DRAFT

Healthcare-Associated Infections Advisory Committee (HAIAC) Meeting

December 11, 2018 1:00 - 3:00 pm PSOB – Room 1B 800 NE Oregon St. Portland, OR 97232

Agenda, materials, minutes, recordings, and transcriptions for meetings are available at: <u>http://www.oregon.gov/oha/PH/DiseasesConditions/CommunicableDisease/HAI/Prevention/Pages/Meetings.aspx</u>.

MEMBERS PRESENT:

- Genevieve Buser, MD, Pediatric Infectious Disease Physician, Providence St. Vincent Medical Center
- Kelli Coelho, RN, CASC, MBA, Executive Director, RiverBend Ambulatory Surgery Center (phone)
- Pamela Cortez, MBA, BSN, RN, CNE, BC, Director of Patient Safety and Clinical Support, Salem Health
- Lisa Freeman, Executive Director, Connecticut Center for Patient Safety (phone)
- Jon Furuno, PhD, Associate Professor, Department of Pharmacy Practice, Oregon State University/College of Pharmacy, Oregon Health and Science University
- Vicki Nordby, RN, BSN, Nurse Consultant, Marquis Companies, Inc

MEMBERS EXCUSED: • Joshua L. Bardfield, Supply Chain Services Manager, The Oregon Clinic, P.C.

- Deborah Cateora, BSN, RN, Healthcare EDU/Training Coordinator and RN Consultant, Safety, Oversight and Quality Unit (SOQ Unit), Oregon Department of Human Services
- Paul Cieslak, MD, Medical Director, Oregon Public Health Division, Oregon Health Authority
- Wendy L. Edwards, RN, BSN, Patient Safety Surveyor, Health Facility Licensing and Certification, Oregon Public Health Division, Oregon Health Authority
- Jordan Ferris, BSN, RN, CMSRN, Nursing Practice Consultant, Oregon Nurses Association
- Laurie Polneau, RN, MHA, CPHRM, Director, Quality/Risk Management/Infection Control, Vibra Specialty Hospital Portland
- Pat Preston, MS, Executive Director, Center for Geriatric Infection Control
- Kirsten Schutte, MD, Infectious Disease and Medical Director of Infection Prevention and Control, Asante
- Amy Jo Walter, Infection Preventionist, Southern Coos Hospital

OTHER PARTICIPANTS PRESENT:

- DeAnza Britton, RN, Friendship Health Center
- Nicole Cantu, RN, BSN, CMSRN, Nursing Practice Consultant, Oregon Nurses Association (phone)
- Dennis Drapiza, MPH, BSN, RN, CIC, Regional Director Northwest Infection Prevention and Control, Kaiser Permanente Northwest (phone)
- Sydney Edlund, MS, Director of Analytics and Research, Oregon Patient Safety Commission
- Ryan Grimm, Director of Surgical Services, Ambulatory Surgery Centers, The Portland Clinic (phone)

- Judy Guzman-Cottrill, DO, Pediatric Infectious Disease Physician, Oregon Health and Science University and Oregon Health Authority
- Thomas Jeanne, Deputy State Health Officer, Oregon Health Authority
- Kirstin King, RN, Director of Nursing Services, Marquis Silver Gardens
- Renee Kozlowski, student, Jesuit High School
- Julie Koch, RN, MSN, BSN, CIC, Manager Infection Prevention, Salem Health Hospitals and Clinics
- Jenny Krein, Representative, ALK (phone)
- Shanna Middaugh, MLS, BHA, CIC, Samaritan North Lincoln Hospital (phone)
- Mary Post, RN, MS, CNS, CIC, Infection Prevention/Employee Health Coordinator, Shriners Hospitals for Children – Portland (phone)
- Kristine Rabii, MSc, Infection Preventionist, Tuality Healthcare (phone)
- Rachel Ruehl, Clinical Pharmacist, ALK (phone)
- Michele Shields, Staff Development Specialist, Holgate Community
- Rachel Steele (phone)
- Dee Dee Vallier, Consumer Advocate (phone)
- Diane Zhitlovsky, Clinical Specialist, Thrombolytics, Genentech

OHA STAFF PRESENT:

- Zintars Beldavs, MS, Acute and Communicable Disease Prevention (ACDP) Section Manager
- Tara Buehring, MPH, Healthcare-Associated Infections (HAI) Office Specialist
- Alyssa McClean, AWARE Program Coordinator
- Valerie Ocampo, RN, MIPH, HAI Public Health Nurse
- Rebecca Pierce, PhD, HAI & Emerging Infections Program (EIP) Program Manager
- Diane Roy, HAI Data and Logistics Coordinator
- Monika Samper, RN, Flu Vax Coordinator and Clinical Reviewer

- Roza Tammer, MPH, CIC, HAI Reporting Epidemiologist
- Dat Tran, MD, HAI Outbreak Response Physician
- Nicole West, MPH, Influenza Epidemiologist
- Alexia Zhang, MPH, HAI EIP Epidemiologist

ISSUES HEARD: • Call to order and roll call

- Logistics update
- Approve September 2018 minutes
- Outbreaks update
- NHSN data
- Jackson County Pilot Project
- Panel: HCP influenza vaccination programs and policies in LTCFs
- Discussion: Topics for future meetings and reports
- Public comment
- Adjourn

These minutes are in compliance with Legislative Rules. <u>Only text enclosed in italicized quotation</u> <u>marks reports a speaker's exact words.</u> For complete contents, please refer to the recordings.

Item	Discussion	Action Item
Call to Order and	40 percent of members present.	No action items
Roll Call		
Genevieve Buser,		
Providence St.		
Vincent (Chair)		

Logistics Update	Membership status	OHA will send
Tara Buehring,	 Health Insurer Representative position is still vacant. 	survey to
Oregon Health	 Application for Consumer Representative was 	participants who
Authority	submitted; OHA is reviewing.	attended meeting
	All other HAIAC members have been approved.	remotely to
	Introduction of webinar	determine
	 Meetings may now be attended remotely through 	effectiveness of
	GoToWebinar.	webinar and
	Short survey will be sent to determine effectiveness of	microphones.
	webinar and use of microphones.	
Approve	September 2018 meeting minutes were approved by 40	No action items
September 2018	percent of members.	
Minutes		
All Committee		
Members		
Outbreaks Update	\geq 70 outbreaks were reported between 9/1/18 and 12/6/18.	No action items
Dat Tran, Oregon	 48 gastroenteritis 	
Health Authority	 11 respiratory 	
	• 11 other	
(See pages 27-30	Healthcare-associated infections accounted for 70% (49/70)	
of meeting	of outbreaks.	
materials)	 Majority occurred in long-term care facilities (n=45; 	
	64%).	
	 Most common etiology was norovirus (n=30; 43%). 	
NHSN Data	OHA's 2017 HAI Report	OHA will include
		an agenda item to
		review HAI

Roza Tammer,	Oregon 2017 HAI report and supporting documents were	reporting
Oregon Health	published in October 2018 on OHA's website (see page	requirements in
Authority	32 of meeting materials).	2019 HAIAC
	Report:	meetings.
(See pages 31-48	 Evaluates progress of Oregon facilities in 	
of meeting	reducing HAIs compared to the U.S. overall	
materials)	and to national goals	
	 Accessible through interactive tables and 	
	maps	
	 Supporting documents: 	
	 2017 Oregon HAI Data Summary – synopsis 	
	of how well Oregon hospitals performed	
	against national benchmarks	
	 About the Data – describes methods, data 	
	presentation and usage, and data	
	interpretation for tables and maps	
	Report and HAI Data Summary examine infections	
	reportable to OHA through the National Healthcare Safety	
	Network (NHSN).	
	Hospitals:	
	 Central line-associated bloodstream 	
	infections (CLABSIs)	
	 Catheter-associated urinary tract infections 	
	(CAUTIs)	
	 Laboratory-identified methicillin-resistant 	
	Staphylococcus aureus (MRSA) bloodstream	
	infections (BSIs)	

• Laboratory-identified <i>Clostridioides difficile</i> (<i>C.</i>	
difficile) infections	
 Surgical site infections (SSIs) resulting from 	
these procedures: abdominal hysterectomy,	
colon surgery, coronary artery bypass graft,	
hip replacement, knee replacement, and	
laminectomy	
 Dialysis facilities: dialysis bloodstream infections 	
(BSIs) – not evaluated in Data Summary report	
Metrics used to evaluate facility and statewide	
performance include:	
Tables/maps:	
 Standard Infection Ratio (SIR) - calculated by 	
dividing number of observed infections by	
number of predicted infections	
 Number of predicted infections – estimate 	
based on risk adjusted 2015 national HAI	
aggregate data	
HAI Data Summary report:	
 2015 national baseline data – 2015 risk 	
adjusted national HAI aggregate data	
 U.S. Department of Health and Human 	
Services (HHS) 2020 targets	
> HAI Data Summary report contains aggregate data for	
acute care hospitals (ACHs) and critical access hospitals	
(CAHs).	

