

Polk Medical Center Antimicrobial Stewardship Team: Implementing the Core Elements

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Background of PMC:

- 25-bed critical access hospital located in Cedartown, Ga.
- Includes:
 - 13-bed emergency department
 - Includes 2 trauma rooms
 - Imaging services
 - Full functioning laboratory
 - Complete surgery wing
 - Includes 2 operating rooms
 - Helipad for emergency transport
- Accredited by The Joint Commission (TJC), and supported by Floyd Healthcare Management Inc.

CDC Core Element 1: Leadership Commitment

- Leadership commitment: Dedicating necessary human, financial, and information technology resources.
 - *Facility Leadership should provide a visible, written statement of support for the Antibiotic Stewardship Program (ASP), such as a policy. (Include all core elements.)*
 - Polk Medical Center Antimicrobial Stewardship Policy.
 - *Facility Leadership should provide support (financial and time) for training and education on AS, ensure adequate staffing.*
 - Difficult task, especially for a smaller facility.
 - Added a part-time pharmacist position **prior** to TJC new medication management standard, this allows for some overlap/time for items such as AS work, still not a specific/set time commitment for pharmacist lead.
 - Physician lead – allotted 2 hours per month for antimicrobial stewardship.
 - Can not exceed 2 hours per month.
 - Is reimbursed for any time spent (not exceeding 2 hours) working on AS.
 - *Designate or appoint a hospital executive to serve as a “champion” of the ASP.*
 - CNO listed on Antimicrobial Stewardship policy as team member.

CDC Core Element 1: Leadership Commitment

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- *Include ASP outcome measures and “works in progress” to quarterly P&T committee.*
- *Include antibiotic stewardship in ongoing provider education programs and annual competencies.*
 - The Antibiotic Stewardship Team (AST) will develop and provide education to physicians and staff at hire and periodically. Require staff to complete yearly educational course specific to antimicrobial stewardship on HealthStream.
 - New page being created on employee/company website under medication resources, titled **Antimicrobial Stewardship** as a quick reference for prescribers.
 - Will list mission statement of the ASP, progress made, future projects, ASP policies, links to educational resources, chart of antibiotic recommendations for uncomplicated cystitis (new), and the most recently published antibiograms (systemic and urine).

CDC Core Element 2: Accountability

- Accountability: Appointing a leader or co-leaders responsible for program outcomes.
 - Listed in Antimicrobial Stewardship Policy
 - Physician leader, Pharmacy team leader
 - Challenges:
 - Lack of training specific to AS.
 - » *Ensure the ASP leader has specific training in antibiotic stewardship (certification or training course).*
 - Complete Stanford Medicine Online Continuing Medical Education Course. Antimicrobial Stewardship: Optimization of Antibiotic Practices.
 - 6 hour course
 - » Work with FMC AS team, IT, and microbiology lab when needed.
 - Pharmacist lead attends FMC AS team meetings to gain valuable insight and work together when needed.
 - *Ensure the ASP leader actively engages other groups in stewardship efforts.*
 - Teamed up with the lead physician over ER prescribers to implement our uncomplicated cystitis treatment recommendations and decrease in FQ use, along with decrease in antibiotic use for uncomplicated bronchitis, etc.

CDC Core Elements 1 and 2: Leadership Commitment and Accountability

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Polk Medical Center Antimicrobial Stewardship policy

- First officially developed and published August 2016.
- Reviewed annually by CNO, Director of Pharmacy, Antimicrobial Stewardship Team, Clinical Council, Pharmacy and Therapeutics Committee, and Executive Committee of Medical Staff.
- **Purpose:**
 - To define antimicrobial stewardship, list the team members involved, and detail the strategies that will be used as needed to make the program successful.
 - To comply with evidence-based guidelines or best practices regarding antimicrobial prescribing and promote rational and appropriate antimicrobial therapy while improving clinical outcomes while minimizing unintentional side effects of antimicrobial use, including toxicity and emergence of resistant organisms.

CDC Core Elements 1 and 2: Leadership Commitment and Accountability (cont.)

- Policy lists:
 - Reference standards: MM.09.01.01
 - Definition of antimicrobial stewardship
 - Leadership commitment
 - Team Membership
 - Functions as a subcommittee of the P&T Committee
 - Composed of: Physician Leader, Pharmacy Team Leader/Clinical Pharmacist, Infection Prevention RN, Microbiology Lab Representative/Director, ED/Inpatient Nurse Representatives/Directors, Senior Administrative Representative.
 - Minimum requirements for number of times team must meet per year. (For PMC, no less than quarterly.)
 - Accountability: Lists the appointed physician as the physician team leader who will guide the team's progress, and the appointed clinical pharmacist who will serve as the pharmacist team leader.

