Implementation Guide/Playbook

TAP OUT: Targeting Appropriate Prescribing in Outpatient Settings

County of Los Angeles Public Health

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Background

Antibiotic resistance is an expected consequence when any antibiotic is used for any length of time (even a single dose). Over time antibiotic resistance has emerged to every antibiotic in use today rendering them less effective or ineffective. The more we use antibiotics, the greater the risk of emergence and spread of resistant bacteria. Unfortunately, while resistance emerges, research and development of new antibiotics has slowed, over several decades, such that no new, novel antibiotics are expected for quite some time, if at all. Antibiotics serve as an important supportive care measure throughout medicine and surgery and the lack of availability of new antibiotics to treat evolving resistance in a serious public health threat.

Inappropriate antibiotic use is a significant contributor to the spread of antibiotic resistance. Primary care clinicians prescribe approximately half of all outpatient antibiotics in the United States. Estimates are that more than 30 percent of antibiotics prescribed in outpatient settings are unnecessary. Thus, primary care prescribers can have a huge impact on slowing and even preventing antibiotic resistance.

Antibiotic Stewardship efforts have been shown to be effective in reducing inappropriate and unnecessary antibiotic use. Antibiotic stewardship is about making sure the right antibiotics are prescribed for the right diagnosis, at the right dose and for the right duration to avoid unnecessary use and minimize the spread of antibiotic resistant bacteria. This involves developing processes, such as adherence to best practices, that take into consideration the emergence of antibiotic resistance with every decision to prescribe an antibiotic.

The Centers for Disease Control and Prevention (CDC) has issued four core elements for a successful antibiotic stewardship program in the outpatient settings. These include Committment, Action, Track and Report and Education (refer to the Figure 1).

Figure 1. Core Elements of Outpatient Antibiotic Stewardship *(Source: The Core Elements of Outpatient Antibiotic Stewardship, CDC).*

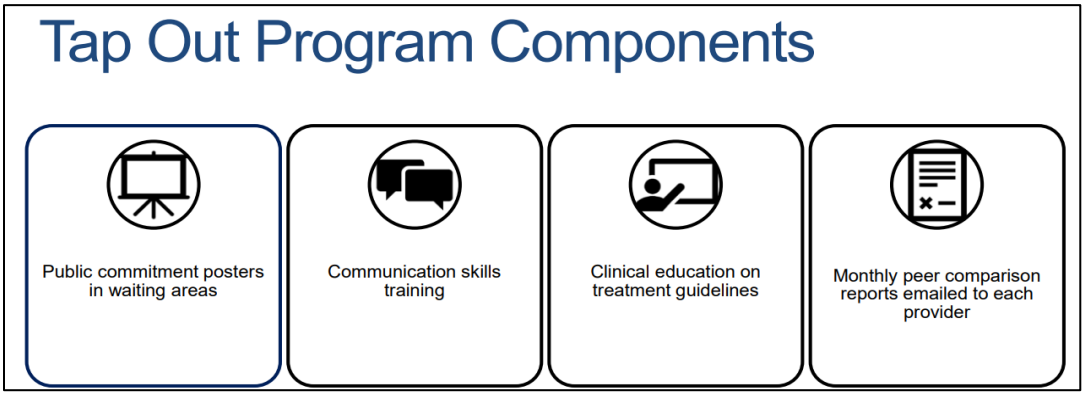
Program Benefits

The TAPOUT program was designed by LACDPH to assist ambulatory healthcare settings in Los Angeles County meet the CDC Core Elements. TAP OUT is intended to maximize adherence to best practices for treatment of common infections and reduce inappropriate and unnecessary use of antibiotics. This is the best way to address the emergence of antibiotic resistance.

Program Overview

TAP OUT is designed to implement antibiotic stewardship in outpatient clinics with multiple antibiotic prescribers. The Program consists of four basic elements to improve antibiotic prescribing.

Figure 2. LACDPH TAP OUT Program Components *(Source: Appropriate Treatment of Common Infections in Primary Care, LACDPH).*



1) **Public Provider Commitment**: These are personalized posters intended for display in exam and waiting rooms notifying patients that their provider is committed to practice antibiotic stewardship. The purpose is to demonstrate individual and organization accountability for using antibiotics optimally according to best practices. Prescribers sign the posters and are encouraged to include their photograph.
2) **Clinician communication skills training**: Clinicians are provided with training in skills to achieve patient satisfaction when antibiotics prescriptions are expected by the patient but are not prescribed.
3) **Clinician education on prescribing best practices**: Clinicians are provided with current best practices for treatment of common infections. Adherence to best practices for prescribing antibiotics is expected.
4) **Regular feedback reports**: Personalized routine (e.g., monthly) performance rankings are provided to each physician or group privately. Each physician receives the designation of being a "top performer" or "not a top performer" for appropriate antibiotic prescribing.