 Device-associated and laboratory-identified infections are reported separately for ACHs and CAHs. 	
 Adult SSIs are combined for ACHs and CAHs. Summary report reveals Oregon generally performed well compared to 2015 national baseline, but only met a few 2020 HHS targets. 	
ACHs:	
 Lower than national baseline for: CLABSIs MRSA BSIs 	
 C. difficile infections 	
 Higher than national baseline for CAUTIs** 	
 Met 2020 HHS target for CLABSIs in neonatal intensive care units (NICLIs) 	
 Lower than national baseline for: MRSA BSIs 	
 C. difficile infections 	
CAUTIs	
 Met 2020 HHS target for CAUTIS 	
Insufficient data to assess CLABSIS	
• ACH and CAH adult SSIS:	
Coronary artery bypass graft	
 Laminectomy 	
 Colon surgery 	
 Higher than national baseline for: 	

 Abdominal hysterectomy** Hip replacement** Knee replacement Met 2020 HHS target for: Coronary artery bypass graft Laminectomy 	
(^^Although higher than 2015 national baseline, not statistically significant.) <u>Centers for Disease Control and Prevention's (CDC) 2016</u> <u>National and State HAI Progress Report</u>	
 CDC's 2016 National and State HAI Progress Report can be viewed on CDCs website (see page 41 of meeting materials). HAI Progress Report offers: Executive summary Simple interactive progress report Detailed technical data tables Data is stratified by facility type: Acute care hospitals (ACHs) Critical Access Hospitals (CAHs) – data tables only Inpatient rehabilitation facilities (IRFs) Long-term acute care hospitals (LTACHs) HAI data are provided for: Central line-associated bloodstream infections (CLABSIs) 	

 Catheter-associated urinary tract infections 	
(CAUTIs)	
 Ventilator-associated events (VAEs) – except IRFs 	
 Surgical site infections (SSIs) – ACHs only 	
Clostridioides difficile (C. difficile) infections	
Methicillin-resistant Staphylococcus aureus (MRSA)	
bacteremia	
Report shows Oregon percentage of HAIs declined more	
than national percentages between 2015 and 2016 in	
most cases.	
ACHs:	
 Oregon percentage of decrease greater than 	
national decrease:	
 CLABSIs 	
 Abdominal hysterectomy SSIs 	
 Colon surgery SSIs 	
 MRSA bacteremia 	
 Oregon percentage increased but national 	
percentage decreased:	
 CAUTIs** 	
 C. difficile infections** 	
 Oregon percentage remained the same but 	
national percentage decreased: VAEs	
IRFs:	
 Oregon percentage of increase greater than 	
national increase: CAUTIs**	
	 Catheter-associated urinary tract infections (CAUTIs) Ventilator-associated events (VAEs) – except IRFs Surgical site infections (SSIs) – ACHs only Clostridioides difficile (C. difficile) infections Methicillin-resistant Staphylococcus aureus (MRSA) bacteremia Report shows Oregon percentage of HAIs declined more than national percentages between 2015 and 2016 in most cases. ACHs: Oregon percentage of decrease greater than national decrease: CLABSIs Abdominal hysterectomy SSIs Colon surgery SSIs MRSA bacteremia Oregon percentage increased but national percentage decreased: CAUTIs** C. difficile infections** Oregon percentage decreased: IRFs: Oregon percentage of increase greater than national percentage decreased: IRFs:

 Oregon percentage of decrease greater than national decrease: C. difficile infections 	
(**Although Oregon percentage increased, number of infections not statistically significant compared to 2015 national baseline.)	
Exemptions to OHA Reporting Mandates	
 Elimination of exemptions beginning in 2019 will expand reporting requirements for some hospitals. CLABSIs must be reported for specified patient care locations regardless of annual number of central line days. SSIs must be reported for specified procedures regardless of annual number of procedures. Recorded webinars and technical assistance is available (see page 47 of meeting materials for details). 	
Comments and Questions	
 <u>Question</u> ➢ Zintars Beldavs: What has caused dramatic decreases in some SSIs? 	
Roza Tammer: CMS requires reporting of SSIs so facilities probably monitoring these infections more closely.	
Julie Koch: coding issues, coding changes over time, and a shift in surgical settings. Patients are not staying overnight as often so fewer patients meeting surveillance definition.	

Rebecca Pierce: Relatively few number of SSIs in Oregon makes interpreting percentage differences tricky	
 Question ➢ Roza Tammer: Is mapping of CPT or ICD-10 billing codes to procedures being routinely checked to ensure infections identified as SSIs meet NHSN SSI surveillance definition? Julie Koch: We've found coding errors that had to be sent back to specialist for recoding. Specifics of procedure—for example, how a hysterectomy is performed—are not always captured correctly resulting in coding inaccuracies. 	
 <u>Question</u> Genevieve Buser: Does it matter whether patients admitted to day surgery unit leave the same day? Roza Tammer: Patient must be admitted and discharged on 	
different calendar days to be considered an inpatient by NHSN.	
 Questions ➢ Zintars Beldavs: Any insights into factors causing differences in outcomes, for example, decrease in MRSA bacteremia and increase in CAUTIs in Oregon? What initiatives and practices have been successful or could/should be implemented to decrease infections? 	
Genevieve Buser: How do long-term care facilities think recently established initiatives are going? Is there message	

fatigue or are initiatives progressing well? Have they been incorporated into routine practice?	
Vicki Nordby: Marquis companies have decreased CAUTIs by reducing catheter usage, have lowered <i>C. difficile</i> infections through antibiotic stewardship, and have few CLABSIs due to low number of central lines.	
Rebecca Pierce: Small numbers coupled with confines of CDC statistics make interpretation of HAI data difficult from year to year. Trend data would be helpful in future reports. Over last few years, <i>C. difficile</i> has been stagnant, although made substantial progress this year, CAUTI has fluctuated, and CLABSI has been steadily declining.	
 Question Genevieve Buser: How does NHSN deal with and adjust to new realities of healthcare as more surgeries are performed in ambulatory surgery centers or as day surgeries in hospitals? Ultimate goal is patient safety regardless of setting. 	
Roza Tammer: Believe NHSN has been working to bolster this part of their application. Some states currently require ASCs to report SSIs. Sense that additional states will follow suit as more procedures are being performed in this setting; a large portion of surgeries are being missed by only focusing on hospitals.	

	Julie Koch: ASCs potential move toward 2-night stay would likely lead to more procedures. Committee might consider requiring ASCs to report SSI measures.	
	Roza Tammer: Plan to have committee discussion about Oregon reporting requirements in 2019.	
Jackson County Pilot Project Roza Tammer, Oregon Health Authority (See pages 49-70 of meeting materials)	 OHA developed and implemented project to improve safety of injections and needle use in healthcare facilities using funds from CDC's One and Only Campaign. Created survey to assess needle use and injection practices to inform educational activities. Devised online toolkit for public and health professionals. Approximately 4,000 surveys were mailed to providers, businesses, and facilities providing health-related services. 73 surveys currently have been received. 70 surveys have sufficient data for analysis. Analysis of surveys revealed a wide range of respondents, services, and practices. Providers and services: Business/facility types encompassed: 21.4% inpatient, 70% outpatient, 8.6% acupuncture. Common licensed provider types included: CNA, RN, NP, MD, and LAc. Common needle-based or injection services included: biopsy, dialysis, blood draw/phlebotomy, surgery, and acupuncture. Injections: 	OHA encouraged committee to review and evaluate online toolkit (see page 74 of meeting materials)

 Majority of respondents administered injectable medications/treatments. 	
 Facilities most commonly injected 	
medications/treatments intramuscularly,	
intravenously, and subcutaneously.	
 Safety syringes used by 80% inpatient facilities 	
and 45% outpatient facilities.	
 Injections involving blood/body fluids performed 	
by 53% of inpatient facilities and 6% of outpatient	
facilities.	
Medication practices:	
 Injectable medications/treatments 	
mixed/reconstituted less than one hour before	
administration: inpatient – 75%; outpatient –	
60%; acupuncture – 17%.	
 Injectable medications/treatments drawn up or 	
added to bags less than one hour before	
administration: inpatient – 75%; outpatient –	
90%; acupuncture - 17%.	
 Injectable medications/treatments checked using 	
2-step process: inpatient – 67%; outpatient –	
37%; acupuncture – 0%.	
 Majority of inpatient and outpatient facilities 	l
never use medication vials on more than one	l
	l
Education:	1

