

Community Pharmacists: Essential Partners in Minnesota Antibiotic Stewardship

Minnesota Community Pharmacists See a Role in Stewardship

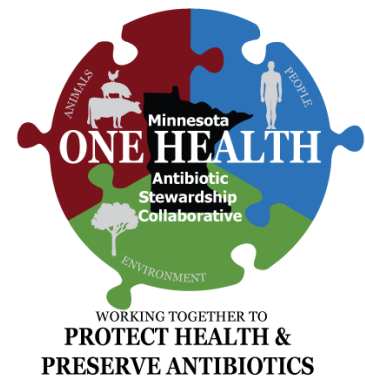
- Over 80% of Minnesota community pharmacists responding to a 2018 Minnesota Department of Health survey believe they play an important role in antibiotic stewardship.¹
- More than 60% of U.S. health care antibiotic use occurs in the outpatient setting.²
- Community pharmacists are some of the most accessible health care professionals and represent the final link in the health care chain before drugs are used in the community.
- Although community pharmacists make up 58% of the pharmacy profession, to date, antibiotic stewardship resources have been largely targeted to hospital pharmacists.³

Antibiotic Resistance

- Antibiotic resistance is one of our most serious health threats.
- CDC estimates that each year in the U.S., 2 million people develop infections from antibiotic-resistant bacteria and 23,000 die from associated causes.
- The major driver of antibiotic resistance is widespread antibiotic use.
- An estimated 30% of outpatient antibiotics are inappropriate.⁴
- Antibiotic stewardship, or the improvement of antibiotic use while effectively treating infections, is essential to combatting resistance.

Other Consequences of Antibiotic Use

- Antibiotics carry a risk of side effects, including allergies and organ damage.
- Because of increasing resistance, some of the only antibiotics available to treat infections caused by resistant bacteria come with a risk of toxic effects.
- Antibiotics have an effect on healthy gastrointestinal bacteria that can last after patients have finished a prescription. This leaves patients at risk for *Clostridium difficile* disease, a toxin-associated illness caused by the *C. difficile* bacterium which is able to thrive after antibiotic exposure.
- *C. difficile* can be acquired in the community and in health care settings.



Antibiotic Stewardship

Antibiotic stewardship is the process of improving how we use antibiotics. Key elements of antibiotic stewardship include the six “D”s:

Diagnosis: using an antibiotic only when clinically indicated.

Drug: choosing the right antibiotic for the infection and the patient.

Dose: giving the right amount of antibiotic.

Duration: giving the antibiotic for the right amount of time.

De-escalation: switching to an antibiotic choice that is better targeted to the infection when possible, and switching from intravenous to oral administration when possible.

Disposal: appropriate disposal keeps leftover drugs out of the hands of those for whom they were not prescribed and out of Minnesota’s lakes and streams.

Minnesota One Health Antibiotic Stewardship Collaborative

Minnesotans from animal, human, and environmental health are working together to be smart about antibiotic use and preventing antibiotic resistance!

www.health.state.mn.us/onehealthabx



Approaches to Improve Antibiotic Stewardship in Community Pharmacies

Consider the following to strengthen your stewardship approach.

- **Engage with pharmacy leadership.** Stewardship activities require human and financial resource investment. Encourage your pharmacy administration to make a commitment to antibiotic stewardship and to establish culture and management procedures that facilitate stewardship interventions.
- **Build relationships with local providers and patients.** Request that indication or diagnosis, and duration be included with all prescriptions. Communicate this expectation with prescribers, following up directly as needed.
- **Be aware of local antibiotic resistance trends.** Obtain antibiograms from hospitals, laboratories, and Minnesota Department of Health.
- **Educate patients.** Develop or obtain existing patient education materials. Consider using posters, pamphlets, fliers, or fact sheets. A key goal of patient education is to modify expectations and the desire for antibiotics. In routine prescription counseling, raise awareness of antibiotic resistance, stewardship, and adverse effects. Counseling, even in appropriate-use situations, might influence patients to treat symptoms rather than use antibiotics in the future for viral infections like the common cold, rather than seeking medical care.^{5,6}
- **Recommend and provide vaccinations in your facility.** Consider collaborative practice agreements with local providers that enable pharmacists to administer vaccinations. Preventing illness is an effective way to avoid antibiotic use and resistance.⁶
- **Consider CLIA-waived point-of-care tests.** CLIA-waived point-of-care tests offer an opportunity to diagnose the cause of symptoms.⁷ Influenza point-of-care tests can provide patient satisfaction and accommodation to pharmacy workflow, without adverse clinical outcomes.⁸

1. [2018 Antibiotic Stewardship Practices in Minnesota Community Pharmacies Survey](http://www.health.state.mn.us/onehealthabx/cpharmsurv.pdf) (<http://www.health.state.mn.us/onehealthabx/cpharmsurv.pdf>).

2. Suda KJ. *J Antimicrob Chemother* 2013; 68:715–8.

3. Bureau of Labor Statistics. <https://www.bls.gov/ooh/healthcare/pharmacists.htm#tab-3>. Updated 30 Jan 2018. Last accessed 23 Mar 2018.

4. Fleming-Dutra et al. *JAMA*. 2016;315(17):1864-1873.

5. Practice Guidelines for Implementing Antimicrobial Stewardship. 41st American Society of Health-Systems Pharmacists Midyear Clinical Meeting, 2006. Anaheim, CA. Available at: <http://www.ashpadvantage.com/podcasts/handouts/07568.pdf>. Last accessed 27 Mar 2018.

6. Antimicrobial Stewardship 201: It's Time to Act. American Pharmacists Association Annual Meeting & Exposition, 2018; Nashville, TN. Available at: <http://aphameeting.pharmacist.com/APhA2018/sessions/antimicrobial-stewardship-201-it%E2%80%99s-time-act>

7. CDC. Test Complexities. Available at:

<https://www.cdc.gov/clia/Resources/TestComplexities.aspx>. Last accessed 15 Mar 2018.

8. Klepser et al. *JPhA*.2016;56(1):14-21.

Other Resources

Society of Infectious Disease Pharmacists

(<https://www.sidp.org/Home>)

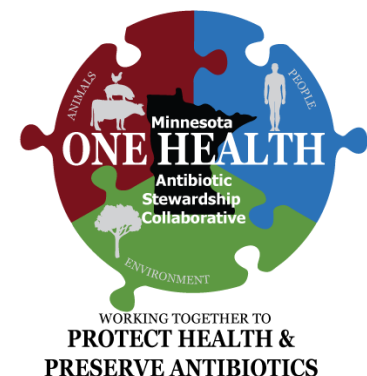
Minnesota One Health Antibiotic Stewardship Collaborative

(<http://www.health.state.mn.us/onehealthabx>) Statewide effort to improve antibiotic use and decrease antibiotic resistance in human, animal, and environmental health.

CDC Antibiotic Prescribing and Use in Doctor's Offices: Community Pharmacists

(<https://www.cdc.gov/antibiotic-use/community/for-hcp/community-pharmacists.html>)

This fact sheet was created in collaboration among the Minnesota Department of Health, Minnesota Board of Pharmacy, and the Minnesota Pharmacists Association.



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