Pre-implementation planning and approval for TAP OUT

1) Individuals and roles needed at a minimum.
    a. **Leadership engagement**: Support from facility leaders is necessary. Time should be spent at the outset obtaining buy-in for TAP OUT to ensure antibiotic stewardship is aligned with operational goals and is fully supported. EHR and staffing barriers can be addressed by leadership to ensure ongoing success.

b. **Clinician champion**: A good program champion with a strong interest in quality improvement, knowledge of the practice and is respected by their colleagues is crucial. Protected time for program implementation and maintenance is essential.
    i. **Information technology support**: Determination of who will assist with data extraction should be established ahead of time. Establishing in advance usable and timely data reports is required.
    ii. **Program manager support**: A program manager can facilitate many of the tasks to ensure success regarding commitment posters, skills training, etc. They can assist the champion with coordination of meetings, and data preparation and distribution.
c. Targeting unnecessary use of antibiotics for bronchitis is highly recommended for TAP OUT. Bronchitis is an "antibiotic-never" infection that has a clear goal of achieving no antibiotic use. Patients often expect antibiotics to treat bronchitis and experience disappointment or frustration when not prescribed. Other common infections may be targeted alternatively or concurrently.
d. Consider collecting baseline antibiotic use data by HEDIS measure (i.e., bronchitis) or ICD-10 codes (other infections)
e. Consider collecting survey data on prescriber baseline knowledge of best practices and antibiotic stewardship.
f. Prepare program request and which may include (See TAP OUT slides):
    i. Reason antibiotic stewardship is needed in your clinic (s)
    ii. Regulatory requirements for antibiotic stewardship (e.g., CMS, HEDIS requirement)
    iii. Clinic or prescriber baseline data if available
    iv. Explanation of TAP OUT prescriber expectation
    v. LACDPH provisions for the program

Implementation (see Appendix for materials)

1) **Clinician commitment posters**: Poster graphics are made available through LACDPH and can be customized for use in your organization. Posters can be translated in multiple languages as well. These are meant to be displayed in areas of the office highly visible to patients. Other options, such as fliers or videos, communicating clinician commitment should be considered if posters are not anticipated to be effective or visible. Clinicians should review the poster text and sign to indicate commitment.
2) **Communication skills training**: Communication skills training should be offered to clinicians. Communications training provide clinicians with evidence-based strategies and tips that will ensure patients are satisfied with the decision to not treat with antibiotics or to delay treatment.
3) **Best practice guidelines**: Best Practice guidelines are recommended for adoption and distribution to clinicians. There will be an expectation to adhere to these guidelines to avoid unnecessary or inappropriate antibiotic use. Governmental, professional, or organization-approved guidelines should be used.
4) **Provider feedback**: Targeted infections for TAP OUT are selected by ICD-10 codes or if available, through HEDIS measures. Linkage of the antibiotic prescription to a visit associated with the target code is obtained usually through an IT department. Each provider's individual performance is calculated as the percentage of encounters for the selected ICD-10 code (or HEDIS measure) where antibiotics were either avoided or ordered appropriately. Giving prescribers this type of performance feedback helps them monitor their own behavior and make changes based on their actual prescribing habits. Before

beginning the intervention, clinicians should receive an email letting them know what to expect from the performance feedback emails. After launching TAP OUT, at regular intervals, clinicians' performances are ranked from highest to lowest. Rankings are typically only shared with individual prescribers. Those with the lowest inappropriate prescribing rates will be informed that they are a "top performer" in a congratulatory email. The remaining clinicians will be told that they are "not a top performer" along with the proportion written by Top Performers for comparison.

a. Program launch:
    i. **Start date**: Selecting a good start date can have some profound effects on the initial success of the program. It is important to select a date or dates where the project can have the direct attention of providers. Avoid start times when people are on vacations. May consider a start time in the fall/winter for URIs.
    ii. **Commitment posters and education materials (skills training and best practices)**: Commitment posters and educational materials should be ordered at least two to three months prior to the planned start date. These should be available at least four weeks prior to your target start date to provide sufficient time for signing and determine placement.
    iii. **Staff meetings and presentations**: If possible, during the weeks leading up to the launch date, the local champion can bring awareness to the project through presentations at staff meetings or by holding education sessions. A simple email sent to all participating providers can be an excellent way to answer any last-minute questions.

