About 30% of antibiotic prescriptions that result from outpatient office visits in the US are unnecessary. The overuse of antibiotics is a major factor leading to antibiotic resistance. Antibiotic stewardship programs play a vital role in addressing the overuse of antibiotics in the outpatient setting. In 2016, the Centers for Disease Control and Prevention released the Core Elements of Outpatient Antibiotic Stewardship.

These core elements were the basis for the development of the Carolinas HealthCare Outpatient Antimicrobial Stewardship Empowerment Network (CHOSEN), which collaborates with more than 150 Atrium Health ambulatory care practice locations to improve antibiotic awareness across metropolitan, suburban and rural communities, touching approximately 1,060,000 patients.

Expanding Antimicrobial Stewardship into the Community: Development of Patient and Provider Education Resources to Improve Antibiotic Awareness

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**Background**

- About 30% of antibiotic prescriptions that result from outpatient office visits in the US are unnecessary.
- The overuse of antibiotics is a major factor leading to antibiotic resistance.
- Antibiotic stewardship programs play a vital role in addressing the overuse of antibiotics in the outpatient setting.
- In 2016, the Centers for Disease Control and Prevention released the Core Elements of Outpatient Antibiotic Stewardship.

**Purpose and Goals**

CHosen compliments the Atrium Health hospital-based Antimicrobial Support Network by enhancing and implementing evidence-based methods to reduce inappropriate antibiotic use.

- **Build Awareness** of appropriate use of antibiotics and antibiotic resistance through patient education.
- **Change Attitudes** by helping patients better understand how antibiotics work and fostering a culture of shared values around the use of antibiotics.
- **Enhance the Patient Experience** through education and providing solutions to problems.

The ultimate goal is to reduce overall antibiotic prescribing by 20% in outpatient settings over a 2-year period.

**Methods**

- From October through November 2017, baseline survey research was conducted with 190 patients and key informant interviews were conducted with 4 patients and 17 providers.
- In March 2017, a multi-disciplinary resource working group comprised of physicians, nurses, pharmacists, quality experts, marketing specialists, information services professionals and researchers was formed.
- The resource working group used key concepts identified from the research to inform the development of stewardship education tools and resources for patients and providers.
- In November 2017, the antibiotics campaign was launched to introduce education material, both internally and externally, for ambulatory care specialties Urgent Care, Internal Medicine, Family Medicine and Pediatrics.

**Results**

- **Improve Understanding**
  - Develop Patient Handout: “What You Need to Know: Antibiotics, Bacteria and Viruses”
  - 63% incorrectly believed that antibiotics work well for treating a virus such as the flu or common cold.
- **Reduce Perceived Barriers**
  - Develop symptom checklist and grading guides for providers to give during patient visits.
  - 61% want their providers to give an order for a medication to help their symptoms.
  - 78% want their provider to suggest an OTC to help their symptoms.
- **Identify Challenges**
  - Develop consistent treatment algorithms and case of provider scripting.
  - 60% believe that some providers are more willing than others to write an order for an antibiotic.
- **Improve Awareness**
  - Develop consumer webpages and videos: create commitment posters: Participate in media pitching.
  - 62% said they have heard a great deal/rather amount about antibiotic resistance.

**Conclusion**

Through multidisciplinary collaboration, our outpatient antimicrobial stewardship program, CHOSEN, reflected a better understanding of patient and provider attitudes and experiences that led to the development of specific resources and tools, along with a multifaceted campaign. The antibiotics campaign aimed to meet the identified educational and resource needs for antibiotic awareness in the communities of the metropolitan and surrounding areas.

**References**


**Contact Information**

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