THE CHRIST HOSPITAL ANTIMICROBIAL STEWARDSHIP PROGRAM

Committee chairs: Angela Haskell Pharm.D, BCPS & Thomas Lamarre, MD
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 Program (ASP)

- Education (providers, RN, Pharmacy)
- Outcomes Measurement
- Antimicrobial Stewardship Team
- Daily Review of Antimicrobial Use

ID Pharmacist - Angela Haskell

- Policy/Order set Development and Review
- Antimicrobial Formulary
- Antibiogram - published annually

- Review all positive cultures + multi-drug resistant organism (on appropriate therapy?)
- Review “restricted” antibiotics
- Review broad spectrum antibiotics
- Provide drug info
- Interventions discussed with ID physicians & calls to treatment team
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

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/getsma
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

ANTIBIOTIC RESISTANCE: THE GLOBAL THREAT

Super-Resistant Bacteria: Problem Today, Crisis Tomorrow

- In India, 50,000+ babies died in one year from super-resistant bacterial infections, which are usually passed on from their mothers.
- In the European Union, antibiotic resistance causes 25,000 deaths per year and 2.5m extra hospital days.
- In Thailand, antibiotic resistance causes 50,000+ deaths per year and 3.2m hospital days.
- In the United States, antibiotic resistance causes 23,000+ deaths per year and more than 2m illnesses.

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 for:
  - Target and measure prevention efforts
  - Drive policies that help stop spread
- Implement Antimicrobial 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

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.

<table>
<thead>
<tr>
<th>Common Condition: What's got you sick?</th>
<th>Common Cause</th>
<th>Are antibiotics needed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strep throat</td>
<td>✓</td>
<td>Yes</td>
</tr>
<tr>
<td>Whooping cough</td>
<td>✓</td>
<td>Yes</td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>✓</td>
<td>Yes</td>
</tr>
<tr>
<td>Sinus infection</td>
<td>✓</td>
<td>Maybe</td>
</tr>
<tr>
<td>Middle ear infection</td>
<td>✓</td>
<td>Maybe</td>
</tr>
<tr>
<td>Bronchitis/cold (not otherwise healthy children and adults)*</td>
<td>✓</td>
<td>No</td>
</tr>
<tr>
<td>Common cold/runny nose</td>
<td>✓</td>
<td>No</td>
</tr>
<tr>
<td>Sore throat (except strep)</td>
<td>✓</td>
<td>No</td>
</tr>
<tr>
<td>Flu</td>
<td>✓</td>
<td>No</td>
</tr>
</tbody>
</table>

* In some cases, acute bronchitis is caused by bacteria, but none of those cases antibiotics will dose help.

Antibiotics Aren't Always the Answer

www.cdc.gov/getsmart
Please feel free to contact us with any antimicrobial related questions.

Antimicrobial Stewardship Office: A009  
(right around from A level doctor’s lounge)

Angela Haskell-ID pharmacist 513-585-2249 or at angela.haskell@thechristhospital.com