 Most inpatient and outpatient facilities provide education once per year on needle use/injection practices. Majority of acupuncture settings do not offer instruction. Disease notifications: 67% inpatient, 41% outpatient, and 0% acupuncture businesses/facilities receive information about disease clusters, outbreaks, or injection/needle related patient/client notifications. 	
Comments and Questions	
 Question Roza Tammer: What should our priorities be for education, outreach, and engagement? How can we ensure our toolkit gets into the right hands? 	
Julie Koch: Were surveys sent to tattoo parlors? There was a recent outbreak in Florida related to contaminated tattoo ink.	
Roza Tammer: Data would be interesting to see, but tattoo parlors were excluded because funding is for healthcare settings. Nonetheless, route of disease transmission in tattoo parlors and other non-healthcare settings using needles/performing injections is similar.	
Rebecca Pierce: Information was not obtained from tattoo parlors, but data collected from Jackson County project,	

	such as trends and data from alternative clinics, could be used to develop similar training materials for tattoo parlors.	
Panel: HCP influenza vaccination programs and policies in LTCFs Kristin King, Marquis Silver Gardens; Michele Shields, Holgate Community (See pages 71-86 of meeting materials.)	 Presentation by Kristin King Facility attained 100% healthcare personnel influenza vaccination rate in 2018. Flu vaccination and infection control are promoted through a variety of methods. Surgical masks: Personnel asked to wear surgical mask during September staff meeting; few able to tolerate mask for entire 90-minute meeting. New policy requires staff who decline flu vaccination to wear surgical mask during influenza season. Comprehensive education: Present facts on effectiveness and safety of flu vaccine Explain common signs and symptoms of flu Describe ways to prevent spread of flu Vaccination incentives: Offer monetary rewards, such as \$100 Visa gift card raffle Give stickers to vaccinated employees to wear on badge 	No action items

 Hand sanitizers strategically placed throughout facility 	
Comments and Questions	
 <u>Question</u> Dat Tran: Was initiative specific to your facility or was it enterprise wide? 	
Kristin King: It was done facility wide.	
Question > Dat Tran: How did other facilities within enterprise perform?	
Vicki Nordby: 8 out of 18 facilities have over 90% vaccination rate so far. The one facility that did not require masks to be worn during September staff meeting has 27% vaccination rate.	
Monika Samper: Requiring staff to wear a mask for even a short period of time is a phenomenal idea—it can be miserable breathing through a mask.	
 <u>Question</u> Zintars Beldavs: How effective are incentives like a \$100 gift card? How often do other facilities use this strategy? 	
Monika Samper: OHA in past surveys asked facilities about types of incentives used to promote flu vaccinations. Results showed incentives were used frequently but generally were not effective.	

Kirsten King: Gift cards and the offer of a TV one year are significant incentives to CNAs that generate a very positive reaction. Small incentives like pizza parties have also worked.	
Presentation by Michele Shields	
 Presentation by Michele Shields Successful strategies utilized to improve vaccination rates: Established masking policy effective as of 2018-2019 influenza season Arranged for Alexia Zhang, OHA epidemiologist, to provide influenza education Offer one-on-one training to staff whose second language is English Give stickers to vaccinated employees to display on badge Promote flu vaccinations at every opportunity Lessons learned: Immunize all staff at same time; delaying vaccinations for some personnel can contribute to flu outbreaks Follow up with vendors to ensure flu vaccine order received Use simple flu vaccination stickers to avoid wasting money Masking policy works: during recent flu outbreak, "mask on" policy increased vaccinations by 22% 	

Comments and Questions	
 Question ➢ Roza Tammer: Any difference in misperceptions or reasons for hesitancy between healthcare personnel, which you educate about flu vaccine, and the general public? 	
Michele Shields: we don't vaccinate general public, so unknown. Staff appear to have fewer excuses or reasons this year for refusing flu vaccine, such as it will make me sick. Common justification for declinations is religious beliefs. Regardless of reason, unvaccinated staff must wear a mask until active cases resolved.	
 Question ➢ Rebecca Pierce: Has more hesitancy been observed following a flu season where vaccine was less effective, like last year? 	
Kirsten King: yes, biggest issue this year. Marquis Silver Gardens responded by distributing educational materials, upholding masking policy (most successful intervention), and reasoning with staff—e.g., partially effective vaccine better than no vaccine.	
Michele Shields: Counteracted hesitancy by providing substantial education. Explained last year's vaccine was less effective because it was obtained from Southern hemisphere where flu was prevalent. Staff were instructed flu shot is still best bet for protecting themselves and residents.	

	Kirsten King: also emphasized to staff that vaccine decreases severity of illness and reduces ICU stays.	
Discussion: Topics for future meetings and reports All members	 HAI reporting requirements, particularly for ambulatory surgery centers Mapping of hospital units to CDC locations in NHSN 	No action items
Public comment	No public comment	No action items
Adjourn		

Next meeting will be March 20, 2018 1:00 pm - 3:00 pm, at Portland State Office Building, Room 1B

Submitted by: Diane Roy Reviewed by: Roza Tammer Rebecca Pierce

MDRO Toolkit Discussion for HAIAC

Mar 20, 2018

Chris Pfeiffer, MD, MHS for DROP-CRE team

Drug-Resistant Organism Prevention and Coordinated Regional Epidemiology (DROP-CRE) Network









Statewide network to detect, control, and prevent multidrugresistant organisms (MDROs) with initial focus on CRE





Initiated September 2012



DROP-CRE through 2019

- Networked with and conducted needs assessments of stakeholders
 - Infection Preventionists in acute & long-term care, Laboratorians
- Built laboratory capacity to track CRE, test for CP-CRE
 - Less than 30 CP-CRE reported to date
- Built HAI team response & published CRE Toolkit to serve as guide— each CP-CRE case receives real-time support from DROP-CRE group
 - No known CP-CRE transmission to date
- Mandated inter-facility transfer notification of CRE and other relevant bugs

MDRO Toolkit

- Long-discussed next step for DROP-CRE team expand from CRE to MDROs
- Goals:
 - Unify definitions of "MDRO" for infection control purposes in Oregon to facilitate inter-facility communication
 - Bring different hospitals (and hospital systems) to the table so we could better understand needs and barriers to unifying an approach

The patient perspective:

"Why am I in isolation?"

"Why am I in isolation here when I wasn't at the last hospital?"

How to create a regional approach?

≻Is reasonable given the current science

> Must be sufficiently simple to implement broadly!!!

- No complex testing (e.g., ESBL screening)
- No electronic reminders
- Implementable beyond Infection Prevention office

How - 2017-2018

- 2017-2018 we convened a "hospital epidemiologist task force" to meet by phone every 2-3 months to tackle various issues (eg. MRSA, GNRs)
- 2018: we presented MDRO Toolkit concepts twice to OSWAPIC
- 2018: we presented MDRO Toolkit concepts to DROP-CRE Advisory Committee Meeting
- 2019: final draft almost completed

OREGON MULTIDRUG-RESISTANT ORGANISM AND CLOSTRIDIODES DIFFICILE TOOLKIT

Purpose Statement

The purpose of this toolkit is to provide recommendations to Oregon healthcare facilities about strategies to prevent transmission of multidrug-resistant organisms (MDROs) and *Clostridioides (formerly Clostridium) difficile* during patient care. The toolkit recommendations provide general guidance, and are not meant to replace facility-level policy or procedure. Local epidemiology as well as pertinent facility- or patient-level factors may impact the likelihood of MDRO transmission, and these factors should always be taken into account when making decisions about transmission prevention strategies.

What's inside? Part 1- General Info

- Important Factors to consider for an MDRO Risk Assessment
- How Differences in Healthcare Settings Impact Approach to MDROs
- General Infection Prevention & Control Principles
 - **Emphasis on Standard Precautions** and Personal Protective Equipment (PPE)
 - Vertical Versus Horizontal Approaches to Infection Prevention
- Guidance for Policies regarding Visitors & Animals to Healthcare Facilities

What's inside - PART 2: Pathogens

- MRSA
- VRE
- Drug-Resistant Enterobacteriaciae
- Drug-Resistant *Pseudomonas aeruginosa*
- Drug-Resistant Acinetobacter baumannii
- Drug-Resistant Stenotrophomonas maltophilia
- C. difficile

For each organism- we address:

- Background and Epidemiology
- Laboratory Information & Definitions
- Strategies to Prevent Transmission
- Cleaning and Disinfection Information
- Related Regulations and Requirements
- Infection Prevention Recommendations (summary Table)

For example - Drug-Resistant Enterobacteriaceae

Background – discussion around--CRE -ESBLs -plasmid vs. chromosomal resistance.

Laboratory Information and Definitions

• Oregon extensively drug-resistant *Enterobacteriaceae* or **"Oregon XDR-E"***

*mirrors the eCDC/CDC *possible* extensively drug-resistant definition

"Oregon XDR-E" are organisms testing non-susceptible to ≥1 agent in at least 4 of the following 6 categories (i.e., organisms test fully susceptible to all agents in no more than 2 of the following 6 categories):

- 1. Aminoglycosides (gentamicin, tobramycin, amikacin)
- Anti-pseudomonal penicillins (piperacillin-tazobactam)
- 3. Carbapenems (ertapenem, imipenem, meropenem)*
- 4. Extended-spectrum cephalosporins (ceftriaxone, cefotaxime, ceftazidime, cefepime)
- 5. Fluoroquinolones (ciprofloxacin, levofloxacin, moxifloxacin)
- 6. Folate-pathway inhibitors (trimethoprim-sulfamethoxazole)

*CRE are an independent category of drug-resistant <u>Enterobactereaciae</u> that usually but not always meet the XDR-E definition— see the Oregon CRE Toolkit for detailed recommendations on reporting and managing <u>carbapenemase</u>-producing and non-<u>carbapenemase</u>-producing CRE.

