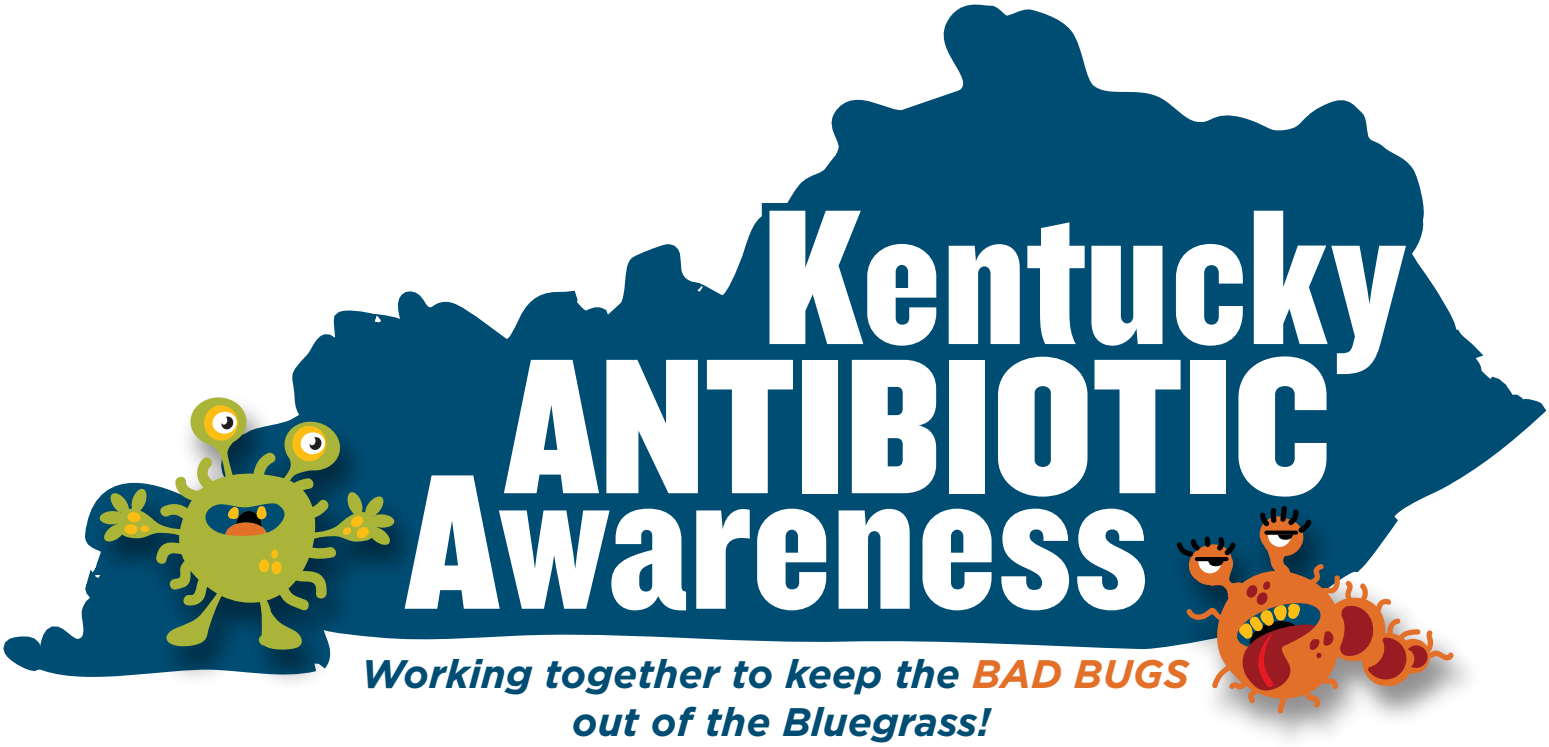
Kentucky Outpatient Antimicrobial Stewardship

Implementation Workbook



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Introduction

Thank you for joining the effort to encourage appropriate antibiotic use throughout Kentucky!

Antimicrobial resistance is a growing healthcare concern that requires immediate attention and action. The most important driving factor for antibiotic resistance is the inappropriate prescribing of antibiotics. Antimicrobial stewardship (AMS) consists of coordinated interventions designed to improve and measure the appropriate use of antimicrobial agents. Stewardship efforts can improve patient safety and slow the spread of antibiotic resistance. The majority of antibiotic use occurs in outpatient healthcare settings, making this an important area for targeting antimicrobial stewardship efforts.[1]

In 2016, the CDC published **The Core Elements of Outpatient Antibiotic Stewardship** https://www.cdc.gov/antibiotic-use/community/pdfs/16_268900-A_CoreElementsOutpatient_508.pdf as a guide for clinicians and facilities.[2] This workbook utilizes Kentucky resources and examples, while maintaining the CDC's Core Elements, listed below. We hope this workbook will assist you in establishing an effective antimicrobial stewardship program (ASP) in your practice.

