

THE CHRIST HOSPITAL ANTIMICROBIAL STEWARDSHIP PROGRAM

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Annual education as mandated per MM.09.01.01

Content update: August 2017

ANTIMICROBIAL RESISTANCE

20-50% of all antibiotics prescribed in U.S. acute care hospitals are either **unnecessary or inappropriate.**

Like all medications, antibiotics have **serious side effects**, including adverse drug reactions and *Clostridium difficile* infection (CDI).

Patients who are unnecessarily exposed to antibiotics are placed at risk for **serious adverse events** with no clinical benefit.

The misuse of antibiotics has also contributed to the **growing problem of antibiotic resistance**, which has become one of the most serious and growing threats to public health.

Potential for spread of resistant organisms means that the misuse of antibiotics can **adversely impact the health** of patients who are not even exposed to them.

Estimated minimum number of illnesses and deaths caused annually by antibiotic resistance*:

At least  **2,049,442** illnesses,
 **23,000** deaths

*bacteria and fungus included in this report

Centers for Disease Control and Prevention. 2015
www.cdc.gov/drugresistance/about.html

ANTIMICROBIAL STEWARDSHIP PROGRAM (ASP)

Antimicrobial stewardship is a **multidisciplinary team** that:

- Promotes the appropriate use of antimicrobials (including antibiotics)
- Improves patient outcomes
- Reduces microbial resistance
- Decreases the spread of infections caused by multidrug-resistant organisms

Purpose of the Antimicrobial Stewardship at TCH:

- To ensure optimal clinical outcomes of antimicrobial use while minimizing unintended consequences including toxicity, the selection of pathogenic organisms, and the emergence of resistance at The Christ Hospital

Antimicrobial Stewardship was started in Fall 2011 at The Christ Hospital.

THE TEAM

Composed of 2 separate functions:

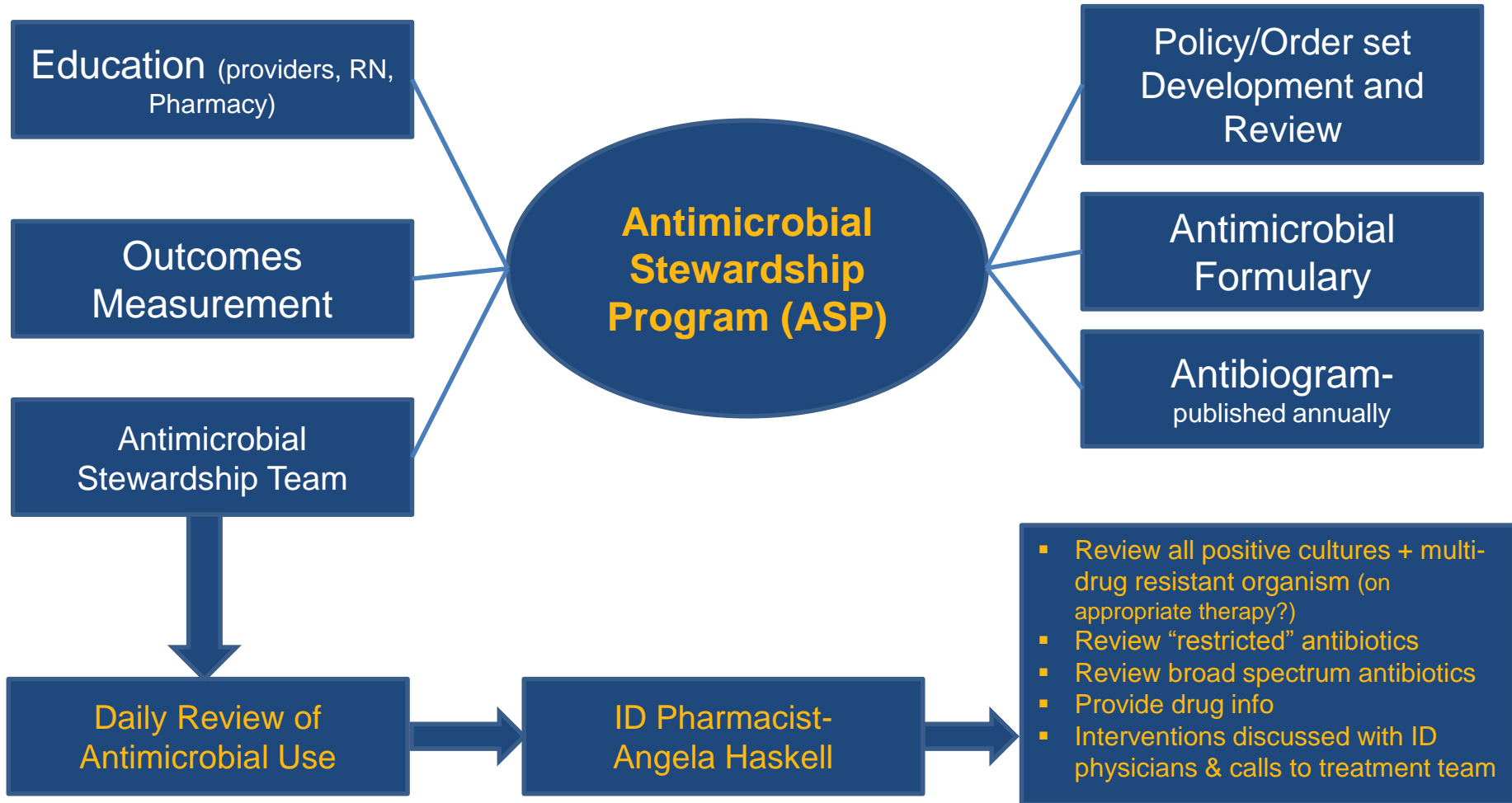
Core Team:

- The members implementing decisions made by the Antimicrobial Stewardship Committee
 - One full time clinical pharmacist with focus in ID (Angela Haskell) and ID physicians (chair Dr Lamarre)
- All Hospital staff should perform daily infection control measures to prevent and isolate the spread of infection

Antimicrobial Stewardship Committee (ASC)

- A Subcommittee of P&T committee at The Christ Hospital
- Develops guidelines/policies and reviews formulary for all antimicrobial agents
- Composed of: Infectious Disease (ID) physicians, champion physicians, clinical pharmacists, clinical microbiologist, & infection control are the recommended members for the committee (see next slide for ASC at TCH)

WHAT DO WE DO?



ANTIMICROBIAL STEWARDSHIP COMPONENTS AT TCH

Antibiogram:

- Can be found on the MyTCH intranet under pharmacy services → antimicrobial stewardship
- Antibiogram is published annually for TCH staff to guide empiric antimicrobial prescribing based on the previous year's organism susceptibilities
 - Improvements in antimicrobial susceptibility, can be seen when trending past antibiograms, based on improved antimicrobial use and infection control processes in the hospital
 - Levofloxacin susceptibility to *Pseudomonas* for TCH **2013 -67%, 2014 -70%, 2015 -73%, 2016-77%**

Formulary management:

- Some antimicrobial agents are restricted to ID (i.e. Avycaz, Zerbaxa, Fosfomycin)
- **Criteria for use antimicrobials:** Not restricted but must choose reason for use (i.e. meropenem, daptomycin, etc.) Pharmacist reviews use, daily, for appropriateness and will call provider if not appropriate.

WHAT CAN YOU DO?

Educate patients and families about the appropriate use of antimicrobials agents using the six quick facts below

6
SMART
FACTS
ABOUT
ANTIBIOTIC
USE

- 

1
Antibiotics are **LIFE-SAVING** drugs
- 

2
Antibiotics only treat **BACTERIAL** infections
- 

3
Some ear infections **DO NOT** require an antibiotic
- 

4
Most sore throats **DO NOT** require an antibiotic
- 

5
Green colored mucus is **NOT** a sign that an antibiotic is needed
- 

6
There are potential **RISKS** when taking any prescription drug

Talk to your clinician about when and how to safely use antibiotics
www.cdc.gov/getsmart