Strategies to Prevent Transmission

- Standard + Contact Precautions
- Role of active surveillance testing
- Patient placement issues

Cleaning and disinfection information

• Standard agents acceptable

• Related regulations and requirements

- No national mandates; NHSN MDRO module allows for reporting
- Oregon- interfacility-transfer notification of Oregon XDR-E required.
 - CRE and other pan-resistant organisms are reportable within 1 day.

6. Infection prevention recommendations for XDR-E

Healthcare Setting	Suggested isolation precautions	When to discontinue isolation
ACH and LTACH	CP-CRE: Standard + Contact Precautions. See Oregon CRE Toolkit for additional suggested measures Other Oregon XDR-E: Standard & Contact Precautions.	CP-CRE: indefinitely Other Oregon XDR-E: ≥1 year after last positive "Oregon XDR- E" test* Optional for facilities to screen high-risk patients for colonization on admission**
LTCF	CP-CRE: Standard + Contact	CP-CRE: indefinitely
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	Precautions*	
	Other Oregon XDR-E: Standard Precautions. Additionally, consider the individual patient's clinical situation (e.g. resistance profile, potential for spread based on site of colonization or infection) and facility	Other Oregon XDR-E: minimum 1 year after last positive "Oregon XDR-E" test* Optional for facilities to screen high-risk patients for colonization on admission**
	resources in deciding whether to implement Contact Precautions.	
Adult Foster	All Oregon XDR-E including	n/a
Home Hospice	CRE: Standard Precautions	
Home Care		
Ambulatory Clinic		

	Healthcare	Suggested isolation	When to discontinue	Other infection
	Setting	precautions	isolation	prevention
				strategies
Another example: MRSA	ACH & LTACH	Standard + Contact for patients colonized or infected with MRSA.*	1 year after last positive MRSA test. Optional: facility may also employ AST to assess ongoing carriage.**	AST optional* Decolonization optional
* If contact precautions are not used, the facility must demonstrate ongoing I and optimal adherence to Standard Precautions. The facility should have esta for monitoring MRSA rates and for rapid identification of outbreaks.	LTCF ow infection risk blished methods	Standard Precautions. Additionally, consider the individual patient's clinical situation (e.g. potential for spread based on site of colonization or infection) and facility resources in deciding whether to implement Contact Precautions.	1 year after last positive MRSA test.	AST optional* Decolonization optional

**Facilities with capacity and interest can consider performing AST for MRSA in previous carriers or other perceived high-risk individuals.

AST = Active surveillance testing to detect asymptomatic colonization.

Duration of Contact Precautions

• 1 year for MRSA*, VRE*, and MDR-GNR

- Consider 1 screening test on admission (>1 year) to evaluate for persistent colonization
- Indefinite: Carbapenemase-producing CRE, other carbapenemase-producing Gram-negative organisms, novel/pan-resistant organisms

If CP are not used, then must demonstrate low risk of infection using Standard + other horizontal prevention strategies

C. difficile

- Prevention Antibiotic stewardship emphasized in addition to prompt detection, isolation
- Control- contact-plus precautions
- Cleaning- sporicidal agent
- National regulations CMS requires CDI LabID

C. Difficile - Infection Prevention Recommendations

Healthcare Setting	Suggested isolation precautions	When to discontinue isolation
ACH & LTACH	Contact-Plus* for CDI	Minimum 48 hours after cessation of diarrhea
	Unresolved issue regarding best approach to isolation precautions for <u>C. difficile</u> <u>colonization</u> - not currently recommended.	Many facilities opt to continue precautions for duration of hospitalization
LTCF	Contact-Plus* for CDI	Minimum 48 hours after cessation of diarrhea
L		

Next Steps

- Publish Spring 2019
- Evaluate adoption facilitators and barriers
- Revise as needed

•Oregon Health Authority: •HAI MEETING March 20, 2019

ANTIBIOTIC STEWARDSHIP PROGRAM (ASP) IN THE SKILLED LONG-TERM-CARE FACILITY

CMS F-tag Regulation: F881



Oregon's skilled nursing facilities are regulated and certified by CMS

The CMS regulation for Antibiotic Stewardship Program (ASP) Is referred to as F-tag F881

CMS Manual System

Pub. 100-07 State Operations Provider Certification

Transmittal 169- Advanced Copy Department of Health & Human Services (DHHS) Centers for Medicare & Medicaid Services (CMS)

Date:

SUBJECT: Revision to State Operations Manual (SOM) Appendix PP for Phase 2, F-Tag Revisions, and Related Issues

I. SUMMARY OF CHANGES: The revisions to the Centers for Medicare & Medicaid Services (CMS) Requirements for Participation under the Medicare and Medicaid Programs; Reform of Requirements for Long-Term Care Facilities Final Rule caused

•483.80 Infection Control
•F880 Infection Prevention & Control
•F881 Antibiotic Stewardship Program
•F882 Infection Preventionist Qualifications/ Role (2019)
•F883* Infuenza and Pneumococcal Immunizations

•CMS: ANTIBIOTIC STEWARDSHIP PROGRAM

Antibiotic Stewardship Program:

Determine whether the facility has an antibiotic stewardship program that includes:

CMS-20054 (5/2017)



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Infection Prevention, Control & Immunizations

- Written antibiotic use protocols on antibiotic prescribing, including the documentation of the indication, dosage, and duration of use of antibiotics;
- Protocols to review clinical signs and symptoms and laboratory reports to determine if the antibiotic is indicated or if adjustments to therapy should be made and identify what infection assessment tools or management algorithms are used for one or more infections (e.g., SBAR tool for urinary tract infection (UTI) assessment, Loeb minimum criteria for initiation of antibiotics);
- A process for a periodic review of antibiotic use by prescribing practitioners: for example, review of laboratory and medication orders, progress notes and medication administration records to determine whether or not an infection or communicable disease has been documented and whether an appropriate antibiotic has been prescribed for the recommended length of time. Determine whether the antibiotic use monitoring system is reviewed when the resident is new to the facility, when a prior resident returns or is transferred from a hospital or other facility, during each monthly drug regimen review when the resident has been prescribed or is taking an antibiotic, or any antibiotic drug regimen review as requested by the QAA committee;
- · Protocols to optimize the treatment of infections by ensuring that residents who require antibiotics are prescribed the appropriate antibiotic;
- A system for the provision of feedback reports on antibiotic use, antibiotic resistance patterns based on laboratory data, and prescribing practices for the prescribing practitioner.

7. Did the facility conduct ongoing review for antibiotic stewardship? Yes No F881

DEPARTMENT OF HEALTH & HUMAN SERVICES Centers for Medicare & Medicaid Services 7500 Security Boulevard, Mail Stop C2-21-16 Baltimore, Maryland 21244-1850



Center for Clinical Standards and Quality/Quality, Safety & Oversight Group

Ref: QSO-19-10-NH

- **DATE:** March 11, 2019
- **TO:** State Survey Agency Directors
- FROM:DirectorQuality, Safety & Oversight Group

F881 TRAINING

SUBJECT: Specialized Infection Prevention and Control Training for Nursing Home Staff in the Long-Term Care Setting is Now Available

Memorandum Summary

• The Centers for Medicare & Medicaid Services (CMS) and the Centers for Disease Control and Prevention (CDC) collaborated on the development of a free on-line training course in infection prevention and control for nursing home staff in the long term care

Take new online training course in infection prevention an control for nursing home staff with Free CE

CDC, in collaboration with the Centers for Medicare & Medicaid Services (CMS), just launched a new Nursing Hom Infection Preventionist Training course. This specialized nursing home training is designed for individuals responsit for infection prevention and control (IPC) programs in nursing homes. The course covers:

- Core activities of effective IPC programs,
- Recommended IPC practices to reduce:
 - Pathogen transmission
 - Heatincare-associated infections
 - Antibiotic resistance

NURSING HOME INFECTION PREVENTIONIST TRAINING COURSE



CDC TRAIN

HOME		Module 11A - Reprocessing Reusable Resident Care Equip
COURSE CATALOG		Module 11B - Environmental Cleaning and Disinfection
CALENDAR		Module 11C - Water Management Program
RESOURCES		Module 11D – Linen Management
HEI P		Module 12A - Preventing Respiratory Infection
		Module 12B - Tuberculosis Prevention
Search TRAIN	Q	Module 13 - Occupational Health Considerations for the Infe
		Module 14 - Antibiotic Stewardship in Nursing Homes
		Module 15 - Infection Prevention and Antibiotic Stewardship
		End of Training Plan Verification and CE Information
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•CMS: ANTIBIOTIC STEWARDSHIP PROGRAM