Post Implementation

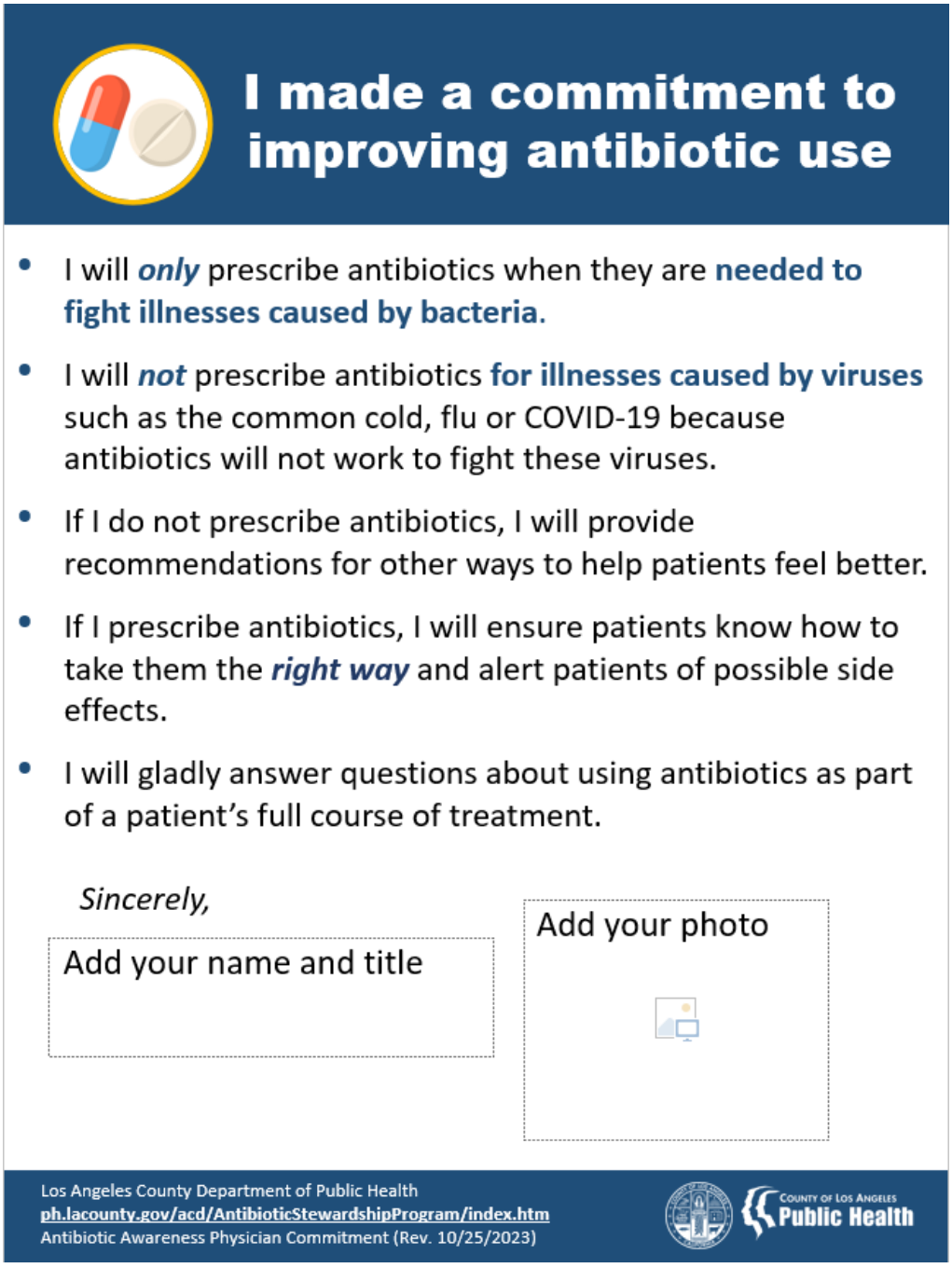
Once TAP OUT is underway it is useful to track antibiotic prescribing outcomes over time, consider post-intervention surveys, and collect and analyze survey and antibiotic prescribing data. You can check in regularly with your team regarding any changes that need to be made after the initial implementation. You can collect feedback informally through discussions with clinician and other stakeholders. You should assess clinician experience during the program through ongoing surveys, or informally. Negative feedback and other issues should be addressed. Antibiotic prescribing performance can be calculated as a percentage of eligible visits that were included using ICD10 codes or HEDIS measure and tracked over time. These data can be displayed for feedback to clinicians and leadership.