Commitment
Demonstrate dedication to and accountability for optimizing antibiotic prescribing and patient safety.

Education and expertise
Provide resources to clinicians and patients and ensure access to needed expertise on optimizing antibiotic prescribing.

Action for policy and practice
Implement at least one policy or practice to improve antibiotic prescribing, assess whether it is working, and modify as needed.

Tracking and reporting
Monitor antibiotic prescribing practices and offer regular feedback to clinicians, or have clinicians assess on their own.

Kentucky Antibiotic Awareness Leadership

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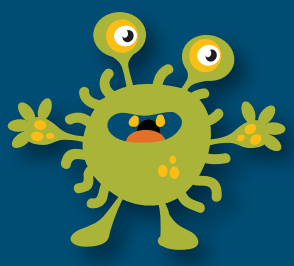
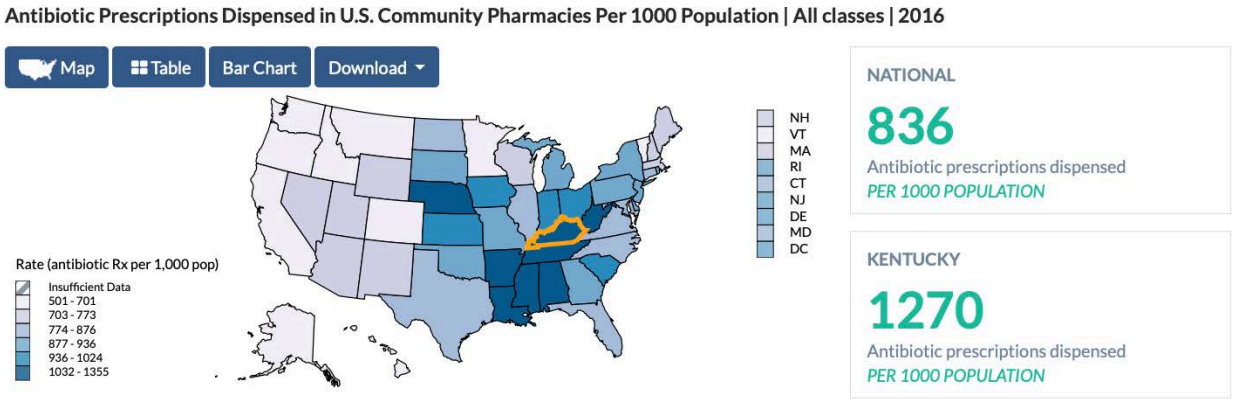
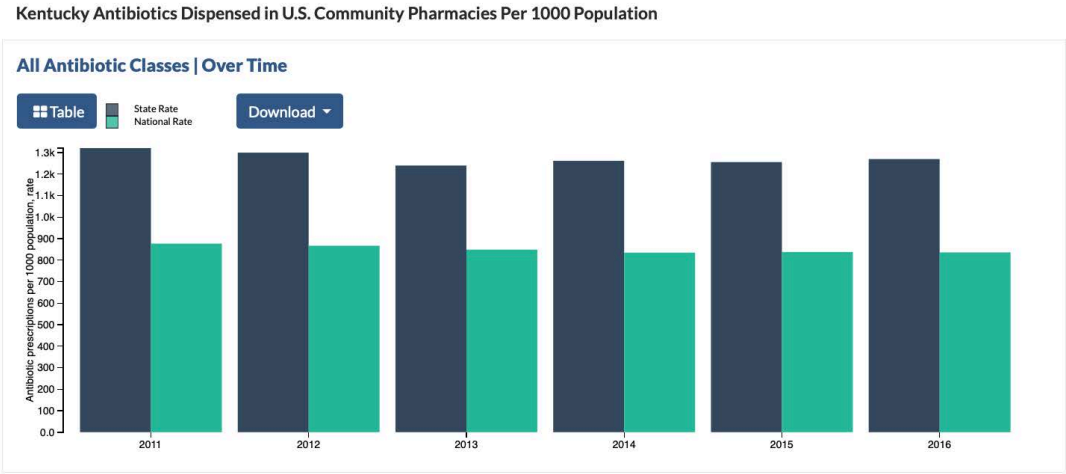


Kentucky Antibiotic Use

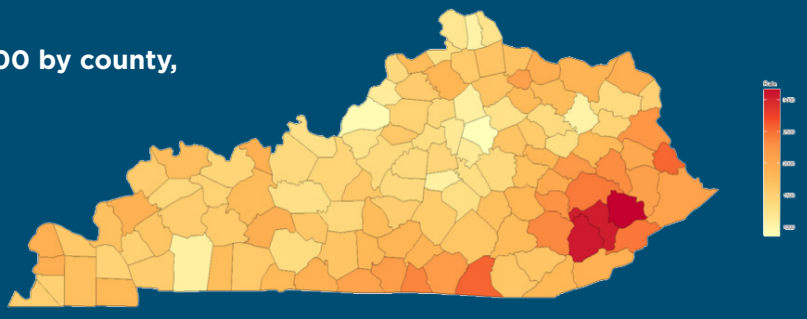
According to the Centers for Disease Control and Prevention (CDC), Kentucky has the second highest rate of outpatient antibiotic prescriptions in the United States. For all patient ages, Kentucky had a rate of 1256 antibiotics dispensed per 1000 population in 2015, compared to the national average of 838 antibiotic prescriptions per 1000 population. For more data on national and Kentucky prescribing, visit the **CDC's website** https://gis.cdc.gov/grasp/PSA/AUMapView.html.