CDC Core Elements 1 and 2: Leadership Commitment and Accountability (cont.)

- Policy lists:
 - Team Program Strategies and how the team will implement said strategies.
 - Examples of Strategies:
 - De-escalation of therapy (De-escalation of Broad-Spectrum Antibiotics Policy)
 - Parenteral to oral antimicrobial conversion - currently working on publishing an IV to PO policy.
 - Develop and publish antibiogram (every 6 months, available to physicians and hospital staff).
 - » Now includes a urine specific antibiogram in addition to the systemic isolate antibiogram.
 - Newly approved addition/statement: Prescribers of antibiotics must document an indication for all antibiotics in the medical record or during order entry.

CDC Core Elements 1 and 2: Leadership Commitment and Accountability (cont.)

- *Seek off-site support for antibiotic stewardship efforts.*
 - Work with Floyd Medical Center Clinical Coordinator, Gary Latta (pharmacist lead for the Floyd Antimicrobial Stewardship Team).
 - Attend FMC Antimicrobial Stewardship Team Meetings.
 - Utilize available resources from Floyd Medical Center:
 - FMC IT – help to build reports for tracking purposes.
 - Using Power Insights in Cerner
 - FMC Microbiology Supervisor – Able to “sweet-talk” the Microbiology Supervisor at FMC to join PMC Antimicrobial Stewardship Team (antibiogram creator for both facilities).
 - FMC IT pharmacist – Work with the IT pharmacist at FMC, Troy Hopper, in implementing changes in Cerner when needed (and possible).
 - Currently Troy is working on adding a step in prescriber order entry of antibiotics that will require the prescriber to choose an indication when entering any antibiotic.

CDC Core Element 3: Drug Expertise

- *Appoint a single pharmacist leader responsible for working to improve antibiotic use.*
 - Full time, on-site.
- What does this entail?
 - Orchestrates team meetings (dates, WebEx invites), prepares PowerPoint presentations for each meeting detailing progress made and pertinent information, obtains and works through data/metrics (including patient charts, prescribing trends), super user for Theradoc (clinical tool often used to support needs for antimicrobial stewardship), works with Floyd Medical Center's antimicrobial stewardship team pharmacist leader, attends Floyd AS meetings.
- *Offer access to training courses on antibiotic stewardship to help develop expertise.*
 - Completed Stanford Medicine Online Continuing Medical Education Course. Antimicrobial Stewardship: Optimization of Antibiotic Practices.
 - 6 hour course
 - All of our pharmacists and our lead physician completed this course. *(Pharmacy leader engages and trains other pharmacy staff in antibiotic use so that there is a broad pharmacy stewardship workforce.)*

CDC Core Element 3: Drug Expertise

- *Seek additional expertise by joining multi-hospital improvement collaboratives.*
 - Recently worked with FMC team to produce local urine antibiograms specific to ER/outpatients at both PMC and FMC, and then using this, along with current guidelines created the **Antibiotic Recommendations for Uncomplicated Cystitis** chart.
 - Once completed, approved by the Infectious Disease Specialist Physician at FMC (also on the FMC antimicrobial stewardship team), and then approved by Med Exec, and P&T Committees at both facilities.
 - Chart aids prescribers in choosing appropriate antibiotics for uncomplicated cystitis patients, while decreasing FQ use, and helping to ensure appropriate duration of therapy.

CDC Core Element 4: Action

- *Implementing recommended actions.*
 - PMC policies that identify and implement specific interventions to improve antibiotic use:
 - Start time for Medications, lists expected turnaround times for medications with STAT, NOW, and ROUTINE order types.
 - Automatic Stop Order, antibiotics ordered without set stop dates/times, are automatically triggered for renewal or discontinuation at 72 hours.
 - De-Escalation of Broad-Spectrum Antibiotics, focus of de-escalation based on availability of microbiology results around day 3 of therapy. Empiric antibiotics may be stopped or reduced in number and/or narrowed in spectrum.
 - Antimicrobial Stewardship, addition to this policy requiring prescribers of antibiotics to document an indication for all antibiotics.
 - IV to PO, currently “in-work” to be approved, currently being done by pharmacists on a daily basis with clinical reports, but policy will define this process.

CDC Core Element 4: Action

- *Implementing recommended actions.*
 - PMC policies (cont'd.):
 - Ordering and Monitoring of Aminoglycosides/Vancomycin, two separate policies for adults and peds, that allow the pharmacist to dose and monitor all patients prescribed an AG or Vanc.
 - AST has tracked/monitored:
 - ER patients diagnosed with acute uncomplicated bronchitis, nasopharyngitis, influenza, who are discharged on antibiotic prescriptions.
 - Are prescribers appropriately or inappropriately prescribing antibiotics in these cases?
 - Team identified a trend in prescribing practices.
 - Team placed CDC posters in patient rooms explaining when ABs are necessary, placed CDC flyers in ER waiting area, placed guidelines for when ABs are appropriate for specific indications in prescriber order-entry stations, posted charts showing past prescriber AB prescribing trends (blinded) in prescriber order-entry stations.

