

## Antimicrobial Stewardship Program (ASP) – What is it?

The goal of the Antimicrobial Stewardship Program (ASP) at Stanford Health Care is to optimize the utilization of antimicrobial agents and patient outcomes while minimizing unintended consequences of antimicrobial usage.

## For our PATIENTS

**You have received a prescription for an antibiotic.**

Antibiotics are used to treat and, sometimes, prevent bacterial (**but not viral**) infections.

While antibiotics are remarkably effective when appropriately prescribed, they may have important side effects that include:

- Allergic reactions and other direct side effects
- Superinfections, including diarrhea due to “C. diff”
- Selection of resistant bacteria which could harm the individual and others

For these reasons, antibiotics should always be prescribed and taken with care. Please ask your healthcare providers to clarify any questions you might have, including why the antibiotic is needed and what its common side effects are.

Please follow the instructions for taking your antibiotic. If you develop symptoms such as a rash, stomach upset, or diarrhea, inform your caregiver as soon as possible.

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## For our NURSES & MEDICAL ASSISTANTS

Antibiotics are used to prevent or treat bacterial (but not viral) infections and sometimes used to prevent specific infections.

While antibiotics are remarkably effective when appropriately prescribed, they may have important side effects that include:

- Allergic reactions and other direct side effects
- Superinfections, including diarrhea due to “C. diff”
- Selection of resistant bacteria which could harm the individual and others

Patients who are prescribed antibiotics must be encouraged to ask any questions they have regarding this, including why the antibiotic is needed and what its common side effects are.

The need to follow the instructions for taking the antibiotic must be reinforced, and the patient told that if they develop symptoms such as a rash, stomach upset, or diarrhea, they must inform their caregiver as soon as possible.

An important aspect of quality care is the implementation of the principles of antimicrobial stewardship. Antimicrobial stewardship is a programmatic effort to optimize antibiotic therapy regarding decisions to prescribe, choice, dosing, route and duration of administration with the primary goal of optimizing patient outcomes while minimizing the potential adverse effects of antibiotic administration. The latter include allergic reactions, toxicity, superinfection (e.g., Clostridium difficile infection), and the selection of antibiotic resistant bacteria.

**Contact us for any questions:**

Stanford Antimicrobial Safety and Sustainability

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## For our SURGICAL PRESCRIBERS & PROCEDURALISTS

The critical necessity of the applications of the principles of antimicrobial stewardship to surgical practice has recently led to the “A Call to Action for Surgeons” that has been endorsed by the Surgical Infections Society<sup>1</sup>.

Much of antibiotic use in surgery is for perioperative prophylaxis. The following is from a recent update by the American College of Surgeons and the Surgical Infections Society regarding prevention of postoperative infections.

### Principles of perioperative antibiotic prophylaxis<sup>2</sup>

- Administer prophylactic antibiotics only when indicated.
- Choice of prophylactic antibiotic should be dictated by the procedure and pathogens most likely to cause SSI.
- Prophylactic antibiotic should be administered within 1 hour before incision or within 2 hours for vancomycin or fluoroquinolones.
- Prophylactic antibiotic dosing should be weight-adjusted.
- Re-dose antibiotics to maintain adequate tissue levels based on agent half-life or for every 1500 mL blood loss
- There is no evidence that prophylactic antibiotic administration after incision closure decreases SSI risk; **prophylactic antibiotics should be discontinued at time of incision closure** (exceptions include implant-based breast reconstruction, joint arthroplasty, and cardiac procedures where optimal duration of antibiotic therapy remains unknown).

The SHC guideline for perioperative antibiotic prophylaxis is available online<sup>3</sup> at the SHC Antimicrobial Stewardship (Stanford Antimicrobial Safety and Sustainability – SASS) website<sup>4</sup>. While, for most procedures, the guideline currently allows prophylaxis to be continued for up to 24 hours, this will soon be changed to reflect the recommendation that “prophylactic antibiotics should be discontinued at time of incision closure” and we recommend that this approach be immediately implemented. One consequence of this for an outpatient surgical center is that there would seldom be a need for a discharge antibiotic prescription.

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#### References:

1. Sartelli M, Duane TM, Catena F, et al. Antimicrobial stewardship: a call to action for surgeons. Surg Infect 2016; 17:625-31.
2. Ban KA, Minei JP, Laronga C, et al. American College of Surgeons and Surgical Infections Society: Surgical Site Infection Guidelines, 2016 Update. J Am Coll Surg 2017; 224:59-74.
3. Antimicrobial Surgical Prophylaxis – SHC Guidelines for Adult Patients. [http://med.stanford.edu/bugsanddrugs/guidebook/jcr\\_content/main/panel\\_builder\\_584648957/panel\\_0/download/file.res/SHC\\_SurgProphylaxisGuidelines.pdf](http://med.stanford.edu/bugsanddrugs/guidebook/jcr_content/main/panel_builder_584648957/panel_0/download/file.res/SHC_SurgProphylaxisGuidelines.pdf)
4. Stanford Antimicrobial Safety and Sustainability. <http://med.stanford.edu/bugsanddrugs.html>