The majority of antibiotic prescribing occurs in children.[1] Kentucky has the highest rate of outpatient pediatric antibiotic prescriptions in the US. Published analyses of pediatric Medicaid claims have demonstrated that the highest prescribing occurs in the south-eastern part of Kentucky, as shown on the map below. This prescribing rate of over 3000 prescriptions per 1000 children per year is over 3 times higher than the national average for children.

Rate of antibiotic prescriptions per 1000 by county, KY Medicaid children, 2016



Checklist

Print this easy-to-use checklist to follow along throughout the workbook.

Commitment (Required)

☐ Identify leadership: _____ (Prescriber Champion) _____ (Nurse Champion)

☐ Join the Listserv: http://eepurl.com/dGgOZL

☐ KY Office Commitment Posters

Education and Expertise (Required)

☐ Provider Education (Must be completed by Prescriber Champion)

CDC Stewardship Training: _____ (Date completed)

☐ Patient Education (Minimum of 2)

_____ (Chosen activity) _____ (Chosen activity)

Action for policy and practice (Optional)

☐ Implement at least 1 suggested intervention, or design your own

Description: _____

Tracking and Reporting (Optional)

☐ Baseline: _____

☐ Post-implementation: _____

☐ Plan for continued monitoring/improvement: _____

When all categories are complete, send to KYantibx@louisville.edu for a Certificate of Achievement!

Commitment

Identify Leadership

Prescriber Stewardship Champion: _____

Nurse Stewardship Champion: _____

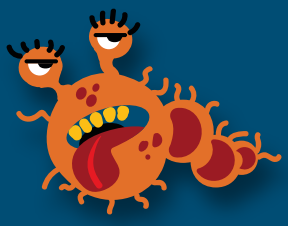
Leadership and responsibility is a vital piece of any successful ASP. Once leaders are established, they can be continuously encouraged by including stewardship-related duties in position descriptions or job evaluation criteria.

Listserv and Newsletter

To ensure you have the support you need, one or both Stewardship Champions should sign up to receive emails and newsletters from the Kentucky Antibiotic Awareness Listserv. Click here to subscribe: http://eepurl.com/dGgOZL

The listserv will provide updates and examples of successful stewardship interventions throughout the state. We look forward to working with you to further improve antibiotic use in Kentucky!

Join the Listserv! http://eepurl.com/dGgOZL



Commitment

Office Posters

KY Commitment Poster

Healthcare providers are encouraged to display their commitment to antimicrobial stewardship with placement of this poster throughout their practice site. Examination room posters, along with other patient and provider educational interventions, have been shown to reduce antibiotic use.[3, 4]

Click here to order free posters for your office!

***While supplies last**

https://louisville.edu/medicine/departments/pediatrics/divisions/child-adolescent-research-design/KYAbxAwareness/posters/

Education

Provider Education

Stewardship training available from national leaders can assist providers in implementing successful strategies throughout their practice.
Below are suggested stewardship training resources with CME/CNE available.

CDC Training on Antibiotic Stewardship
https://www.train.org/cdctrain/training_plan/3697

Section 1
- Module 1: Antibiotic Resistance Threats and Combating the Spread of Antibiotic Resistance
- Module 2: What is Antibiotic Stewardship and Why Do We Need It?
- Module 3: Antibiotic Adverse Events: It's about Patient Safety

Section 2
- Module 4A: Outpatient Antibiotic Use Across the United States: *Background & Errors in Antibiotic Use*
- Module 4B: Outpatient Antibiotic Use Across the United States: *Drivers of Inappropriate Antibiotic Use and Opportunities for Improvement*
- Module 5: Core Elements of Outpatient Antibiotic Stewardship: *Implementing Antibiotic Stewardship in Your Outpatient Practice*
- Module 6: Communication Training: *A Key to Improving Outpatient Antibiotic Prescribing and Use*

Section 3
- Module 7A: Antibiotic Stewardship Considerations for the Management of Urinary Tract and Skin and Soft Tissue Infections
- Module 7B: Antibiotic Stewardship Considerations for Bronchitis, Asthma and COPD Exacerbations, Viral Upper Respiratory Infection, and Acute Sinusitis
- Module 7C: Antibiotic Stewardship Considerations for the Management of Acute Otitis Media and Pharyngitis
- Module 7D: Antibiotic Stewardship Considerations in Dentistry

Section 4
- Module 8: Antibiotic Stewardship in Emergency Departments and Hospitals
- Module 9: Antibiotic Stewardship in Nursing Homes

This course fulfills Improvement Activities (IA) Patient Safety and Practice Assessment (PSPA)_23 and PSPA_24 under the Centers for Medicare & Medicaid Services (CMS) Merit-Based Incentive Programs, or MIPS.

