Antimicrobial Stewardship and the “New Regulations”

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Outline:

• Introduction to new CMS regulations
• Rationale for these regulations
• Epidemiologic data on MDROs
• Data supporting AS
• Specifics of the regulations
• How to implement a program in case studies

Definitions:

• CMS: The Centers for Medicare & Medicaid Services, CMS, is part of the Department of Health and Human Services (HHS). They administer programs: Medicare, Medicaid, the Children's Health Insurance Program (CHIP), and the Health Insurance Marketplace.
• JC: An independent, not-for-profit organization, The Joint Commission accredits and certifies more than 21,000 health care organizations and programs in the United States.
• ASP/AST/AS: Antimicrobial stewardship refers to coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration. Antimicrobial stewards seek to achieve optimal clinical outcomes related to antimicrobial use, minimize toxicity and other adverse events, reduce the costs of health care for infections, and limit the selection for antimicrobial resistant strains.
Let's start at the beginning

• In September 2014, President Obama issued an executive order instructing the Department of Health and Human Services, which oversees CMS, to propose a requirement for “robust” Antimicrobial Stewardship Programs by the end of calendar year 2016.

  http://www.ashp.org/menu/News/PharmacyNews/NewsArticle.aspx?id=4352Stash.0nPsq09.dpuf

Start at the beginning

• The National Action Plan for Combating Antibiotic-Resistant Bacteria, which was developed by the interagency Task Force for Combating Antibiotic-Resistant Bacteria in response to Executive Order 13676: “Combating Antibiotic-Resistant Bacteria,” (79 FR 56931, Sept. 23, 2014), outlines steps for implementing the National Strategy on Combating Antibiotic-Resistant Bacteria and addressing the policy recommendations of the President’s Council of Advisors on Science and Technology report on Combating Antibiotic Resistance.

• The Action Plan includes activities to foster improvements in the appropriate use of antibiotics (that is, antibiotic stewardship) by improving prescribing practices across all healthcare settings, particularly establishment of antimicrobial stewardship programs in all acute care hospitals by 2020.

• In June 2016 CMS released that all hospitals and critical access hospitals have ASP by Jan 1
Requirements
• A designated leader responsible for development and implementation of the hospitalwide ASP, based on nationally recognized guidelines, to monitor and improve the use of antimicrobials,
• Documentation of the program’s activities
• Communication and collaboration on antimicrobial-use issues
• Competency-based training and education on the practical applications of antimicrobial stewardship guidelines, policies, and procedures
• Further, the program must show coordination among all the hospital’s staffs, services, and programs responsible for antimicrobial use and resistance

Requirements
• Document the evidence-based use of antimicrobials throughout the hospital
• Demonstrate improvements in proper antimicrobial use by all departments and services of the hospital
• Adhere to nationally recognized guidelines and best practices for improving antimicrobial use
• Reflect the scope and complexity of the hospital’s services.

Requirements
• To establish and maintain an ASP with these attributes, CMS estimated, an "average-size" hospital of about 124 beds would need the services of 0.25 pharmacist full-time equivalent (FTE), 0.1 physician FTE, and 0.05 network data analyst FTE.—
• A nice reference is http://www.ashp.org/menu/News/PharmacyNews/NewsArticle.aspx?id=4352#sthash.0nPssqN9.CP2ehjvj.dpuf
Other Resources

- Antimicrobial Stewardship Resources section of ASHP’s website, for guidance on best practices for implementing ASPs.
- A recent addition to the resource center is the guidance document *Antibiotic Stewardship in Acute Care: A Practical Playbook*. The Playbook is a product of the National Quality Forum’s National Quality Partners Antibiotic Stewardship Action Team, on which Pasko served. See more at: http://www.ashp.org/menu/News/PharmacyNews/NewsArticle.aspx?id=4352#sthash.0nPssqN9.CPZehjvL.dpuf

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- We proposed that the facility’s IPCP must also include an antibiotic stewardship program that includes antibiotic use protocols and systems for monitoring antibiotic use and recording incidents identified under the facility’s IPCP and the corrective actions taken by the facility.
- We further proposed to add a new paragraph to require that the facility designate an infection prevention and control officer (IPCO) who is responsible for the IPCP and who has received specialized training in infection prevention and control. We proposed that the IPCP be a major responsibility for the individual assigned as the facility’s IPCO.
- We propose to require that the IPCO be a healthcare professional with specialized training in infection prevention and control beyond their initial professional degree and be a member of the facility’s Quality Assessment and Assurance (QAA) committee.