CDC Core Element 4: Action

- *Implementing recommended actions.*
 - Monitor blood culture contamination on a monthly basis.
 - IP tracks any trends or increases, and follows up with responsible parties.
 - Are nurses obtaining cultures that lab personnel should be obtaining?
 - If trend is spotted, or reoccurring “offender”, IP addresses.
 - Pharmacists counsel inpatients prescribed antibiotics using the CDC: “You’ve Been Prescribed an Antibiotic, Now What?” handout.
 - This specifically addresses possible adverse events associated with antibiotics such as C. difficile infections.
 - Patient counseling specific to antibiotics tracked via interventions entered in Theradoc by pharmacists.

CDC Core Element 4: Action

- *Implementing recommended actions.*
 - Urinary tract infections:
 - For inpatient improvements: nursing required to complete a Healthstream course on the diagnosis and treatment of UTIs.
 - Nursing was asked to complete a pre-test.
 - Course was created focusing on trends/areas where improvement was needed/found on pre-test, then nursing staff completed course and asked to complete a post test requiring scores of > 90%.
 - For ER outpatients: monitored patients diagnosed with UTIs and antibiotics prescribed upon discharge.
 - Team specifically focused on uncomplicated UTIs and FQ use.
 - At start of focus, February 2017: 65% of patients seen in PMC ER diagnosed with a UTI were prescribed a FQ.
 - As of November 2017: only 17% of patients seen in PMC ER diagnosed with a UTI were prescribed a FQ.

CDC Core Element 4: Action

- *Implementing recommended actions.*
 - What team did to accomplish decrease in FQ prescribing for discharged ER patients with UTIs:
 - Using a report in Explorer (in Cerner), ran all codes for specific time frames related to UTIs in PMC ER. Identified code used majority of time, N39.0, UTI site not specified.
 - Ran reports monthly using Power Insights (in Cerner) that could show all patients coded in ER with N39.0, and all patients coded with N39.0 who then received a discharge prescription.
 - Using Excel, filtered out any discharge prescriptions that were not antibiotics.
 - Reviewed chart of every patient, with code N39.0, that received a FQ at discharge.
 - Identified prescribers who chose FQs.
 - AST lead physician and pharmacist reached out to head of ER department/lead ER physician (also on Executive Committee of the Medical Staff).

CDC Core Element 4: Action

- *Implementing recommended actions.*
 - What team did to accomplish decrease in FQ prescribing for discharged ER patients with UTIs:
 - Lead ER physician requested an email to be compiled with data regarding FQ prescribing in PMC ER in reference to UTIs and why the AST was focusing on this (importance of not using FQs unless needed due to collateral damage, and increase in resistance patterns, etc.). Email also included why the AST was created and the new JC standards being implemented beginning in January of 2017.
 - Shared information, success with decreasing FQ use with FMC. (Ran reports for FMC to show same trends initially seen at PMC.)
 - Lead pharmacists from both FMC and PMC worked with FMC Microbiology Supervisor to create a urine specific antibiogram for PMC ER, FMC ER and outpatient FMC urgent care facilities. Using these urine specific antibiograms, along with current IDSA guidelines, an antibiotic recommendation chart for uncomplicated cystitis was created for outpatient prescribers to be posted not only in ERs, but also Floyd outpatient urgent care facilities.

CDC Core Element 5: Tracking

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- *Monitoring the antimicrobial stewardship program, which may include information on antibiotic prescribing and resistance patterns.*
 - Via Theradoc, able to track: de-escalation of broad-spectrum antibiotics, poly-antibacterial de-escalation (pts who have received two or more antibiotics for at least 72 hours), IV to PO conversion of antibiotics, patient counseling specific to antibiotics, any renal adjustments of antibiotics, patients who are on an antifungal or antibiotics with no cultures.
 - Can view how many times changes are made from the alert firing in Theradoc, or when a pharmacist enters a clinical intervention in Theradoc.
 - PMC Antibiogram, shows patterns of resistance.
 - Published every 6 months.
 - Systemic antibiogram and urine specific antibiogram.
 - Will be submitting antibiotic use and resistance through CDC NHSN module via Theradoc once upgrade is complete.
 - IT currently working on this upgrade with Theradoc.