Antibiotic Stewardship Program:

Determine whether the facility has an antibiotic stewardship program that includes:

CMS-20054 (5/2017)



Page 4

Infection Prevention, Control & Immunizations

- Written antibiotic use protocols on antibiotic prescribing, including the documentation of the indication, dosage, and duration of use of antibiotics;
- Protocols to review clinical signs and symptoms and laboratory reports to determine if the antibiotic is indicated or if adjustments to therapy should be made and identify what infection assessment tools or management algorithms are used for one or more infections (e.g., SBAR tool for urinary tract infection (UTI) assessment, Loeb minimum criteria for initiation of antibiotics);
- A process for a periodic review of antibiotic use by prescribing practitioners: for example, review of laboratory and medication orders, progress notes and medication administration records to determine whether or not an infection or communicable disease has been documented and whether an appropriate antibiotic has been prescribed for the recommended length of time. Determine whether the antibiotic use monitoring system is reviewed when the resident is new to the facility, when a prior resident returns or is transferred from a hospital or other facility, during each monthly drug regimen review when the resident has been prescribed or is taking an antibiotic, or any antibiotic drug regimen review as requested by the QAA committee;
- · Protocols to optimize the treatment of infections by ensuring that residents who require antibiotics are prescribed the appropriate antibiotic;
- A system for the provision of feedback reports on antibiotic use, antibiotic resistance patterns based on laboratory data, and prescribing practices for the prescribing practitioner.

7. Did the facility conduct ongoing review for antibiotic stewardship? Yes No F881





PATIENT SAFETY NETWORK

PSNet

Bleeding related to use of

antithrombotic medication

Pote	ntially Preventable Events Relat	ed to:
Medication	Care	Infection
Change in mental status/delirium related to use of opiates and psychotropic medication	Falls, abrasions/skin tears, or other trauma related to care	Respiratory infections: Pneumonia Influenza
<i>Hypoglycemia related to use of antidiabetic medication</i>	Electrolyte imbalance (including dehydration and acute kidney injury/insufficiency) associated with inadequate fluid maintenance	 Skin and wound infections: Surgical Site Infections (SSIs) Soft tissue and non- surgical wound infections
Ketoacidosis related to use of antidiabetic medication	Thromboembolic events related to inadequate resident monitoring and provision of care	Urinary tract infections (UTIs) • Catheter Associated UTIs (CAUTIs) • UTIs (non-catheter

Respiratory distress related

provision of

to inadequate monitoring and

tracheostomy/ventilator care

•	Norovirus		
		Daga 52	
		Page 52	

Clostridium difficile

Infectious diarrhea

•



Agency for Healthcare Research and Quality Advancing Excellence in Health Care

Тор	ics	Programs	Research	Data	Тоо	ls Fur	ndir	ng & Grants	News
Home	>	Nursing Home An	timicrobial Stewa	ardship Guide	>	Toolkits	>	Implement, N	lonitor, and Su

Nursing Home Antimicrobial Stewardship Guide

- About the Guide
- Toolkits
- Implement, Monitor, and Sustain an Antimicrobial Stewardship Program
- Determine Whether It Is Necessary To Treat a **Potential Infection With** Antibiotics
- Help Prescribing Clinicians Choose the Right Antibiotic

Toolkit 1. Start an Antimicrobial Stewardship Program

Overview of the Toolkit

Why Should a Nursing Home Use This Toolkit?

This toolkit provides nursing homes with a simple, step-by-step approach to starting an antimicrobial stewardship program. An antimicrobial stewardship program uses collaborative and evidenc based approaches to improve antibiotic use by getting residents th right antibiotics, when they need them. The program is aligned wi and supports Quality Assurance and Performance Improvement (C practices, such as supporting governance and leadership, feedback monitoring. In addition, an antimicrobial stewardship program car

•https://www.ahrq.gov/nhguide/toolkits/implement-monitor-

sustain-program/toolkit1-start-program.html



•https://www.idsociety.org/practice-guidelines/#/score/DESC/0/+/

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Infectious Diseases Society of America			
Guidelines 🗸 Public Health 🗸 Clinical Practic	e	bout	Us v
Practice Guidelines			

Status
Archived(34)

Current(32)

IDSA Practice Guidelines

Practice guidelines are systematically developed statements to assist practitioners and patients in making decisions about appropriate health care for specific clinical circumstances. Attributes of good guidelines include validity, reliability, reproducibility, clinical applicability, clinical flexibility, clarity, multidisciplinary process, review of evidence, and documentation. [Institute of Medicine Committee to Advise the Public Health Service on Clinical Practice Guidelines, 1990]

IDSA GUIDELINES







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Volume 218 Number 12

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Clinical Infectious Diseases



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	Pranita D. Tamma,	MD, MHS ¹ ; Melissa A. Mi	ller, MD, N	/IS ² ; Sara E	E. Cosgrove, MD, MS ³
	≫ Author Affiliation	ons Article Information	ı		

JAMA. Published online December 27, 2018. doi:10.1001/jama.2018.19509

•Go to: doi:10.1001/jama.2018.19509

•* Tamma, PD et al JAMA, published online Dec. 27, 2018; E1-E2 Search: doi:10.1001/jama.2018.19509

Moment	Scenario	Patient and Symptom Description	Decision
1	Does this patient have an infection that requires antibiotics? •CORRECT DX	Patient is a 34-year-old previously healthy woman with dysuria, fever, hypotension, and flank pain	Patient has signs and symptoms concerning for pyelonephritis
2	Have I ordered appropriate cultures before starting antibiotics? What empirical antibiotic therapy should I initiate? •ANTIBIOTIC CHOICE: BRO	Urine dipstick indicates pyuria and bacteriuria AD v NARROW SPECTRUM	 Urine and blood cultures are obtained prior to administering antibiotic therapy Ceftriaxone is prescribed as empirical therapy for pyelonephritis Broader therapy is not indicated because the patient has no risk factors for pseudomonal or antibiotic-resistant infection Vancomycin is not administered because methicillin-resistant <i>Staphylococcus aureus</i> is not a common cause of pyelonephritis
3	A day or more has passed. Can I stop antibiotics? Can I narrow therapy? Can I change from intravenous to oral therapy? •TIME OUTRE-ASSESS	 Patient has an appropriate response to therapy Urine cultures grow <i>Escherichia coli</i> resistant to trimethoprim and sulfamethoxazole but susceptible to ciprofloxacin 	 Because <i>E coli</i> recovered in the urine has oral treatment options available, ceftriaxone is stopped and ciprofloxacin is initiated The patient is able to tolerate oral therapy and shows clinical improvement; thus, patient is switched from intravenous to oral therapy
4	What duration of antibiotic therapy is needed for this patient's diagnosis? •DOSE DURATION	Patient is on day 3 of therapy and is ready to be discharged home	 Treatment with ciprofloxacin for 7 d has been shown to be effect for pyelonephritis The patient is discharged home to complete additional 4 d of antibiotic therapy

Table. Hypothetical Scenario Incorporating the 4 Moments of Antibiotic Decision Making Into Daily Practice



Page 59

Annals of Long-Term Care

TOPICS ARTICLES MULTIMEDIA JOURNAL ABOUT



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December ·Volume26· 7 2018 Issue

FEATURES

REVIEW

Antimicrobial Stewardship in Long-Term Care Facilities: An Opportunity for Intervention

Jonathan C Cho, PharmD, MBA, BCPS¹ • Kristy M Shaeer, PharmD, BCPS² • Monika T Zmarlicka, PharmD³ Marylee V Worley, PharmD, BCPS⁴ • Joseph Hong, PharmD⁵ • Lauren D Tesh, PharmD⁶

Ann Longterm Care. 2018;26(7):17-23, S1-S4. **DOI:** 10.25270/altc.2018.12.00047 Received January 29, 2018; accepted April 26 ,2018. Published online December 10. 2018.

Annals of Long-Term Care

TOPICS ARTICLES MULTIMEDIA JOURNAL ABOUT

TOPICS

COPD

Antimicrobial Stewardship and Analyzing How We Talk About LTC

Dementia

End-of-life Care

Epilepsy

Ethics

Fall Risk

Login or Register to download PDF Issue: Volume 26 - Issue 7 - December 2018 - ALTC Authors: Gregg Warshaw, MD, Medical Editor





The development of antimicrobial resistance remains one of the major global public health threats today. Antimicrobial stewardship programs

MY OPINION AS A CONSULTANT:

Nurses are the drivers of and for the usage of antibiotics in the LTCF

Nurses are the leaders and "fixers" of the misusage of antibiotics in the LTCF

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March 11, 2019

Patient Outcomes After Hospital Discharge to Home With Home Health Care vs to a Skilled Nursing Facility

Rachel M. Werner, MD, PhD^{1,2}; Norma B. Coe, PhD³; Mingyu Qi, MS¹; et al

> Author Affiliations | Article Information

JAMA Intern Med. Published online March 11, 2019. doi:10.1001/jamainternmed.2018.7998

Discussion

Among hospitalized patients discharged either to home with home health care or to an SNF, discharge to home was associated with a 5.6-percentage point higher rate of readmission at 30 days, concentrated among discretionary hospitalizations. There were no significant differences in 30day mortality or functional outcomes. Medicare payments were significantly lower among patients discharged to home.