IMPROVING ANTIMICROBIAL PRESCRIBING

The CDC provides materials to distribute to assist with the appropriate prescribing of antimicrobial agents

IMPROVE ANTIBIOTIC PRESCRIBING



Stay up to date on the latest clinical guidelines and local antibiotic resistance patterns



Clearly communicate with patients about clinical visit expectations



Counsel patients about antibiotic resistance using materials from CDC's Get Smart Program

www.cdc.gov/getsmart

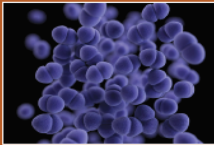


INFORMATION FOR PATIENTS-FLYERS AVAILABLE TO PRINT AND DISTRIBUTE

[HTTPS://WWW.CDC.GOV/GETSMART/WEEK/EDUCATIONAL-RESOURCES/RESOURCES.HTML](https://www.cdc.gov/getsmart/week/educational-resources/resources.html)



ANTIBIOTIC RESISTANCE: THE GLOBAL THREAT



Antibiotic resistance—when bacteria no longer respond to the drugs designed to kill them—is happening right now across the world.



The full impact is unknown. There is no system in place to track antibiotic resistance globally.



Without urgent action, modern medicine will be obsolete and minor injuries will once again be deadly.



Super-Resistant Bacteria: Problem Today, Crisis Tomorrow

- In India, **58,000+ babies died in one year** from super-resistant bacterial infections, which are usually passed on from their mothers¹
- In the European Union, antibiotic resistance causes **25,000 deaths per year** and 2.5m extra hospital days²
- In Thailand, antibiotic resistance causes **38,000+ deaths per year** and 3.2m hospital days²
- In the United States, antibiotic resistance causes **23,000+ deaths per year** and more than 2m illnesses²



Global Action to Slow Resistance

- **Improve Laboratory Capacity:** Countries need medical labs to identify bacteria and choose the right drugs to treat them. When people get antibiotics without this testing, they:
 - Often get treatment that doesn't help
 - Develop and spread resistant bacteria
 - Increase their risk for future resistant infections
- **Develop National Tracking Programs:** Countries need the infrastructure to collect resistance data and report results globally. This information is necessary to:
 - Target and measure prevention efforts
 - Drive policies that help stop spread
- **Implement Antibiotic Stewardship Programs:** To ensure antibiotics are here when we need them, they must be prescribed and taken correctly now.
- **Expand Infection Control Programs:** Improving infection control practices in healthcare settings is critical to prevent spread of antibiotic-resistant germs.



CDC's Impact on a Global Threat

CDC's proposed Antibiotic Resistance Solutions Initiative will:

- **Allow standardized tracking** of antibiotic resistance internationally
- **Prevent** antibiotic resistance
- **Improve** antibiotic prescribing and use
- **Boost communication** of antibiotic resistance threats



¹[http://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(13\)70319-9/fulltext](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(13)70319-9/fulltext)
²Antimicrobial Resistance Global Report on Surveillance, 2014. WHO Report.
http://www.who.int/csr/resistance/documents/AMR_report_web_slide_set.pdf?ua=1

Viruses or Bacteria What's got you sick?

Antibiotics only treat bacterial infections. Viral illnesses cannot be treated with antibiotics. When an antibiotic is not prescribed, ask your healthcare professional for tips on how to relieve symptoms and feel better.

Common Condition: What's got you sick?	Common Cause			Are antibiotics needed?
	Bacteria	Bacteria or Virus	Virus	
Strep throat	✓			Yes
Whooping cough	✓			Yes
Urinary tract infection	✓			Yes
Sinus infection		✓		Maybe
Middle ear infection		✓		Maybe
Bronchitis/chest cold (in otherwise healthy children and adults)*		✓		No
Common cold/runny nose			✓	No
Sore throat (except strep)			✓	No
Flu			✓	No

* In some cases, acute bronchitis is caused by bacteria, but even in these cases antibiotics still do not help.



Antibiotics Aren't Always the Answer

www.cdc.gov/getsmart



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Nov. 16, 2014
CS272798

CONTACT US

Please feel free to contact us with any antimicrobial related questions.

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