Why?

- Are there data supporting this?
- Why did CMS, JC, Missouri require this?
- Is there precedent?
- Are there metrics to report? AU/SAR?
• It is estimated that there are between 1.6 and 3.8 million HAIs in LTC facilities annually (80 FR 42215). These infections result in an estimated 150,000 hospitalizations; 388,000 deaths; and healthcare costs between $673 million to $2 billion.

• CRE study of LTAC

• Give New Deli story
• Talk about ND prev
• Talk about CRE vs ND
• There is more asymptomatic transmission

• MMWR Jan 13 New Deli strain
  • CREs represent an urgent threat in the United States because they are linked to death rates as high as 50%, there are few effective treatments, and they can spread rapidly. An important issue highlighted by this case is that isolates that show resistance to all antimicrobials are not common. Of more than 250 CRE samples collected in the Emerging Infections Program, about 80% were vulnerable to at least 1 aminoglycoside; 90% were susceptible to tigecycline.
  • However, the CDC reports that as of January 6, 2017, a total of 175 patients in the United States have been diagnosed with NDM-CRE, 81 of them in Illinois.
Core Elements: What you can do

- [https://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html](https://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html)

- Use this link, there are lots of interventions

- Don’t do more than a couple at once

- The Centers for Disease Control and Prevention (CDC) identified that 20%–50% of all antibiotics prescribed in US acute care hospitals are either unnecessary or inappropriate. The CDC has also stated: "Antibiotics are among the most commonly prescribed medications in nursing homes. Up to 70% of long-term care facilities’ residents receive an antibiotic every year."
Joint Commission

- [https://www.jointcommission.org/assets/1/6/New_Antimicrobial_Stewardship_Standard.pdf](https://www.jointcommission.org/assets/1/6/New_Antimicrobial_Stewardship_Standard.pdf)
- Approved: New Antimicrobial Stewardship Standard
- The Joint Commission recently announced a new Medication Management (MM) standard for hospitals, critical access hospitals, and nursing care centers. Standard MM.09.01.01 addresses antimicrobial stewardship and becomes effective January 1, 2017.

CMS IP implementation

- This section will be implemented in Phase 1 with the following exceptions:
  - (a) As linked to Facility Assessment at §483.70(e)—Implemented in Phase 2.
  - (b) Infection preventionist (IP)—Implemented in Phase 3.
  - (c) IP participation

- We do not have the exact verbage for CMS surveyor
- You will have to be able to say “yes”.
- Have an IP? Yes
- Do you review atbx scripts? Yes
- Isolation policy?yes
- Do you monitor prescribing, HAIs, adverse events? yes
CDC LTC Checklist

to safe and appropriate antibiotic use in your facility

Accountability

Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship activities in your facility

Drug expertise

Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility

Action

Implement at least one policy or practice to improve antibiotic use

Tracking

Monitor at least one process measure of antibiotic use and at least one outcome from antibiotic use in your facility

Reporting

Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff

Education

Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving use

Case Studies:

• Let's look at 2 very different types of Nursing homes
  • One small, independent maybe even rural facility
  • One larger facility, part of a large health care system, with shared EHR and physicians.

Case Studies:

• Small NH has 30 residents, staff that as you see fit.
  • No EHR, 2 FP docs and extenders with one being medical director, and outsourced pharmacy
  • Need to be compliant with the IP and ASP COP!!!
Case Studies:

- Interventions:
  1. Education residents and family straight off the CDC website-lots of resources
  2. Review all atbx orders. Maybe make a form that has the organ infected, the indication, the bug, the drug, the length of therapy. This makes it easy to follow over time, makes it easier to review, and intervention is easier
  3. Insist that all duration of therapy be best practices
  4. Follow C. dif rates then look at risk factors

Case Studies:

- Interventions:
  5. Educate staff on ASB, wounds, viral URI
  6. Follow Quinolone scripts per quarter
  7. Feedback to providers

Reduce quinolones

- You will prevent Adverse Events
- QTC, delerium, labile blood sugars, C dif, MDROs, coagulopathy

- Effects of control interventions on Clostridium difficile infection in England: an observational study

- Lance Infectious Diseases, Jan 24, 2017