Elizabeth A. Monsees PhD, MBA, RN, CIC¹ , Pranita D. Tamma MD, MHS², Sara E. Cosgrove MD, MS³, Melissa A. Miller BSN, MD, MS⁴ and Valeria Fabre MD³

¹Patient Care Services Research, Children's Mercy Hospital, Kansas City, Missouri, ²Department of Pediatrics, Johns Hopkins University School of Medicine, Baltimore, Maryland, ³Department of Medicine, Division of Infectious Diseases, Johns Hopkins University School of Medicine, Baltimore, Maryland and ⁴Center for Quality Improvement and Patient Safety, Agency for Healthcare Research and Quality, Rockville, Maryland

Abstract

Nurses view patient safety as an essential component of their work and have reported a general interest in embracing an antibiotic steward role. However, antibiotic stewardship (AS) functions have not been formally integrated into nursing practice despite nurses' daily involvement in clinical activities that impact antibiotic decisions (e.g., obtaining specimens for cultures, blood drawing for therapeutic drug monitoring). Recommendations to expand AS programs to include bedside nurses are generating support at a national level, yet a practical guidance on how nurses can be involved in AS activities is lacking. In this review, we provide a framework identifying selected practices where nurses can improve antibiotic prescribing practices through appropriate obtainment of *Clostridioides difficile* tests, appropriate urine culturing practices, optimal antibiotic administration, accurate and detailed documentation of penicillin allergy histories and through the prompting of

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F881: The Role of the LTCF Nurse:

- 2019
- assess relevant indications before obtaining urine culture specimens to prevent the use of unnecessary antibiotics;
- ensure appropriate testing for Clostridiodes difficile (C. diff) infection through accurate documentation and medication reviews;
- ensure optimal antibiotic administration by helping patients transition from intravenous to oral therapies;
- Solution of period of p
- use a team-based review to ensure that antibiotic therapies are not unnecessarily prolonged.
 Monsees, EA et al Infect Control Hosp Epidemiol. 2019 Feb 21:1-6. doi: 10.1017/ice.2018.362. [Epub ahead of

print]



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Moment	Scenario	Patient and Symptom Description	Decision
1	Does this patient have an infection that requires antibiotics? CORRECT DX	Patient is a 34-year-old previously healthy woman with dysuria, fever, hypotension, and flank pain	Patient has signs and symptoms concerning for pyelonephritis
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Table. Hypothetical Scenario Incorporating the 4 Moments of Antibiotic Decision Making Into Daily Practice

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American Journal of Infection Control 000 (2019) 1-6



Contents lists available at ScienceDirect

American Journal of Infection Control

journal homepage: www.ajicjournal.org

Major Article

Antibiotic stewardship targets in the outpatient setting

Alexis T. White PharmD^a, Collin M. Clark PharmD, BCPS^{a,1}, John A. Sellick DO, MS^{b,c}, Kari A. Mergenhagen PharmD, BCPS-AQID^{a,*}

^a Department of Pharmacy, Veterans Affairs Western New York Healthcare System, Buffalo, NY

^b Department of Medicine, Veterans Affairs Western New York Healthcare System, Buffalo, NY

^c Department of Medicine, Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY

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Infection Control

F881: The Role of the LTCF Nurse:

2019

tion choice.

Current literature recommends implementing and measuring the impact of outpatient antibiotic stewardship programs, based on disease state-specific targets and use of the Centers for Disease Control and Prevention's Core Elements for Outpatient Antibiotic Steward-ship.²⁴ Other studies have evaluated interventions to decrease prescriptions for upper respiratory tract infections, which are commonly viral in nature and require no antibiotic use in most cases.^{1,3} These studies relied on ICD coding to identify their targets for intervention and were focused on a handful of outpatient disease states, rather than the entire outpatient population who received oral antibiotics.²⁵ In our study, ICD-10-CM codes were unreliable and were not associated with an infection in 60% of the population.

A systemic review found that most outpatient stewardship programs focus on respiratory infections. Although these interventions decrease antimicrobial use without adversely impacting patients' outcomes, much of the data are of low-quality.²⁶ Although antibiotics were overused in respiratory infections, especially bronchitis, antibiotics were also heavily overused in urinary tract and skin and soft tissue infections. Results may have varied if the timeframe of our study was extended.

1 11

interventions before the patient leaves the office. Education should start with the patient regarding when an antibiotic is not needed and the harmful effects that can result when used inappropriately. This may decrease the feeling that the provider needs to appease the patient with an antibiotic, even when they know it is not truly indicated. We recommend beginning a stewardship program with alerts when azithromycin, amoxicillin/clavulanate, ciprofloxacin, and cephalexin are prescribed to capture maximal interventions and expand

from there.

Nurses are more likely going to take time to educate

SUPPLEMENTARY DATA

(vs doctors)......Pat 3/20/2019

Supplementary data related to this article can be found at https://doi.org/10.1016/j.ajic.2019.01.027.

References

1 1 .

1. Parente DM, Timbrook TT, Caffrey AR, LaPlante KL. Inappropriate prescribing in outpatient healthcare: an evaluation of respiratory infection visits among veterans in teaching versus non-teaching primary care clinics. Antimicrob Resist Infect Con-

Infection Control & Hospital Epidemiology (2019), **40**, 24–31 doi:10.1017/ice.2018.281



Original Article

A recipe for antimicrobial stewardship success: Using intervention mapping to develop a program to reduce antibiotic overuse in long-term care

Andrea Chambers PhD¹, Sam MacFarlane RN¹, Rosemary Zvonar BSc(Pharm)², Gerald Evans MD^{1,3},

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Chambers, A et al Infection Control & Hospital Epidemiology (2019), 40, 24 – 31 doi:10.1017/ice.2018.281 SEARCH:

Infection Control & Hospital Epidemiology

25

Table 1. Targeted Evidence-Based Practice Recommendations to Minimize Treatment for Asymptomatic Bacteriuria

Practice Recommendation	Description of the Practice Recommendation
Screening for bacteriuria	 Discontinue routine urine screening (eg, at admission and annually) unless residents have clinical signs and symptoms^a of a UTI.^{8,10} Accepted clinical signs and symptoms of a UTI are defined as: new difficult or painful urination (acute dysuria) alone or 2 or more of the following: fever, new flank or suprapubic pain, new or increased urinary frequency/ urgency, gross hematuria, and acute onset of delirium in residents with advanced dementia.^{11,12,19}
Diagnostic tools	Discontinue use of dipsticks to diagnose a UTI. Clinical symptoms of a UTI (defined above) and a positive culture are required for a UTI diagnosis. ^{8,20}
When to collect a urine sample for culture	Obtain urine cultures only when residents have been determined to have accepted clinical signs and symptoms of a UTI. ⁸
How to collect a urine sample	Obtain urine cultures using proper technique to avoid contamination. This includes the use of a clean catch or midstream collection or in/out catheterization and adherence to aseptic technique. Store urine cultures under refrigeration if transport is not immediate.
When to prescribe antibiotics	 Prescribe antibiotics only when clinical criteria for UTI are present (as defined above). Review and reassess when urine culture and susceptibility results are received. A bacterial count greater than or equal to 10⁸ CFU/L with typical signs or symptoms of a UTI is considered diagnostic.⁸ If antibiotics are started empirically, the physician or nurse practitioner should reassess the need for, choice, and duration of antibiotic therapy based on the culture and susceptibility report.

Note. UTI, urinary tract infection. CFU, colony-forming units. dementia.^{11,12}

^aAccepted clinical signs and symptoms of a UTI were based on the Loeb 2005 criteria¹⁹ additional considerations to reflect challenges in diagnosing residents who have advanced

Testing and antibiotic prescribing for urinary tract infections in nursing homes is frequently inappropriate.