For more CDC education on antibiotic stewardship:
https://www.cdc.gov/antibiotic-use/community/for-hcp/continuing-education.html

Education in Quality Improvement for Pediatric Practice **(EQIPP): Judicious Use of Antibiotics**
https://shop.aap.org/eqipp-judicious-use-of-antibiotics/
- Online course is free for American Academy of Pediatrics (AAP) members and qualifies for MOC Part 4 Credit

Education

Communication Training

Patient encounters can be difficult when patient expectations are at odds with what you feel is best for the patient. Studies have shown that certain communication strategies can avoid inappropriate antibiotic prescribing while maintaining patient satisfaction and decreasing visit length.[5,6,7] This information is also available in module 6 of **CDC's Antibiotic Stewardship Training Series.** https://www.train.org/cdctrain/training_plan/3697

Key Communication Practices:

- ☐ Review your Physical Exam findings
- ☐ Deliver a clear diagnosis
- ☐ Use a 2-part negative/positive treatment recommendation
    1. Negative treatment recommendations to 'rule out' the need for antibiotics: "This is a cold, which antibiotics won't work against"
    2. Positive treatment recommendations for symptom relief: "Raising the head of her bed will help with the drainage from her nose so she won't cough so much"
- ☐ Provide a contingency plan

Note: Patients/parents tend to question the treatment plan after a negative recommendation. Avoid this by using the following structure:

- "**On the one hand**, antibiotics won't help..." [negative recommendation]
- "**On the other hand**, there are things you can do..."[positive recommendation]

DIALOGUE AROUND RESPIRATORY ILLNESS TREATMENT
DART

Researchers from University of Washington and Seattle Children's developed **Dialogue Around Respiratory Illness Treatment (DART)** learning modules to better understand these important communication strategies. These training modules are also available with continuing education credit in Module 6 of the **CDC's Antibiotic Stewardship Training Series**. https://www.train.org/cdctrain/training_plan/3697

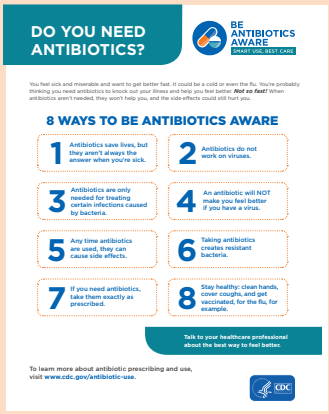
Education

Patient In-Office Education

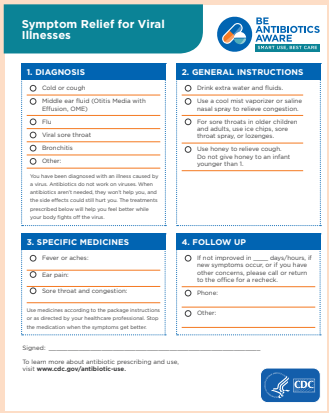
Provide patient handouts

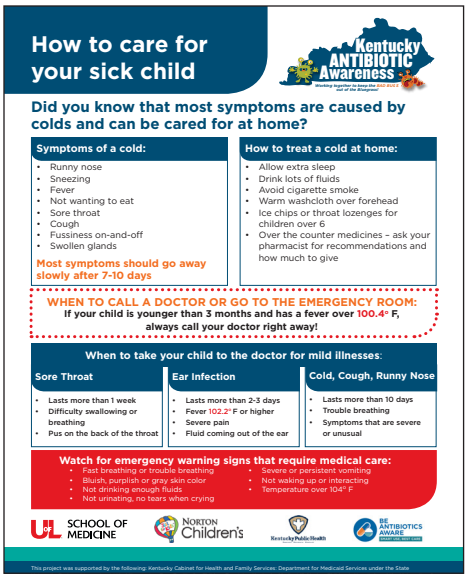
Antibiotics aren't always the answer
https://www.cdc.gov/antibiotic-use/community/pdfs/aaw/AU_trifold_8_5x11_508.pdf

Do you need Antibiotics
https://www.cdc.gov/antibiotic-use/community/pdfs/aaw/cdc-au-wait-room-poster-11x17-p.pdf



Symptom Relief for Viral Illnesses https://www.cdc.gov/antibiotic-use/community/pdfs/aaw/CDC-AU_RCx_Relief_for_Viral_Illness_sm_v8_508.pdf





Use our
Sick Child Handout
https://louisville.edu/medicine/departments/pediatrics/divisions/child-adolescent-research-design/KYAbxAwareness/kentucky-antibiotic-awareness-sick-child-handout
at well-child visits to discuss:

- When to take a child to the doctor
- How to help at home

Education

Show graphics and videos on TVs and computer monitors

Videos:

