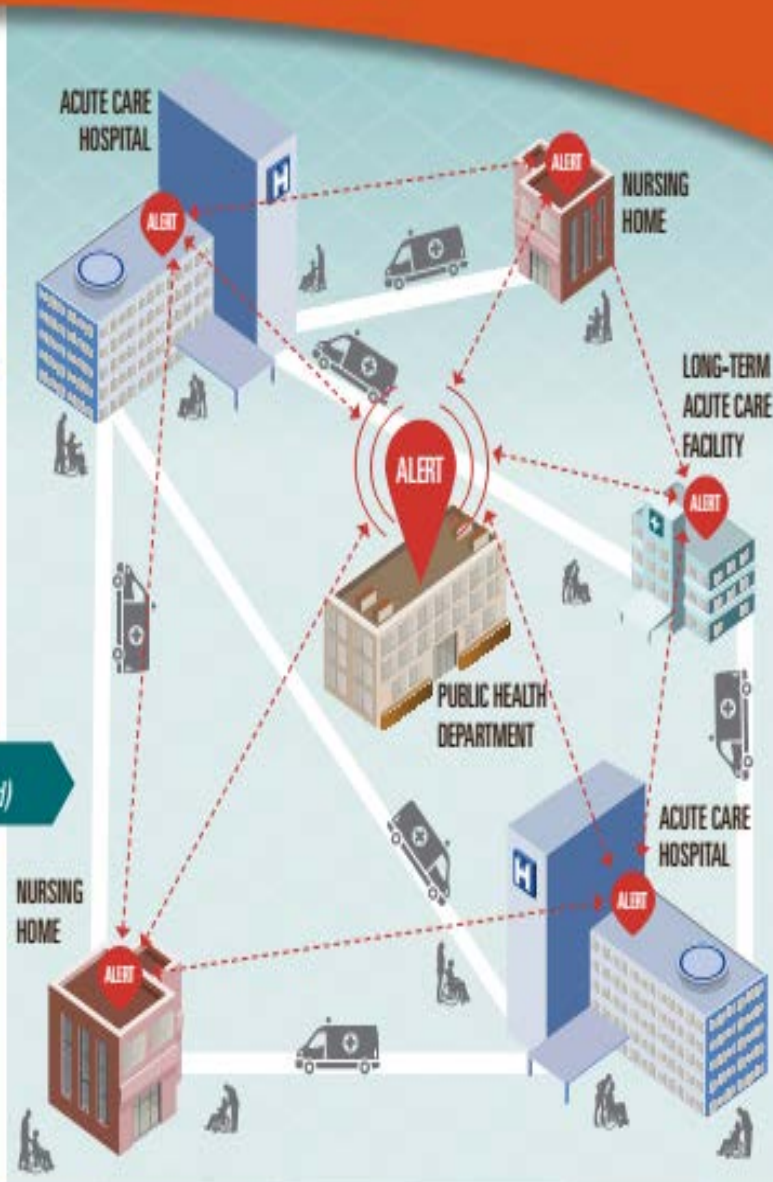
- Patients can be transferred back and forth from facilities for treatment without all the communication and necessary infection control actions in place.

Independent Efforts *(Still not enough)*

- Some facilities work independently to enhance infection control but are not often alerted to antibiotic-resistant or *C. difficile* germs coming from other facilities or outbreaks in the area.
- Lack of shared information from other facilities means that necessary infection control actions are not always taken and germs are spread to other patients.

Coordinated Approach *(Needed)*

- Public health departments track and **alert** health care facilities to antibiotic-resistant or *C. difficile* germs coming from other facilities and outbreaks in the area.
- Facilities and public health authorities share information and implement shared infection control actions to stop spread of germs from facility to facility.



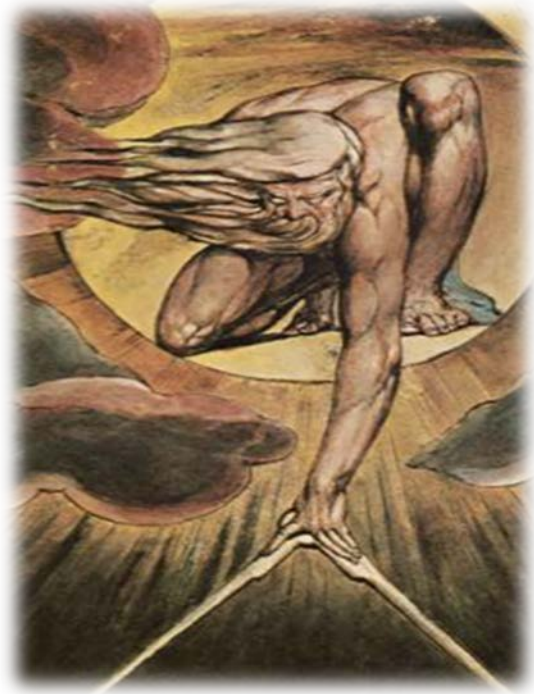
What is One Health?



- Worldwide initiative
- Human, animal, and environmental health are linked
- Main Goal:
 - Enhance cooperation and expand interdisciplinary collaborations between all the fields to promote health and well-being

OLD

Antibiotics as miracles
("No downside risk, so
why not try?")



New

Antibiotics: Good when
used well, better when
used thoughtfully