- Asymptomatic bacteriuria is common in nursing home residents^{1,2}
- Up to half of antibiotics prescribed to treat urinary tract infection in older adults are unnecessary or inappropriate^{3,4}
 - Appropriateness of AU for UTI ranged from 15-45% depending on appropriateness criteria applied⁵
- Overtesting could lead to incorrectly diagnosing urinary tract infections, inappropriate treatment, adverse drug events and delays in diagnosis⁶

1. Nicolle et al. Int J Antimicrob Agents. 2006 Aug;28 Suppl 1:S42-8.

2. Nicolle et al. Infect Control Hosp Epidemiol. 2001 Mar;22(3):167-75.

3. Crnich et a,. J Am Geriatr Soc. 2017 Aug;65(8):1661-1663.

4. Trautner. Nat Rev Urol. 2012;9(2):85-93.

5. Eure et al, Infect Control Hosp Epidemiol 2017 Aug;38(8):998-1001.

6. Hald. JAMA Intern Med. 2016 May 1;176(5):587-8.


F881 ASP: CMS PATHWAY 2019 • LOEB MINIMUM CRITERIA

Antibiotic Stewardship Program:

Determine whether the facility has an antibiotic stewardship program that includes:

CMS-20054 (5/2017)

Page 4

Infection Prevention, Control & Immunizations

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- Protocols to review efficial signs and symptoms and laboratory reports to determine if the antibiotic is indicated or if adjustments to therapy should be made and identify what infection assessment tools or management algorithms are used for one or more infections (e.g., SBAR tool for urinary tract infection (UTI) assessment, Loeb minimum criteria for initiation of antibiotics);
- A process for a periodic review of antibiotic use by prescribing practitioners: for example, review of laboratory and medication orders, progress notes and medication administration records to determine whether or not an infection or communicable disease has been documented and whether an appropriate antibiotic has been prescribed for the recommended length of time. Determine whether the antibiotic use monitoring system is reviewed when the resident is new to the facility, when a prior resident returns or is transferred from a hospital or other facility, during each monthly drug regimen review when the resident has been prescribed or is taking an antibiotic, or any antibiotic drug regimen review as requested by the QAA committee;
- Protocols to optimize the treatment of infections by ensuring that residents who require antibiotics are prescribed the appropriate antibiotic;
- A system for the provision of feedback reports on antibiotic use, antibiotic resistance patterns based on laboratory data, and prescribing
 practices for the prescribing practitioner.

7. Did the facility conduct ongoing review for antibiotic stewardship? Yes No F881

Reference: Loeb M, et al. Infect Control Hosp Epidemiol 2001;22:120-4. Page 73

•2012, CDC, Stone, M et al Definitions for Surveillance LTCF (revisiting McGeer)

Indications to Treat a UTI See; CNS F650

Because many residents have chronic bacteriuria, the research-based literature suggests treating only symptomatic UTIs. Symptomatic UTIs are based on the following criteria:¹³

• Residents without a catheter should have at least three of the following signs and symptoms:

Fever (increase in temperature of >2 degrees F (1.1 degrees C) or rectal temperature >99.5 degrees F (37.5 degrees C) or single measurement of temperature >100 degrees F (37.8 degrees C));¹⁴

- New or increased burning pain on urination, frequency or urgency;
- New flank or suprapubic pain or tenderness;

 Change in character of urine (e.g., new bloody urine, foul smell, or amount of sediment) or as reported by the laboratory (new pyuria or microscopic hematuria); and/or

 Worsening of mental or functional status (e.g., confusion, decreased appetite, unexplained falls, incontinence of recent onset, lethargy, decreased activity).¹⁵
 Page 74

[Facility Logo] •Reference: Loeb M, et al. Infect Control Hosp Epidemiol 2001;22:120-4.

Date of Infection:	Date of Review:	Reviewed by:	
UTI: 🗆 evaluated 🗆 criteria met	LRTI: 🗆 evaluated 🗆 criteria met	SSTI: 🗆 evaluated 🗆 criteria met	FUO: 🗆 evaluated 🗆 criteria met
Suspected Infection Syndrome	Minimum Criteria for Starting Antibiot	ic Therapy	
Urinary tract infection without cathete	er Either one of the following criteria □ Acute dysuria, OR □ Temp >37.9 °C (100 °F) or 1.5 °C (2. ≥1 of the following new or worsenin □ Urgency □ Suprapubic pain □ Urinary incontinence	4 ºF) above baseline, AND ng symptoms □ Frequency □ Gross hematuria □ Costovertebral angle tenderness	
with cathete	er At least one of the following criteria Rigors New onset delirium	 □ Temp >37.9 °C (100 °F) or 1.5 °C □ New costovertebral angle tende 	(2.4 °F) above baseline rness
Note: Residents with intermittent cathet Urine culture should be sent prior t Antibiotics should not be started fo	erization or condom catheter should be categ o starting antibiotics or cloudy or foul smelling urine	gorized as 'without catheter'	
Lower respiratory tract infection			
with temp >38.9 °C (102 °	F) At least one of the following criteria Productive cough	□ Respiratory rate >25 breaths / m	inute
with temp >37.9 °C (100 °F) or 1.5 ⊆ (2.4 ºF) above baselin	 Both of the following criteria Cough, AND At least one of the following criteria Pulse >100 beats / minutes Rigors 	□ Delirium □ Respiratory rate >25 breaths / m	inute
afebrile with COPD an >65 years o	d Both of the following criteria d □ New or increased cough □ Purulent sputum production		
afebrile without COP	 All of the following criteria New cough Purulent sputum production At least one of the following criteria Delirium 	a □ Respiratory rate >25 breaths / m	inute

•https://asap.nebraskamed.com/wp-content/uploads/sites/3/2018/04/Loeb-minimum-criteria-

•for-initiating-antibiotic-therapy-checklist.pdf

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•Resident with indwelling catheter

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•hyppte-sion
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•Any one of the above pre SE-n:

•Resident without indwelling catheter: •Acute dysura alone; •OR •Single tecnreature of 100T (3B°C), repeater tempefatures of Dg 'F (37"Cr MD at least one new or worsening of the following •urgencysurorapubic pain •frequency gross hematuria onstovertebral angle te-demess newi'veccseniT u-r.ary incontinence



LU.S. Department of Health & Human Services

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SBAR-UTI

American Journal of Infection Control

•LTCFs [33%] had higher CDI prevalence compared to ACHs [15%] and clinics [12%].

< Previous Article October 1, 2017 Volume 45, Issue 10, Pages 1157–1159 Next Article

To read this article in full, please review your options for gaining access at the bottom of the page.

Prevalence of *Clostridium difficile* infection in acute care hospitals, long-term care facilities, and outpatient clinics: Is *Clostridium difficile* infection underdiagnosed in longterm care facility patients? •Go to: https://doi.org/10.1016/j.ajic.2017.04.288 PAT PRESTON MARCH 20, 2019



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American Journal of Infection Control

journal homepage: www.ajicjournal.org



Major Article

Lack of improvement in antimicrobial prescribing after a diagnosis of *Clostridium difficile* and impact on recurrence



Richard L. Watson MD, PhD^a, Christopher J. Graber MD, MPH^{b,c,*}

Patients who receive inappropriate courses of antibiotics after their initial case of CDI
 were at <u>significantly increased risk</u> for recurrent CDI than those given only appropriate
 antimicrobials, •GO TO: ttps://doi.org/10.1016/j.ajic.2018.04.213

Key Words: Clostridium difficile C diff **Background:** Antimicrobial use is one of the largest modifiable risk factors for development of *Clostridium difficile* infection (CDI). We sought to determine if a recent diagnosis of CDI affected the appropriateness of subsequent antimicrobial prescribing.



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Major Article

Antibiotic exposure and risk of community-associated *Clostridium difficile* infection: A self-controlled case series analysis



Giulio DiDiodato, MD, PhD^a, Lauren Fruchter, MD^b

•<u>GO TO:</u>

•<u>https://doi.org/10.1016/j.ajic.2018.06.016 0196-6553/</u>



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Major article

Optimizing treatment of respiratory tract infections in nursing homes: Nurse-initiated polymerase chain reaction testing

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F881: The Role of the LTCF Nurse:

<u>2019</u>

CONCLUSIONS

In nursing homes, the introduction of nurse-initiated PCR testing of respiratory specimens is feasible and useful in terms of identifying the cause of many respiratory illnesses and outbreaks. However, the current study suggests additional resources may be required to influence antibiotic prescribing behaviors for RTIs in nursing homes. Guidance from clinical algorithms or other support, such as input from an AMS clinician,²⁴ in addition to nurse-initiated PCR testing, may be required to impact antibiotic prescribing for RTIs in nursing homes.

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- \blacktriangleright More than half the patients had sepsis;
- > In 74% of them, sepsis was present at admission.atients with sepsis were more likely to come from an acute rehabilitation center or *long-term care facility* and more likely to be admitted to the intensive care unit.
- Sepsis was the immediate cause of death in 35% of patients and contributed to the \geq deaths of another 8%.
- Suboptimal care, most often delay of >3 hours in administration of antibiotics, was

identified in 23% of sepsis-associated deaths.

Nearly all deaths attributed to sepsis were considered to be unpreventable.

Rhee C et al. Prevalence, underlying causes, and preventability of sepsis-associated mortality in US acute care hospitals. JAMA Netw Open 2019 Feb 1; 2:e187571. https://doi.org/10.1001/jamanetworkopen.2018.7571 PAT PRESTON MARCH 20, 2019



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Vital Signs: Epidemiology and Recent Trends in Methicillin-Resistant and in Methicillin-Susceptible Staphylococcus aureus Bloodstream Infections — United States

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Abstract

Introduction: *Staphylococcus aureus* is one of the most common pathogens in health care facilities and in the community, and can cause invasive infections, sepsis, and death. Despite progress in preventing methicillin-resistant *S. aureus* (MRSA) infections in health care settings, assessment of the problem in both health care and community settings is needed. Further, the epidemiology of methicillin-susceptible *S. aureus* (MSSA) infections is not well described at the national level.

