



In the Know

Antibiotic Stewardship Edition

October 2017

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Introduction

Greetings from the Louisiana Healthcare-Associated Infections & Antibiotic Resistance Prevention Program! The mission of the Louisiana Healthcare-Associated Infections and Antibiotic Resistance (HAI/AR) Prevention Program is to protect patients by preventing healthcare-associated infections and the proliferation of antibiotic resistant organisms through surveillance, outbreak response, and infection control education across the provider spectrum. The Antibiotic Stewardship Newsletter is a new initiative from the HAI Team centered on the evolving antimicrobial standards, practices, and knowledge needed to achieve success in combating antimicrobial resistance through the framework of stewardship.

The idea of antibiotic stewardship has been around for decades, but it is only very recently that efforts have been made toward developing standardized approaches to address this growing health threat. Over the next few years, the time and commitment of resources that will be required of healthcare facilities in combating antimicrobial resistance will increase. The extra investment in antibiotic stewardship will slow the rising threat of antimicrobial resistance and safeguard the *magic bullets* we have come to take for granted.

This newsletter aims to deliver important information on antimicrobial stewardship so that Louisiana healthcare professionals and administrators are best equipped to face these coming demands. Whether it is shared updates on the Centers for Disease Control and Prevention (CDC) Antibiotic Resistance Laboratory Network (ARLN) or new Centers for Medicaid and Medicare Services (CMS) regulations, this newsletter will make sure you are up-to-date in the antimicrobial stewardship world.

Aside from news updates, this newsletter will become a local medium through which best practices and success stories can be broadcast in hopes that others adopt proven methods of success used right here in Louisiana. So if you have a stewardship success story including a tool you think benefits your facility, a strategy to keep data collection manageable, or even a word of caution to other Antibiotic Stewardship Programs (ASPs), let us know! If you would like to see anything featured that we may have overlooked or are curious about anything related to ASPs, please let us know of that as well. Please send any inquiries and comments you may have about this newsletter and its contents to Benjamin Munley at Benjamin.Munley@la.gov.

1945	1950s	1980s	2000s	2007	2010	2014	2017
Alexander Fleming warns of the misuse of antibiotics and the subsequent development of resistance in his Nobel Prize Lecture	Penicillin-resistant infections become clinically significant	Rising prevalence of MRSA and MDR Gonorrhea	Increasing number of prevalence of MDROs begin to be noticed on a large scale	IDSA/SHEA Antimicrobial Stewardship (AMS) Guidelines released First law on judicious use of antibiotics passed in California	Early adopters of antibiotic stewardship programs	CDC Get SMART Healthcare and antibiotic stewardship program tools White House National Action Plan	The Joint Commission implements the first AMS Standard for hospitals and nursing care centers CMS Phase 2 goes into effect

Stewardship: What is The Joint Commission looking for?

With the new The Joint Commission Antimicrobial Stewardship Standard [MM.09.01.01](#) which went into effect this past January as well as the Centers for Medicaid & Medicare Services (CMS) [phase 2 guidelines for nursing homes](#) being enacted this November, much is afoot in the world of antimicrobial stewardship regulations. In response to these new benchmarks which must be met to receive accreditation or reimbursement, many acute care hospitals, critical access hospitals, and nursing care centers have implemented a number of new changes to protocols, policies, organizational structuring, and job descriptions within their facilities and workforces. With these changes, now is a prime time to recap components The Joint Commission surveyors will be looking for if (when) they come to your facility.

The Joint Commission Antimicrobial Stewardship Standard aims to ensure that healthcare facilities caring for inpatients/residents have not only initiated, but have also delegated resources towards the maintenance of an ASP. The documents to have ready before a survey should include the following: description of how the CDC Core Elements are being applied, approved ASP protocols, a description of ASP data collected and how it is used, any documentation of ASP improvements, and any documents supporting leadership commitment to the ASP (e.g., letters of commitment, strategic plans, budget plans, and performance improvement plans). Additionally, surveyors may ask during patient tracers about staff and/or patient education received with regards to the ASP, so providing educational opportunities to all relevant staff is essential.

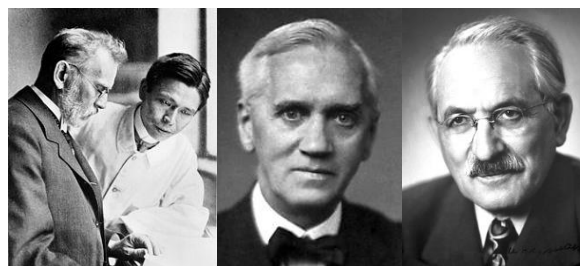
For more information on The Joint Commission's new standard, see the resources below:

1. The Joint Commission Antimicrobial Stewardship Standard Interpretation FAQs:
https://www.jointcommission.org/standards_information/jcfaq.aspx?ProgramId=5&ChapterId=76&IsFeatured=False&IsNew=False&Keyword
2. Blog post by The Joint Commission Surveyor, Lisa Waldowski, on the new Standard:
https://www.jointcommission.org/on_infection_prevention_control/newest_antimicrobial_stewardship_standard/

Knowledge Tidbit: Antimicrobial History

The antibiotic era began slowly in the early 1900's when the German physician Paul Ehrlich theorized a possible "magic bullet" which would cure humanity of microbial infections. He then tested hundreds of arsenic derived compounds to eventually discover Arsphenamine, or Salvarsan: the first manufactured antimicrobial to treat syphilis in 1909.