CDC The Right Tool
https://www.youtube.com/watch?v=dETK7Jc-XWA

CDC Snort, Sniffle, Sneeze: No Antibiotics Please
https://www.youtube.com/watch?v=e5qP891fy9E

WHO: Antibiotics – handle with care
https://www.youtube.com/watch?v=-ZX97bIbZBQ

Graphics:

The Right Tool
https://www.cdc.gov/antibiotic-use/community/pdfs/aaw/AU_Print_PSA_Right_Tool_11x17_11-10-17_FINAL-508.pdf

Viruses or Bacteria
https://www.cdc.gov/antibiotic-use/community/pdfs/Viruses-or-Bacteria-Factsheet-Eng.pdf

Kentucky Antibiotic Awareness
uofl.edu/ky-antibiotic-awareness

Education

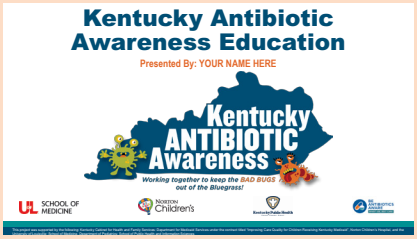
Community Education

Kentucky providers feel that the public will be more receptive to education that comes from members of their own community. Help educate your community about appropriate antibiotic use!

Social Media
Follow us and share our posts!
Facebook: @KYAbxAwareness
Twitter: @KYAbxAwareness

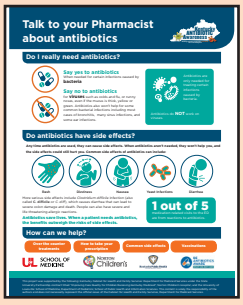
Children
Use our **KY Kids Activity Book** to educate the next generation uofl.edu/ky-antibiotic-awareness/kentucky-antibiotic-activity-pages

Community Events
Use our **KY Community Antibiotic Awareness slides** uofl.edu/ky-antibiotic-awareness to provide education at libraries, health fairs, social meetings, churches, and more!



Traditional Media
Seek opportunities to share your message on a local radio or news show or write an article or Letter to the Editor for your local newspaper.

Pharmacy
Encourage your local pharmacies to join the effort by hanging a **Pharmacy Commitment Poster** uofl.edu/ky-antibiotic-awareness/pharmacy-poster and including this handout with antibiotic prescriptions https://www.cdc.gov/antibiotic-use/community/pdfs/aaw/CDC-AU_RCx_Taking_Your_Antibiotics_sm_v8_508.pdf



Education

Children's Activities

KY Kids Antibiotic Awareness Activity Book
uofl.edu/ky-antibiotic-awareness/kentucky-antibiotic-activity-pages

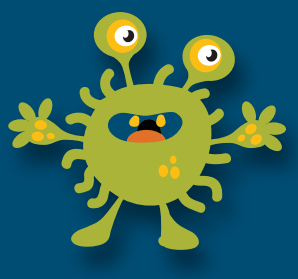
CDC Flu Season Activity Book
https://www.cdc.gov/flu/pdf/freeresources/family/ready_wrigley_flu.pdf

KY Antibiotic Awareness stickers
uofl.edu/ky-antibiotic-awareness

Kentucky ANTIBIOTIC Awareness
Working together to keep the BAD BUGS out of the Bluegrass!

CDC Be Antibiotics Aware stickers
https://www.cdc.gov/antibiotic-use/community/downloads/stickers-au-v2-FINAL.pdf

BE ANTIBIOTICS AWARE
SMART USE, BEST CARE



Education

Antibiotic Awareness Week: Nov. 18-24, 2019

U.S. Antibiotic Awareness Week https://www.cdc.gov/antibiotic-use/week/get-involved.html is an annual one-week observance to raise awareness of the threat of antibiotic resistance and the importance of appropriate antibiotic prescribing and use. Join CDC and partners as we celebrate the effort to combat the spread of antibiotic resistance and improve patient safety.

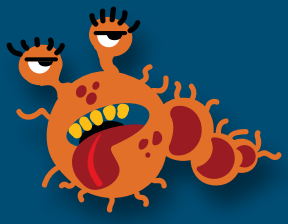
Ideas for participation:

- Schedule a community education event
- Host a children's coloring contest
- Hand out antibiotic awareness stickers
- Share social media messages

Keep in touch with Kentucky Antibiotic Awareness for information on Antibiotic Awareness Week in 2019

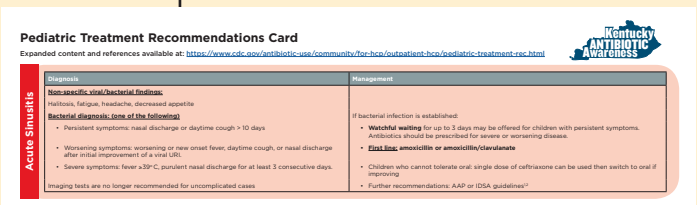
Facebook: @KYAbxAwareness
Twitter: @KYAbxAwareness

Join the Listserv! http://eepurl.com/dGgOZL



Action for policy and practice

Now that you're an expert on antimicrobial stewardship, it's time to take action! Consider implementing one of the following interventions to improve antibiotic prescribing in your practice or design your own.

