Setting up an Antimicrobial Stewardship Program

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Objectives

✔ be able to understand the steps required to implement an antimicrobial stewardship program

✔ how to get financial resources for your program

✔ how to measure success (or failure) of your program
Disclosures

✦ I believe in straight man-to-man defence over zone
✦ I believe on switching on all screens, unless you can double team
✦ … but no disclosures relevant to this talk
### Setting up an ASP

1. Develop a relationship with someone who has money and power
2. Appeal to the heart and get money
3. Develop relationships
4. Put a team together
5. Understand your data
6. Launch your ASP
7. Grab low-hanging fruit
8. Engage stakeholders
9. Measure success in different ways
10. Report success
11. Go back to 7

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Key Themes

- Focus on relationships, not content
- Prescribing antimicrobials is an emotional process
- Process measures are important, but outcomes are what really matter
Show Me the Money!
Show Me the Money!

Jerry Maguire, Tristar Pictures 1996
Where to start?

Find out who has the money

people leading ASPs want to do a good job, and will often believe that they can do it for free or minimal money

unless you are a masochist, you need money to do antimicrobial stewardship

- BEING TOLD YOU WILL GET MONEY FROM THE COST SAVINGS IS NOT GETTING MONEY
- IF YOU CAN DO IT WITHOUT MONEY, WHY DO YOU NEED IT?
Where to start?
Find out who has the money: Executive Sponsor

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Where to start?
Report to a single person with money and power, preferably the one with the most money

- don’t report to a Pharmacy & Therapeutics Committee (or equivalent)
- don’t report to the Medical Advisory Committee
- don’t report to a Division Head or Director lacking discretionary money
- report to the most powerful person in the organization who could care
Hospital Joint Antimicrobial Advisory Committee
Pharmacy Director
Chief of Medicine

Hospital Antimicrobial Stewardship Team
ID Physician
ID Pharmacist
Microbiologist
IPAC Physician
Administrative Assistant

Hospital Antimicrobial Formulary Committee
Chair: ID Physician
Secretary: Pharmacist
Microbiologist
Director of Infection Prevention and Control
General internist
Surgeon

Medical Advisory Committee

Pharmacy & Therapeutics Committee
Bad Example of an Organizational Chart
Hospital Vice-President, Medical

Antimicrobial Stewardship Leader
ID Physician

Hospital Antimicrobial Stewardship Team
2 Physicians
3 Pharmacists
Microbiologist
Infection Prevention and Control
General internist
Surgeon

Medical Advisory Committee

Pharmacy & Therapeutics Committee

Good Example of an Organizational Chart
Develop relationships and persuade the Executive Sponsor why this is important

- **Face time, not keyboard time**
- **Use facts and evidence, but supplement by appealing to the heart ... you are selling**
Two sales pitches

The importance of feeling

Allen Brady & Marsh, and the British National Rail Service
Two sales pitches
The importance of feeling

multidrug-resistant
Pseudomonas aeruginosa in the ICU

http://www.mistymountainographics.com
Get money

- don’t accept “no” for an answer
- make it real money or people who represent money
- translate what you are getting into dollars
  - NO SUCH THING AS PROTECTED TIME
- translate what you are doing into dollars
  - HOW MUCH DOES A CASE OF C. DIFFICILE COST?
  - HOW MUCH IS AN EXTRA DAY OF HOSPITALIZATION FOR FAILURE TO GET ON PO ANTIMICROBIALS?
Start with some necessary infrastructure

Start getting a team together of necessary partners

• NOT ONLY PHYSICIANS AND PHARMACISTS

• PERSONALITIES ARE AS IMPORTANT AS (PERHAPS MORE IMPORTANT THAN) ROLES

• MAKE SURE YOU HAVE A FINANCE PERSON, AN INFORMATICS OR DATA PERSON, AND A NURSE INVOLVED

Start understanding data
Formally Launch your ASP

- have a “Launch Meeting” with EVERYONE attending
- discuss ASP’s scope, structure (esp. reporting structure), deliverables, and issues of timelines
- have this “charter” signed by key players, incl. executive sponsor
forge strong relationships and a common understanding with people who have access to data