The next big step forward wasn't until 1928 when Alexander Fleming discovered penicillin: a substance isolated from a mold that had grown, quite by accident, onto a *Staphylococcus* petri dish where it inhibited bacterial growth. By 1945 Penicillin had been mass produced and was in widespread clinical use.



Dr. Paul Ehrlich
and colleague,
Dr. Sahachiro Hata

Dr. Alexander
Fleming

Dr. Selman
Waksman

The third giant of science to contribute to the rise of the antibiotic era was the soil microbiologist Selman Waksman who, between 1940 and 1948, discovered and tested over 20 new antibiotics including Streptomycin and Neomycin.

For more information on the life and work of these three scientists, see the resources below:

1. Paul Ehrlich's Nobel Prize Biography:
https://www.nobelprize.org/nobel_prizes/medicine/laureates/1908/ehrllich-bio.html
2. Alexander Fleming's Nobel Prize Biography:
https://www.nobelprize.org/nobel_prizes/medicine/laureates/1945/fleming-bio.html
3. Selman Waksman's Nobel Prize Biography:
https://www.nobelprize.org/nobel_prizes/medicine/laureates/1952/waksman-bio.html

National Healthcare Safety Network Antibiotic Use and Antibiotic Resistance (AUR) Module

Ready to take your facility's antimicrobial stewardship program to the next level? The National Healthcare Safety Network (NHSN) Antibiotic Use and Antibiotic Resistance (AUR) Module was first released in 2011, but has previously seen little use due to the information technology requirements for reporting. Utilization is ramping up, and the AUR Module is listed as a special registry for [Meaningful Use Stage 3](#). So why put things off until tomorrow which could be done today?

If your facility's antibiotic stewardship program has reached a mature stage with extensive drug use and prescribing practices in-place, onboarding the AUR Module to your facility's reporting protocols is a good next step. Although initial start-up can take a bit of work for your facility's IT staff and EMR vendor, the payoff is actionable data to track antibiotic use and resistance in your facility and compare your metrics to other AUR reporters. The first step in enrolling in the AUR module is seeing if your current EMR vendor is [listed as a provider](#) of the required IT infrastructure. Next, speak with your IT staff and vendor to implement an onboarding timeline. Lastly, test and validate your reporting system by following the clinical document architecture (CDA) guidebook available from NHSN.

CDC has recently uploaded training videos on the AUR. To view on demand, visit <https://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html> and click "Training". For more information on the NHSN AUR Module, see the resource below: CDC's webpage for the NHSN AUR Module: <https://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html>

Troubleshooting the CDC 7 Core Elements of Antibiotic Stewardship: The Reluctant Champion

Successful antibiotic stewardship programs implement the CDC 7 core elements of antibiotic stewardship, of which *accountability* is a key component. Accountability entails appointing a single leader responsible for program outcomes. It is recommended that a physician champion be designated as your antibiotic stewardship leader because of such factors as peer-to-peer engagement. Although infectious disease physicians generally lead the charge in their institutions, it is not required considering some facilities do not have ID docs. But what if no one steps up to the plate? Work with your leadership team to refine duties of physician stewardship champions (PSC) so that tasks are manageable. PSCs are the primary promoters best stewardship practices among prescribers in your facility. Check out tools and strategies to work through antibiotic stewardship program implementation from the National Quality Forum [here](#).

U.S. Antibiotic Awareness Week is November 13-19, 2017



[U.S. Antibiotic Awareness Week](#) (formerly "Get Smart About Antibiotics Week") 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. How will you promote Antibiotic Awareness Week? Share your stories with Benjamin.Munley@LA.gov. Activities will be shared in the next newsletter!

Recent Publications Related to Antimicrobial Stewardship

1. Blueprints for Success: Models of effective antimicrobial stewardship programs: https://apic.org/Resource/_TinyMceFileManager/epublications/Antimicrobial_Stewardship_Spring2016.pdf
2. ANA-CDC White Paper: Redefining the Antibiotic Stewardship Team (Defining Nurse's Roles in AMS Programs): <http://www.nursingworld.org/ANA-CDC-AntibioticStewardship-WhitePaper>