Intervention	Details	Resources and Literature Support
Protocol Development	Use evidence-based diagnostic criteria and treatment recommendations 	**Clinical practice guidelines** **IDSA Guidelines** http://www.idsociety.org/PracticeGuidelines/ **Summary of treatment recommendations on CDC's website** https://www.cdc.gov/antibiotic-use/community/for-hcp/outpatient-hcp/index.html **Pediatric Treatment Recomendation Card** uofl.edu/ky-antibiotic-awareness
Provider Feedback	Monthly reports on the topic of your choice: • HEDIS Measures https://www.ncqa.org/hedis/measures/ Upper Respiratory Infection (URI) Children with Pharyngitis (CWP) • Use of 1st line antibiotics	**See Appendix (p22)** **Intervention Resources -** **Provider Feedback links 1-4**
Delayed Fill or Watchful Waiting	Ask patients to fill a prescription or return to your office only if symptoms persist or worsen. 	**Prescription Pad Handouts** **Delayed prescribing** https://www.cdc.gov/antibiotic-use/community/pdfs/aaw/CDC-AU_RCx_Delayed_Prescribing_sm_v9_508.pdf **Watchful waiting** https://www.cdc.gov/antibiotic-use/community/pdfs/aaw/Watchful-Waiting-Prescription-Pads_small-P.pdf **See Appendix (p22) Delayed Fill or Watchful Waiting Guidelines 1-5** **See Appendix (p22) Delayed Fill or Watchful Waiting Clinical Trials 1-6**

Action for policy and practice

Intervention	Details	Resources and Literature Support
Indications or Written Justification	Require written justification in the medical record or indications on all antibiotic prescriptions	**Effect of Behavioral Interventions on Inappropriate Antibiotic Prescribing Among Primary Care Practices** https://jamanetwork.com/journals/jama/fullarticle/2488307
Triage Visits	Use existing call centers or train office staff to reduce unnecessary visits for conditions that do not require a clinic visit, such as a common cold.	**Optimizing the use of telephone nursing advice for upper respiratory infection symptoms.** https://www.ncbi.nlm.nih.gov/pubmed/26014465
Clinical Decision Support	Providing specific information during the typical workflow can facilitate accurate diagnoses and effective management of common conditions (e.g. viral respiratory infections)	**See Appendix (p22)** **Clinical Decision Support links 1-3**
UTI Treatment	Follow-up with patients to discontinue or narrow antibiotic therapy based on urine culture results	**See Appendix (p22)** **UTI Treatment links 1-3**
Cefdinir Use	Cefdinir is over-prescribed in pediatrics given its lack of 1st line indications per national guidelines. This is concerning due to decreased efficacy against Strep pneumoniae and poor drug properties. Track the use of cefdinir in your practice to ensure appropriateness.	**Cephem Review paper** https://www.researchgate.net/publication/258254786_Cephem_Antibiotics_Wise_Use_Today_Preserves_Cure_for_Tomorrow **Susceptibility paper** https://academic.oup.com/jac/article/63/3/511/693929

For examples of ASP interventions used in Kentucky
See Appendix (p23)

Tracking and Reporting

Tracking and reporting is an important piece of any successful antimicrobial stewardship program. Consider monitoring at least one aspect of antibiotic prescribing to guide changes in practice and assess progress in improving antibiotic prescribing.

Below are recommendations from **The Core Elements of Outpatient Antibiotic Stewardship:** https://www.cdc.gov/antibiotic-use/community/pdfs/16_268900-A_CoreElementsOutpatient_508.pdf

1. Track and report...

- ☐ Antibiotic prescribing for one or more high-priority conditions
- ☐ The percentage of all visits leading to antibiotic prescriptions
- ☐ Complications of antibiotic use and antibiotic resistance trends among common outpatient bacterial pathogens

2. Assess and share performance on quality measures and established reduction goals addressing appropriate antibiotic prescribing from health care plans and payers

- ☐ Healthcare Effectiveness Data and Information Set (HEDIS) measures related to antibiotic use: http://www.ncqa.org/hedis-quality-measurement/what-is-hedis
  - o Appropriate Testing for Children with Pharyngitis (CWP)
  - o Appropriate Treatment for Children With Upper Respiratory Infection (URI)
  - o Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis (AAB)
- ☐ CMS Quality Payment Program (see the next page for more information)

Incentives

Your work towards implementing an ASP in your practice will also qualify you for provider incentives. Specific examples are listed below.