- PHARMACY
- IT
- DECISION SUPPORT
- OTHERS

find out what data is available and when
Identify low-hanging fruit from data and team
Identify low-hanging fruit from data and team

these can be antimicrobials
- EXPENSIVE
- HEAVILY USED
- BROAD-SPECTRUM

consider syndromes (e.g. CAP or asymptomatic bacteriuria) or services (e.g. ICU)
Show the fruit to relevant stakeholders

- don’t decide on an intervention before you identify the problem(s)
- engage the stakeholder in the process of identifying an intervention
- don’t burst the balloon
- decide how you will measure success of your intervention
Identifying antimicrobial prescribing problems

- Lack of a guideline is never the sole problem.

- There are 4 basic problems with prescribing:
  - Starting when there is no need
  - Not stopping
  - Treating too broadly (esp. after culture results are available)
  - Treating too narrowly
When I first met you, it was incredible. I never really thought I could feel this way about anything. Everything good. Nothing bad. You always seem to be there when I need you. I know you aren’t all good, but I can’t help telling myself that you are perfect. It is like I am addicted to you. You make me (and everyone around me) feel so good. And every time I reach for you, I get to have you. I probably shouldn’t say this publicly (or even to you) but I sometimes feel that I am greedy because I want more of you than I even deserve. It is like I want a bigger, stronger version of you, thinking that it will make me feel better, more potent.
My first antibiotic

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Identifying antimicrobial prescribing problems

*cf “lovemarking” … there are emotions associated with antimicrobial prescribing*

- BROAD-SPECTRUM ANTIMICROBIALS HAVE EMOTIONS TIED TO THEM
- IV ANTIMICROBIALS ARE ALSO EMOTIONALLY LADEN

*if there is variation with prescribing for common conditions, then guidelines need to be effectively introduced into practice*
Engage stakeholders in your interventions
Engage stakeholders in your interventions

Exclusion ➔ Discovery ➔ Distress ➔ Distance or destructive behaviour
Squeezing the balloon
Squeezing the balloon

Targeting a certain antimicrobial or class that you perceive is “bad” usually results in squeezing the balloon.

Are you actually improving care, and can you show it (and do prescribers care)?
Measuring success
Measuring success

if you cannot measure your program’s success (or failure), you shouldn’t intervente
Measuring success

- Structure measures
- Process measures
- Outcome measures
Measuring success

- structure measures
- process measures
- outcome measures

One of the currently defining struggles of antimicrobial stewardship: separating process measures from outcome measures
Measuring success

www.1to1media.com

www.pewhealth.org from talk by Dr. Danilo LF Wong

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tell you that you have the pieces in place to do your work

• personnel (e.g. pharmacist, physician, data analyst, etc.)
• guidelines
• data systems
• surveillance systems
Measuring success

www.1to1media.com

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Process measures

Tell you that you are actually making changes to how antimicrobials are being prescribed

- de-escalation
- use or adherence of guidelines
Outcomes measures: Consumption

- These tell you that you are actually changing usage:
  - by unit, service or even condition
  - DDD (defined daily dosage), DOT (days of therapy), LOT (length of therapy), cost, grams, etc.
- Because of widespread overuse, a reduction is assumed to be good.
Measuring success

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Process measures: Appropriateness

Appropriateness is the ideal process measure of antimicrobial stewardship

- We often talk about inappropriateness, but have difficulty defining it
- Almost always requires chart review
- Beware retrospective “inappropriateness”
Measuring success

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resistance is probably the holy grail of antimicrobial stewardship

no solid evidence to demonstrate that an ASP will reduce “resistance”
• if it will, it will take time
• how do you measure it
• use this as a deliverable at your own peril
Measuring success

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Outcome measures: Clinical
unlikely that you can identify a mortality benefit, but it can be used as a **balancing measure**

length of stay, admissions to ICU, readmissions are useful to monitor (and relatively easy to get)

avoid focusing on “cure”
Reporting successes

Rule Number 1: they aren’t “your” successes, but those of your colleagues/prescribers

Rule Number 2: tell as many people as you can about everyone else’s successes
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