LACDPH Role to support TAPOUT

1) Analytics Services: Monthly data files can be forwarded to us to produce reports by provider or clinic by our data analyst; data analysis agreements
2) Physician commitment poster graphics
3) Patient education graphics which can be provided in multiple languages
4) Physician skills training resources
5) Availability for guidance and assistance with implementation

Appendix: Implementation Materials

Antibiotic Use Physician Commitment Poster

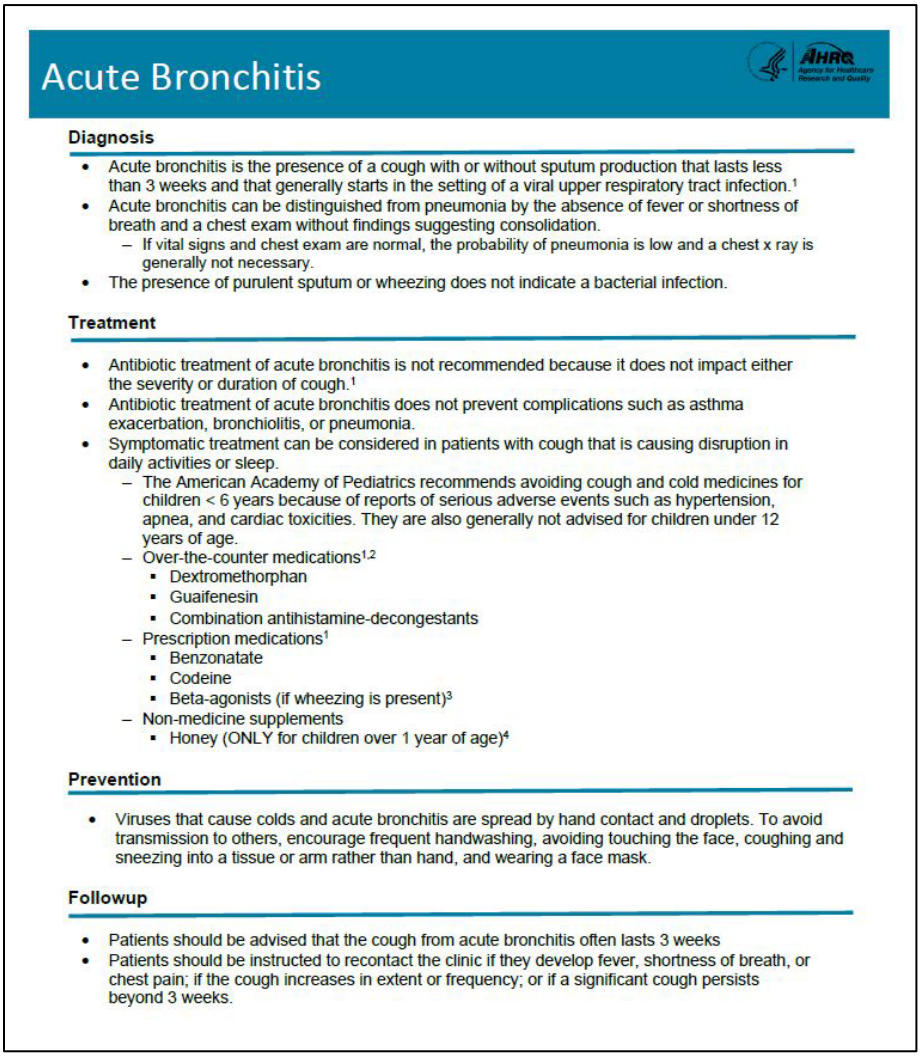


Trainings

Communications Skills Training to improve patient satisfaction with the decision to not prescribe or delay prescribing antibiotics.

- Antibiotic Stewardship Trainings (CDC sponsored CE courses)
- To Prescribe or Not to Prescribe (Stanford continuing education): This communication training activity from provides a practical approach to the management of common outpatient infections using both instructional and interactive videos and patient role plays.
- The Primary Care Office Visit (Conversations for Health): This role-play simulation is designed to help patients and physicians improve their skills in leading real-life conversations about the appropriate prescription and use of antibiotics, improve collaboration at the point of care, and change behaviors.