CMS Quality Payment Program:
https://qpp.cms.gov/

Quality Measures:
QPP 021: Perioperative Care: Selection of Prophylactic Antibiotic – First OR Second-Generation Cephalosporin
QPP 065: Appropriate Treatment for Children with Upper Respiratory Infection (URI)*
QPP 066: Appropriate Testing for Children with Pharyngitis*
QPP 093: Acute Otitis Externa (AOE): Systemic Antimicrobial Therapy – Avoidance of Inappropriate Use
QPP 116: Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis
QPP 331: Adult Sinusitis: Antibiotic Prescribed for Acute Viral Sinusitis (Overuse)
QPP 332: Adult Sinusitis: Appropriate Choice of Antibiotic: Amoxicillin with or Without Clavulanate Prescribed for Patients with Acute Bacterial Sinusitis (Appropriate Use)
QPP 407: Appropriate Treatment of Methicillin-Sensitive Staphylococcus Aureus (MSSA) Bacteremia
QPP 464: Otitis Media with Effusion (OME): Systemic Antimicrobials- Avoidance of Inappropriate Use

Improvement Activities:
I**A_PSPA_23** and **IA_PSPA_24:** Completion of CDC Training on Antibiotic Stewardship (High weight)
https://www.train.org/cdctrain/training_plan/3697
IA_PSPA_15: Implementation of an ASP (Medium weight)

Patient-Centered Medical Home (PCMH)
https://pcmh.ahrq.gov/page/defining-pcmh
Competency E, KM20: Incorporates evidence-based clinical decision support
Competency A, QI1: Measures current performance and opportunities for improvement
Competency C, QI15: Reports practice-level or individual clinician performance results

Medicaid EHR Incentive Program (Promoting Interoperability):
- Quality measures also compatible with this program are marked above with *
- **For more information:**
  - **CMS Promoting Interoperability**
    https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html?redirect=/EHRIncentivePrograms/
  - **Kentucky CHFS: Kentucky Medicaid EHR Incentive Program (PI)**
    https://chfs.ky.gov/agencies/dms/ehr/Pages/whatsnew.aspx
  - **Eligibility**
    https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Eligibility.html

For more information on these programs, contact the
KY Regional Extension Center
http://www.kentuckyrec.com/

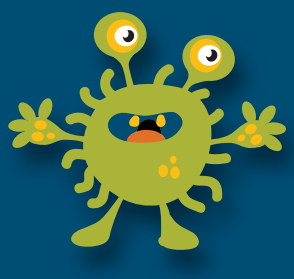
Congratulations!

You have successfully implemented an ASP

What's next?

- ☐ Send your completed **Checklist (p6)** to KYantibx@louisville.edu for a Certificate of Achievement. Display it proudly at your practice site!
- ☐ Tell your colleagues about this program and encourage participation
- ☐ Tell us your success stories (interventions, community events, etc.) – we hope to include them as examples for inspiration
- ☐ Contact us with feedback and ideas for resource development, events, assistance, etc.

☐ Most importantly... maintain your ASP with continued **Commitment**, **Education**, **Action** and **Tracking**!



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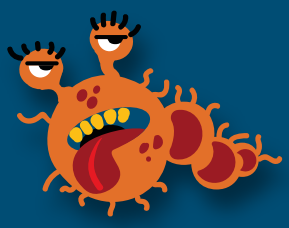
This content is solely the responsibility of the authors and does not necessarily represent the official views of the Cabinet for Health and Family Services, Department for Medicaid Services.



Appendix

Intervention Resources

Provider Feedback

1. Effect of an Outpatient Antimicrobial Stewardship Intervention on Broad-Spectrum Antibiotic Prescribing by Primary Care Pediatricians https://jamanetwork.com/journals/jama/fullarticle/1696098
2. Cluster-randomized trial to improve antibiotic use for adult with acute respiratory infections treated in emergency departments https://www.annemergmed.com/article/S0196-0644(07)00383-6/fulltext?code=ymem-site
3. Provision of social norm feedback to high prescribers of antibiotics in general practice: a pragmatic national randomized controlled trial https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00215-4/fulltext
4. Effect of behavioral interventions on inappropriate antibiotic prescribing among primary care practices https://jamanetwork.com/journals/jama/fullarticle/2488307

Delayed Fill or Watchful Waiting Guidelines

1. The diagnosis and management of acute otitis media http://pediatrics.aappublications.org/content/131/3/e964.long
2. Clinical practice guideline for the diagnosis and management of acute bacterial sinusistis in children aged 1 to 18 years. http://pediatrics.aappublications.org/content/132/1/e262.long
3. Clinical practice guideline (update):adult sinusitis executive summary. http://journals.sagepub.com/doi/pdf/10.1177/0194599815574247
4. CDC pediatric treatment recommendations https://www.cdc.gov/antibiotic-use/community/for-hcp/outpatient-hcp/pediatric-treatment-rec.html
5. CDC adult treatment recommendations https://www.cdc.gov/antibiotic-use/community/for-hcp/outpatient-hcp/adult-treatment-rec.html