CDC Core Element 5: Tracking

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- Monitoring adherence to specific treatment recommendations.
 - Manual tracking done via Cerner using Power Insights and Explorer to follow:
 - Discharge antibiotics prescribed for uncomplicated UTIs in ER.
 - » Recently, also monitoring duration of therapy in these patients (to compare pre and post-chart durations).
 - Discharge antibiotics prescribed for uncomplicated bronchitis in ER.
 - » Influenza patients
 - » Nasopharyngitis patients
 - If needed, can identify prescribers who are not following recommendations.
 - Manual tracking is time consuming, but allows for investigation into charts.

CDC Core Element 6: Reporting FLOYD Polk Medical Center

- *Regularly reporting information on the antimicrobial stewardship program, which may include information on antibiotic use and resistance, to doctors, nurses, and relevant staff.*
 - Reported in quarterly pharmacy and therapeutics (P&T) committee meetings.
 - New policies implemented, or changes in policies related to antimicrobial stewardship needs due to issues in prescribing or in relation to antibiotic use and resistance, are presented, reviewed and approved by P&T, Executive Committee of Medical Staff, Clinical Council, and the Antimicrobial Stewardship Team.
 - Reports on measures being tracked are prepared and presented with each AST meeting.
 - Charts showing prescribing trends posted in prescriber order entry stations when necessary to facilitate changes.

CDC Core Element 6: Reporting *FLOYD* Polk Medical Center

- Emails to prescribers, nurses, and pharmacists regarding important trends or issues identified are also used to report and explain work done by the AST.
- Prescribers and ancillary staff have access to PMC antibiograms online and soon will have access to an Antimicrobial Stewardship page that includes resources to aid staff in optimizing the use of antimicrobial agents in our patients.
- Reporting of AST progress and goals often included in required Healthstream courses specific to Antimicrobial Stewardship Education for staff.

CDC Core Element 7: Education FLOYD Polk Medical Center

- *Educating practitioners, staff, and patients on the antimicrobial program, which may include information about resistance and optimal prescribing.*
 - The AST will develop and provide education to physicians and staff at hire and periodically (listed in PMC Antimicrobial Stewardship policy).
 - Ancillary staff to complete yearly educational courses specific to antimicrobial stewardship on HealthStream.
 - New page being created on company website under medication resources, titled **Antimicrobial Stewardship** as a quick reference for prescribers.
 - Will list mission statement of the ASP, progress made/recent accomplishments, goals, ASP policies, [links to CDC educational resources](#), chart of antibiotic recommendations for uncomplicated cystitis (new), and the most recently published antibiograms (systemic and urine).

CDC Core Element 7: Education *FLOYD* Polk Medical Center

- Working with FMC and the Quality Department to add a supplemental section on antimicrobial stewardship for physician/prescriber education.
 - Focusing on “drugs/bugs” and general antimicrobial stewardship knowledge.
 - This supplemental section/page will be presented to physicians at hire and periodically when completing other required educational updates.
 - Will include a link to the medication resources/antimicrobial stewardship page (discussed on previous slide), found on the company website.
- Team watches for and informs department leaders of CE opportunities pertaining to antimicrobial stewardship.
 - CDC and the American Nurses Association offered free webinar on December 5: “Nurses’ engagement in antibiotic stewardship is critical to patient safety.”
 - This particular CE was cancelled 😞; however, encouraged by the number of nurses who were interested in completing.

CDC Core Element 7: Education *FLOYD* Polk Medical Center

- All PMC pharmacists, as well as the AS lead physician completed Stanford Medicine Online Continuing Medical Education Course. Antimicrobial Stewardship: Optimization of Antibiotic Practices.
- Education of patients:
 - CDC posters related to AS, posted in patient ER rooms.
 - Chart: “Viruses or Bacteria – What’s Got You Sick?”
 - Chart: “Do you need antibiotics?”
 - Placement of CDC brochure “Antibiotics Aren’t Always the Answer” in ER waiting room.
 - For inpatients, patient counseling by the pharmacist.
 - Use of CDC handout: “You’ve Been Prescribed an Antibiotic, Now What?”

Question 1:

- Which of the following is an intervention implemented at Polk Medical Center to improve antibiotic use?
 - a) Automatic stop orders
 - b) De-escalation of broad spectrum antibiotics
 - c) Start time for medications
 - d) All of the above

Question 2:

- Which of the following metrics are being tracked to assess antibiotic use at Polk Medical Center?
 - a) Days of antimicrobial therapy for antibiotics prescribed for uncomplicated urinary tract infections in the emergency room
 - b) Days of antimicrobial therapy for antibiotics prescribed in the emergency room
 - c) Days of antimicrobial therapy for all antibiotics prescribed for uncomplicated bronchitis in the emergency room
 - d) All of the above

Questions?