Best Practices Guidelines for Bronchitis



Acute Bronchitis

Diagnosis

- Acute bronchitis is the presence of a cough with or without sputum production that lasts less than 3 weeks and that generally starts in the setting of a viral upper respiratory tract infection.[1]
- Acute bronchitis can be distinguished from pneumonia by the absence of fever or shortness of breath and a chest exam without findings suggesting consolidation.
  - If vital signs and chest exam are normal, the probability of pneumonia is low and a chest x ray is generally not necessary.
- The presence of purulent sputum or wheezing does not indicate a bacterial infection.

Treatment

- Antibiotic treatment of acute bronchitis is not recommended because it does not impact either the severity or duration of cough.[1]
- Antibiotic treatment of acute bronchitis does not prevent complications such as asthma exacerbation, bronchiolitis, or pneumonia.
- Symptomatic treatment can be considered in patients with cough that is causing disruption in daily activities or sleep.
  - The American Academy of Pediatrics recommends avoiding cough and cold medicines for children < 6 years because of reports of serious adverse events such as hypertension, apnea, and cardiac toxicities. They are also generally not advised for children under 12 years of age.
  - Over-the-counter medications[1,2]
    - Dextromethorphan
    - Guaifenesin
    - Combination antihistamine-decongestants
  - Prescription medications[1]
    - Benzonatate
    - Codeine
    - Beta-agonists (if wheezing is present)[3]
  - Non-medicine supplements
    - Honey (ONLY for children over 1 year of age)[4]

Prevention

- Viruses that cause colds and acute bronchitis are spread by hand contact and droplets. To avoid transmission to others, encourage frequent handwashing, avoiding touching the face, coughing and sneezing into a tissue or arm rather than hand, and wearing a face mask.

Followup

- Patients should be advised that the cough from acute bronchitis often lasts 3 weeks
- Patients should be instructed to recontact the clinic if they develop fever, shortness of breath, or chest pain; if the cough increases in extent or frequency; or if a significant cough persists beyond 3 weeks.

Provider Feedback Letter (example only)

[Name]

[Title]

[Address 1]

[City] [State] X,

Dear Dr. X,

I am writing to ask for your help in promoting appropriate antibiotic prescribing to protect patients from harms caused by unnecessary antibiotic use and combat antibiotic resistance, one of the most urgent threats to the public's health.

Antibiotics are powerful tools to fight life-threatening infections, like those that can lead to sepsis. However, anytime they are used, they can cause side effects and contribute to antibiotic resistance. Antibiotic-resistant infections can be more difficult to treat, pose a threat to patient safety, and lead to increased health care costs.[1]

To combat this growing threat and improve patient safety, [Health plan] is participating in a Centers for Disease Control and Prevention (CDC) initiative to improve antibiotic prescribing. As part of this effort, we are identifying and alerting prescribers who are writing too many unnecessary prescriptions for acute bronchitis according to prescribing data.

Your inappropriate antibiotic prescribing rate for acute bronchitis was X % in 20XX.
The top performers' rate was 0%.

You wrote X prescriptions out of X acute uncomplicated bronchitis cases that did not warrant antibiotics in 20XX.

This analysis was based upon the 2019 Healthcare Effectiveness Data and Information Set (HEDIS®) quality measure Avoidance of Antibiotic Treatment for Adults with Acute Bronchitis.[2] According to CDC, antibiotics will not treat acute bronchitis, and using antibiotics when they are not needed could do more harm than good.[3] To improve your performance on this measure, consider taking the following actions:

1. **Give patients advice on self-care**. You can use the enclosed CDC factsheet: "Preventing and Treating Bronchitis.[4]"
2. **Display a personalized commitment poster**[5] to show your commitment to using antibiotics appropriately with your patients.
3. **Implement CDC's *Core Elements of Outpatient Antibiotic Stewardship***[6], which provide a framework for improving antibiotic use.

CDC's national campaign, *Be Antibiotics Aware*, aims to raise awareness about antibiotic resistance and the importance of appropriate antibiotic prescribing and use among healthcare providers, patients, and their families. We encourage you to visit the *Be Antibiotics Aware* campaign website to find resources that you can use to educate your patients about appropriate antibiotic use: www.cdc.gov/antibiotic-use.

Antibiotic prescribing is a complex issue, but there are simple changes that we can all make that have the potential for big impact. We look forward to collaborating with you to improve patient safety and combat antibiotic resistance.

Sincerely,

[Name of Chief Medical Officer]

[Title]

[Company name]