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DRCHSD Quality Improvement Webinar Series

Antibiotic Stewardship

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May 12 – Patient-Centered Medical Home (PCMH) – The In's and Out's of Implementation

All webinars in the series are from 11:00 – 12:00 pm CST





Antibiotic Stewardship

A BRIEF REVIEW FROM CDC GUIDANCE

Objectives/Learning Outcomes

- ▶ Understand the CDC framework
- ▶ Establish new gap analysis tools to enhance your current program
- ▶ Identify trends and opportunities for outcome measures

Core Elements

Core Elements of Hospital Antibiotic Stewardship Programs



Hospital Leadership Commitment

Dedicate necessary human, financial, and information technology resources.



Accountability

Appoint a leader or co-leaders, such as a physician and pharmacist, responsible for program management and outcomes.



Pharmacy Expertise (previously “Drug Expertise”):

Appoint a pharmacist, ideally as the co-leader of the stewardship program, to help lead implementation efforts to improve antibiotic use.



Action

Implement interventions, such as prospective audit and feedback or preauthorization, to improve antibiotic use.



Tracking

Monitor antibiotic prescribing, impact of interventions, and other important outcomes, like *C. difficile* infections and resistance patterns.



Reporting

Regularly report information on antibiotic use and resistance to prescribers, pharmacists, nurses, and hospital leadership.



Education

Educate prescribers, pharmacists, nurses, and patients about adverse reactions from antibiotics, antibiotic resistance, and optimal prescribing.

Let's go into each one a little further.

Hospital Leadership Commitment

Priority

- ▶ Giving leaders time to manage the program and conduct daily stewardship interventions
- ▶ Provide resources, incl. staffing
- ▶ Schedule regular meetings to assess
- ▶ Appointing senior team member as 'champion'
- ▶ Report ongoing activity and outcomes

Other examples

- ▶ Integrate into QAPI
- ▶ Clear expectations
- ▶ Formal support
- ▶ Add to job description; support training and ongoing education
- ▶ Support participation in local, state and national collaboratives

Questions:

How much time is devoted to your Atbx Stwrdshp program?

What outcomes are you monitoring?

Your Stewardship Team

- ▶ Clinicians
- ▶ Department Managers
- ▶ Pharmacy & Therapeutics Committee
- ▶ Infection Control
- ▶ Quality
- ▶ Compliance
- ▶ Microbiology
- ▶ IT
- ▶ Nursing (non-managerial)

Leadership Assessment Questions

Assessment Questions	Yes	No
Does facility leadership provide stewardship program leader(s) dedicated time to manage the program and conduct daily stewardship interventions?		
Does facility leadership provide stewardship program leader(s) with resources (e.g, IT support, training) to effectively operate the program?		
Does your antibiotic stewardship program have a senior executive that serves as a point of contact or “champion” to help ensure the program has resources and support to accomplish its mission?		
Do stewardship program leader(s) have regularly scheduled meetings with facility leadership and/or the hospital board to report and discuss stewardship activities, resources and outcomes?		
Does your facility leadership ensure that staff from key support departments and groups have sufficient time to contribute to stewardship activities? (refer to Core Elements for key support staff)		
Does facility leadership ensure that antibiotic stewardship activities are integrated into other quality improvement and patient safety efforts, such as sepsis management and diagnostic stewardship?		
Does facility leadership support enrollment and reporting into the National Healthcare Safety Network (NHSN) Antimicrobial Use and Resistance (AUR) Module, including any necessary IT support?		

Accountability

- ▶ MUST appoint designated leader or co-leaders
- ▶ Must have provider designee to serve as contact and strengthen program (think hospitalist)
- ▶ Must be in some form of current leadership role
 - ▶ Management experience to direct and delegate
 - ▶ Communication skills to engage staff
- ▶ Perform Stewardship Rounds!!! Not a one-person job😊
- ▶ Provide training for leader(s)

Accountability Questions

Questions	Yes	No
Does your facility have a leader or co-leaders responsible for program management and outcomes of stewardship activities?		
If a non-physician is the leader of the program, does the facility have a designated physician who can serve as a point of contact and support for the non-physician leader?		

Q: Who performs rounding currently?

Q: Who is part of your stewardship team?

Pharmacy / Drug Expertise

- ▶ Pharmacist typically are the lead/co-leader with a provider
- ▶ Empowered to lead implementation efforts
- ▶ High value if educated in infectious diseases
- ▶ Assist in policy and procedure development
- ▶ Establish pharmacy-driven interventions

Pharmacy Expertise Questions

Questions	Yes	No
Does your facility have a pharmacist(s) responsible for leading implementation efforts to improve antibiotic use?		
Does your pharmacist(s) leading implementation efforts have specific training and/or experience in antibiotic stewardship?		

Q: Where does your pharmacist receive education?