Clinical Trials

1. Delayed antibiotic prescribing strategies for respiratory tract infections in primary care: pragmatic, factorial, randomised controlled trial https://www.bmj.com/content/348/bmj.g1606
2. Prescription strategies in acute uncomplicated respiratory infections https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2475025
3. Comparison of two approaches to observation therapy for acute otitis media in the emergency department http://pediatrics.aappublications.org/content/121/5/e1352?sso=1&sso_redirect_count=1&nfstatus=401&nftoken=00000000-0000-0000-0000-000000000000&nfstatusdescription=ERROR%3a+No+local+token
4. Nonsevere acute otitis media: a clinical trial comparing outcomes of watchful waiting versus immediate antibiotic treatment http://pediatrics.aappublications.org/content/115/6/1455
5. Treatment of otitis media with observation and a safety-net antibiotic prescription http://pediatrics.aappublications.org/content/112/3/527
6. Wait-and-see prescription for the treatment of acute otitis media https://jamanetwork.com/journals/jama/fullarticle/203330

Clinical Decision Support

1. Efficacy of an evidence-based clinical decision support in primary care practices https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1722509
2. Effects of clinical pathways for common outpatient infections on antibiotic prescribing https://www.amjmed.com/article/S0002-9343(13)00069-7/fulltext
3. A cluster randomized trial of decision support strategies for reducing antibiotic use in acute bronchitis https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1556795

UTI Treatment

1. Urine culture follow-up and antimicrobial stewardship in a pediatric urgent care network http://pediatrics.aappublications.org/content/early/2017/03/14/peds.2016-2103
2. Impact of a multidisciplinary culture follow-up program of antimicrobial therapy in the emergency department https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4108117/
3. Expanding antimicrobial stewardship to urgent care centers through a pharmacist-led culture follow-up program https://link.springer.com/article/10.1007/s40121-017-0168-8

Kentucky Outpatient ASP Intervention Examples

Reduction of Antibiotics for URI

Who: Norton Healthcare
Aim: To reduce inappropriate antibiotic prescribing for viral upper respiratory infections by 20% for patients greater than 3 months old
Methods:

- Reports were distributed to all primary care adult and pediatric and immediate care providers on a monthly basis, detailing the % visits where an antibiotic was given for patients with a URI (percent failure). The reports included data for individual providers, offices as a group and specialty as a group including adult primary care, pediatric primary care, and urgent care.
- Messaging regarding appropriate antibiotic use was added to waiting room monitors.
- Support staff were also provided with education about the initiative.

Results:

- In 9 months, the percent failure rate for adult primary care dropped from 47.9% to 41%
- Immediate care centers and pediatric practices remained relatively unchanged

Conclusions:

- Clinician peer pressure may be an effective means of encouraging behavior change
- Further provider education on communication techniques might be useful
- Building an epic report takes longer than you would think

Contact: Michele Fass, MD; michele.fass@nortonhealthcare.org

Effect of Patient and Provider Education on Antibiotic Overuse for Respiratory Tract Infections.

Who: Fulltime Healthcare Provider's for "walk-in" patients in large, busy rural PCP office in north-central Kentucky
Aim: to assess the effects of a combination patient and provider education program on antibiotic prescribing in RTIs in a rural primary care clinic
Methods: Utilizing a quasi-experimental pretest-posttest design, a retrospective electronic medical record review was conducted to determine if a patient and provider education program changed the rates of antibiotics being prescribed (immediate or delayed) during a visit for RTI for 207 randomly selected patients during the established evaluation time period.
Results: The antibiotic prescription rate for the preintervention group was 56.3% compared to 28.8% for the postintervention group (p, .01). Immediate antibiotics were ordered in the preintervention group 31.1% of the time compared to 13.5% for the postintervention group (p,.05).
Conclusions: The results of this study demonstrate that educational interventions can be effective in rural settings and that changes in antibiotic prescribing are possible.
Reference: Chiswell, E., Hampton, D., & Okoli, C. (2018). Effect of Patient and Provider Education on Antibiotic Overuse for Respiratory Tract Infections. *Journal for Healthcare Quality: Official Publication of the National Association for Healthcare Quality*, Journal for healthcare quality: official publication of the National Association for Healthcare Quality, 18 May 2018.
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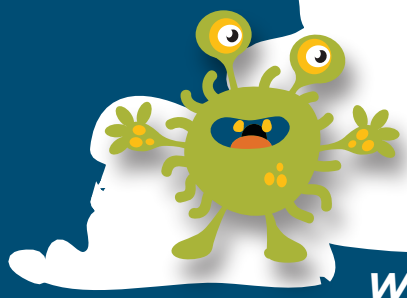
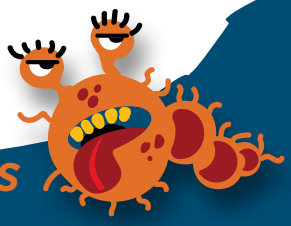
Kentucky ANTIBIOTIC Awareness





Working together to keep the BAD BUGS out of the Bluegrass!

UofL SCHOOL OF MEDICINE

Just for Kids — NORTON Children's

Kentucky Public Health

BE ANTIBIOTICS AWARE
SMART USE, BEST CARE

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