ASP: ROLE OF PHARMACIST F881 and drug reviews:F757

- Centers for Medicare and Medicaid Services- LTC requirements
- 483.45 Pharmacy Services
 - A pharmacist is required to review the resident's medical record coincident with the drug regimen review when...during each monthly drug regimen review when the resident has been prescribed or is taking a psychotropic drug, <u>an antibiotic</u>, or any drug the QAA Committee has requested be included in the pharmacist's monthly drug review.

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2019

QREGON'S PHARMACY SERVICES

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CONSONUS

PHARMERICA

PROPACPAYLESS

- •F881 ASP: Optimizing the use of antibiotics to ensure best outcome for the resident while minimizing harms
- Right Diagnosis: clinical guidelines; Loeb and 2012 CDC
 (McGeer) guidelines; F650 UTI guidance;
- > Right Drug: clinical guidelines; pharmacist; F757?
- > Right Route & Dose: oral is safer?; high dose better?;
- > Right Duration: shorter better?
- > Timely De-escalation: communicate with provider
 - Time out (48-hour re-assess):

OHA NHSN Reporting Requirement Review

Roza Tammer, MPH, CIC Healthcare-Associated Infections Program HAIAC March 20, 2019



PUBLIC HEALTH DIVISION Acute and Communicable Disease Prevention Section

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Mandatory HAI reporting requirements

All current requirements are outcome measures except for one process measure, healthcare personnel influenza vaccination

- Central line-associated bloodstream infections (CLABSIs)
 - Adult, pediatric, and neonatal ICUs
 - Adult and pediatric medical, medical/surgical, and surgical wards
- Catheter-associated urinary tract infections (CAUTIs)
 - Adult and pediatric ICUs
 - Adult and pediatric medical, medical/surgical, surgical, and inpatient rehabilitation wards



Mandatory HAI reporting requirements

- Laboratory-identified methicillin-resistant *Staphylococcus aureus* (MRSA) bloodstream infections (BSIs)
 - Facility-wide, inpatient
- Laboratory-identified *Clostridium difficile* infections (CDI)
- Surgical site infections (SSIs) resulting from the following procedures:
 - Coronary artery bypass graft (CBGB)
 - Knee prosthesis (KPRO)
 - Colon surgery (COLO)
 - Hip prosthesis (HPRO)
 - Abdominal hysterectomy (HYST)
 - Laminectomy (LAM)



Data trends in Oregon – CLABSI & CAUTI









Data trends in Oregon – MRSA & CDI





Data trends in Oregon – CBGB, KAM, KPRO









Data trends in Oregon – HYST, HPRO, COLO









Expand existing hospital reporting

- New measures
 - Antimicrobial use and resistance (AU/AR)
 - Lab-based surveillance for MDROs (VRE, CephR-Klebsiella, CRE, MDR Acinetobacter spp.)
 - Prevention process measures for MDROs (hand hygiene, gown and gloves, active surveillance testing adherence)
 - Central line insertion practices (CLIP)
 - VAE, PedVAE, and PNEU (PedVAP)
 - HCP exposure
 - Blood safety surveillance
- New locations for CLABSI and CAUTI
- New procedure types or outpatient procedures for SSI
- New variables (race, ethnicity, DOB, etc.)



Expand reporting to new facility types

- Current requirements apply to acute care, critical access, and long-term acute care hospitals
- NHSN can support additional reporting for other facility types (both outcome and process measures)
 - Ambulatory surgery centers
 - Long-term care facilities
 - Outpatient dialysis facilities
 - Inpatient rehabilitation facilities
 - Inpatient psychiatric facilities



CMS quality reporting program requirements

	Hospital	Outpatient hemodialysis	Long-term care hospital	Inpatient rehabilitation facility	Cancer hospital
CLABSI	Adult, pediatric, and neonatal ICUs; adult and pediatric M, S, M/S wards		Adult and pediatric LTAC ICUs and wards		All bedded inpatient locations
CAUTI	Adult and pediatric ICUs; adult and pediatric M, S, M/S wards		Adult and pediatric LTAC ICUs and wards	Adult and pediatric IRF wards	All bedded inpatient locations
SSI	Inpatient COLO and HYST				Inpatient COLO and HYST
MRSA LabID Event	FacWideIN		FacWidelN	FacWidelN	FacWideIN
CDI LabID Event	FacWideIN		FacWideIN	FacWideIN	FacWideIN
VAE			Adult LTAC ICUs and wards		
Dialysis event		\checkmark			



NHSN requirements in other states

- New Hampshire
 - Hospitals: CLABSI in all ICU; CLIP in all ICU; CAUTI in all ICU; SSI following CABG, COLO, HYST, KPRO; and HCP flu vaccination
 - ASCs: SSI following BRST, HER, and FX
- Pennsylvania
 - Hospitals: All HAI associated with any inpatient location using the Patient Safety Module
- Alaska
 - May "view reports made by facilities bound by CMS rule concerning certain HAIs"



Questions and discussion

- How, if at all, should we consider expanding our reporting requirements?
- How, if at all, should we consider reducing our reporting requirements?
- How can our reporting requirements best support and align with our existing and future priorities?

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Capabilities for National Healthcare Safety Network (NHSN) reporting by facility type

	ASC (n=79)*	LTACH (n=1)	Outpatient hemodialysis facilities (n=71)*	ACH/CAH (n=61)	LTCF (depends on licensure type)	IRF (n=8)*	IPF (n=12)*
SSI	\checkmark	\checkmark		\checkmark		\checkmark	\checkmark
Same-day	\checkmark						
outcome measures							
HCP vaccination	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
CDI and MDRO					\checkmark		
UTI					\checkmark		
Prevention process					\checkmark		
measures							
HCP exposure		\checkmark		\checkmark	\checkmark	\checkmark	\checkmark
Dialysis events							
Dialysis prevention			\checkmark				
process measures							
CLIP		✓	✓	✓		\checkmark	✓
Dialysis patient			\checkmark				
influenza							
vaccination							
AU/AR		✓ ✓		✓ ✓			✓
CLABSI		✓		✓		✓	✓
CAUTI		✓		✓		\checkmark	\checkmark
CDI, MRSA, and		\checkmark		\checkmark		\checkmark	\checkmark
MDRO							
VAE		✓		✓		✓	
PedVAE		✓		✓		\checkmark	
PNEU (PedVAP)		\checkmark		✓		\checkmark	\checkmark
Blood safety		\checkmark		✓		\checkmark	\checkmark

*Estimates of facility numbers based on Oregon Health Authority and Centers for Medicare and Medicaid Services websites

Definitions:

- Same day outcome measures: Patient burn, patient fall, wrong site, wrong side, wrong patient, wrong procedure, wrong implant, all-cause hospital transfer/admission
- HCP vaccination: Influenza vaccination
- Prevention process measures: Hand hygiene, glove and gown adherence

Capabilities for National Healthcare Safety Network (NHSN) reporting by facility type

- Dialysis events: IV antimicrobial start, positive blood culture, and pus, redness, or increased swelling by specific vascular access site type
- Dialysis prevention process measures: Hand hygiene, catheter connection/disconnection, exit site care, arteriovenous fistula graft cannulation/decannulation, dialysis station routine disinfection, injection safety medication preparation and administration
- HCP exposure: HCP exposure to blood/body fluids and subsequent prophylaxis, treatment, and lab testing
- VAE: Lower respiratory tract events in mechanically ventilated adult inpatients
- pedVAE: Lower respiratory tract events in mechanically ventilated inpatients in pediatric and neonatal locations
- PNEU (PedVAP): Lower respiratory tract events in mechanically ventilated pediatric inpatients
- Blood safety: Adverse reactions that are potentially related to a transfusion

Abbreviations:

- ASC: Ambulatory surgery center
- LTACH: Long-term acute care hospital
- ACH: Acute care hospital
- CAH: Critical access hospital
- LTCF: Long-term care facility
- IRF: Inpatient rehabilitation facility
- IPF: Inpatient psychiatric facility
- SSI: Surgical site infection
- HCP: Healthcare personnel
- CDI: Clostridioides difficile infection
- MDRO: Multi-drug resistant organism
- UTI: Urinary tract infection
- CLIP: Central line insertion practices
- AU/AR: Antimicrobial use/antimicrobial resistance
- CAUTI: Catheter-associated urinary tract infection
- CLABSI: Central line-associated bloodstream infection
- MRSA: Methicillin-resistant *Staphylococcus aureus*
- VAE: Ventilator-associated event
- PNEU: Pneumonia site-specific infection
- VAP: Ventilator-associated pneumonia