Action: To Improve Antibiotic Use

- ▶ Priority: Strongly recommended and considered 'foundational'
 - ▶ Prospective audit and feedback
 - ▶ Preauthorization
 - ▶ Facility-specific treatment guidelines
- ▶ Common Infection-based Interventions
 - ▶ Community-acquired pneumonia
 - ▶ Urinary tract infections
 - ▶ Skin and soft tissue infections

Other Infection-based Interventions

- ▶ Sepsis
- ▶ Staph aureus (MRSA)
- ▶ C. difficile
- ▶ Culture-proven invasive infections (blood stream)
- ▶ Review of planned outpatient parenteral antibiotic therapy (OPAT)

Provider-based Interventions

- ▶ Antibiotic “timeouts”
 - ▶ Typically provider-led reassessment
 - ▶ Review of culture results and any rapid diagnostics
 - ▶ No optimal timing established
 - ▶ Focus on four key questions
 - ▶ Does this patient have an infection that will respond to antibiotics?
 - ▶ Have proper cultures and diagnostic tests been performed?
 - ▶ Can antibiotics be stopped or improved by narrowing the spectrum (also referred to as “de-escalation”) or changing from intravenous to oral?
 - ▶ How long should the patient receive the antibiotic(s), considering both the hospital stay and any post-discharge therapy?
- ▶ Assessing penicillin allergy

Pharmacy-led Interventions

- ▶ Documentation of indications for antibiotics
- ▶ Automatic changes from IV to oral therapy
- ▶ Dose adjustments
- ▶ Dose optimization
- ▶ Duplicative therapy alerts
- ▶ Time-sensitive automatic stop orders
- ▶ Detection and prevention of antibiotic-related drug-drug interactions

Microbiology-based Interventions

- ▶ Selective reporting of antimicrobial susceptibility testing results
- ▶ Comments in microbiology reports

Q: How are you using microbiology in your antibiotic stewardship program?

Nursing-based Interventions

- ▶ Optimizing microbiology cultures
- ▶ Intravenous to oral transitions
- ▶ Prompting antibiotic reviews (timeouts)

Q: How are nurses empowered for prompting timeouts?

Tracking

- ▶ Monitoring antibiotic prescribing
 - ▶ Policy and guidelines being followed?
 - ▶ Have interventions improved antibiotic use and patient outcomes?
- ▶ Antibiotic use measures
 - ▶ NHSN AU Option
 - ▶ Standardized Antimicrobial Administration Ratio (SAAR) risk-adjusted benchmark
- ▶ Outcome measures
- ▶ Process measures for quality improvement

Tracking Assessment Questions

Questions	Yes	No
Does your antibiotic stewardship program track antibiotic use by submitting to the National Healthcare Safety Network (NHSN) Antimicrobial Use (AU) Option?		
Does your antibiotic stewardship program monitor prospective audit and feedback interventions by tracking the types of interventions and acceptance of recommendations?		
Does your antibiotic stewardship program monitor preauthorization interventions by tracking which agents are being requested for which conditions?		
Does your stewardship program monitor adherence to facility-specific treatment recommendations?		
Does your stewardship program monitor adherence to a documentation policy (dose, duration and indication)?		
Does your antibiotic stewardship program monitor the performance of antibiotic timeouts to see how often these are being done and if opportunities to improve use are being acted on during timeouts?		
Does your antibiotic stewardship program routinely perform medication use evaluations to assess courses of therapy for select antibiotics and/or infections to identify opportunities to improve use?		
Does your antibiotic stewardship program assess how often patients are discharged on the correct antibiotics for the recommended duration?		
Does your antibiotic stewardship program track antibiotic resistance by submitting to the NHSN Antimicrobial Resistance (AR) Option?		
Does your antibiotic stewardship program track CDI in context of antibiotic use?		
Does your facility produce an antibiogram (cumulative antibiotic susceptibility report)?		

Reporting

- ▶ Regular updates to providers, pharmacists, nurses and leadership
- ▶ Antibiotic resistance information should be included
- ▶ Any local or state health dept. infection control/resistance threats
- ▶ Medication use evaluations
- ▶ Key issues from prospective audit and feedback reviews
- ▶ Facility-specific information to motivate or improve prescribing
- ▶ Any provider peer-to-peer comparisons that have been effective?

Reporting Assessment Questions

Question	Yes	No
Does your antibiotic stewardship program share facility and/or individual prescriber-specific reports on antibiotic use with prescribers?		
Does your antibiotic stewardship program report adherence to treatment recommendations to prescribers (e.g., results from medication use evaluations, etc)?		
Has your facility distributed a current antibiogram to prescribers?		

Education

- ▶ Educate with reporting
- ▶ Formal and informal educating settings
- ▶ Screen savers, posters, newsletters, etc.
- ▶ Patient and community education
- ▶ Case-based education (grand rounds)
- ▶ Local, state and national training sessions

Education Assessment Questions

Questions	Yes	No
Does your stewardship program provide education to prescribers and other relevant staff on optimal prescribing, adverse reactions from antibiotics, and antibiotic resistance?		
Does your stewardship program provide education to prescribers as part of the prospective audit and feedback process (sometimes called “handshake stewardship”)?		

Final Thoughts/Questions

- ▶ What is your greatest challenge with antibiotic stewardship management?
- ▶ What is your greatest success/implementation achieved?