Los Angeles County Department of Public Health

Health Officer Order for the Reporting of Carbapenem-Resistant *Enterobacteriaceae* (CRE) and Antimicrobial Resistance (AR)

A Review of the Reporting Requirements and Instructions

February 2017



Overview

- CRE Overview and Definition
- Reporting for Facilities Enrolled in NHSN
 - Group info
 - Required elements
- Reporting for Facilities Not Enrolled in NHSN
 - Using the CRE Epidemiology Report Form- SNFs only
- Antibiogram Reporting Instructions
 - How to submit
 - Recommendations for preparation
- Updates and Resources



CRE in Los Angeles County

- Voluntary CRE data reported into NHSN in 2015 from 22 hospitals
 - Pooled mean HO rate: 0.94 per 10,000 pt days
- Public Health Lab Enhanced CRE surveillance program
 - Over 600 isolates submitted by 30 laboratories in LAC
 - Predominant carbapenemase identified: KPC
- No current estimates of CRE since 2010-2012 CRKP surveillance period



CRE and AR Health Officer Order

- Issued January 19, 2017 to acute care hospitals and skilled nursing facilities (SNFs) in Los Angeles County
- Mandated the following:
 - Facilities enrolled in NHSN report CRE via LabID
 - SNFs not enrolled in NHSN report via submission of CRE Epidemiology Report Form and lab report to LACDPH Morbidity Unit
 - All facilities that create an antibiogram to provide the most recent report to LACDPH annually



Reporting in Other Health Jurisdictions

- Pasadena Public Health Department and Long Beach Department of Health and Human Services issued their own Orders with the same reporting mandate to ACHs and SNFs in their jurisdictions
 - Facilities in those jurisdictions who are enrolled in NHSN will also join the LA County CRE NHSN group to fulfill the reporting requirement
 - Facilities not enrolled in NHSN will report to their local health department



CRE Surveillance Definition

Any Escherichia coli, Klebsiella oxytoca, Klebsiella pneumoniae, or Enterobacter spp. demonstrating resistance by one or more of the following methods:

- Resistant to imipenem, meropenem, doripenem, or ertapenem by standard susceptibility testing methods (i.e., minimum inhibitory concentrations of ≥4 mcg/mL for doripenem, imipenem and meropenem or ≥2 mcg/mL for ertapenem) OR
- Production of a carbapenemase (e.g., KPC, NDM, VIM, IMP, OXA-48)
 demonstrated using a recognized test (e.g., polymerase chain reaction
 (PCR), metallo-β-lactamase test, modified-Hodge test, Carba-NP,
 Carbapenem Inhibition Method (CIM)).



Reporting for Facilities Enrolled in NHSN



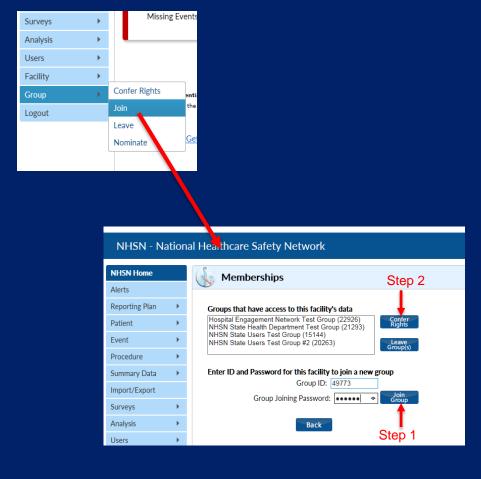
Compliance with Reporting Via NHSN

- Join new LA County CRE Group
- Confer rights to new group February 28th deadline
- Add CRE to monthly reporting plan
- Create custom reporting fields
- Note this applies to <u>all</u> healthcare facilities enrolled in NHSN within Los Angeles County, Pasadena, and Long Beach Public Health jurisdictions



Joining New LA County CRE NHSN Group

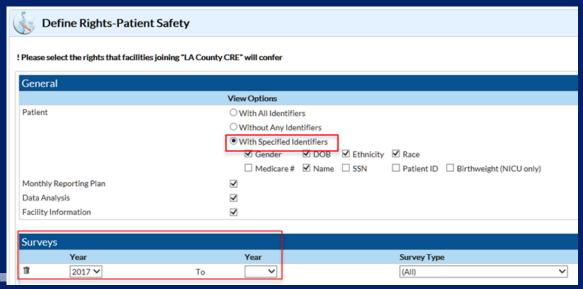
- In the left menu bar select Group
 Join
- In the Memberships page:
- Enter Group ID: 49773
- Enter Group Joining Password: lacdph (all lowercase)
- Click 'Join Group'
- Click the LA County CRE name in the Groups box
- Click 'Confer Rights'





Conferring Rights

- Order requires the inclusion of patient identifiers for all CRE cases
 - Specified Identifiers: Name, Gender, DOB, Ethnicity,
 Race
 - Surveys: going from 2017 forward (leave 'to' blank)

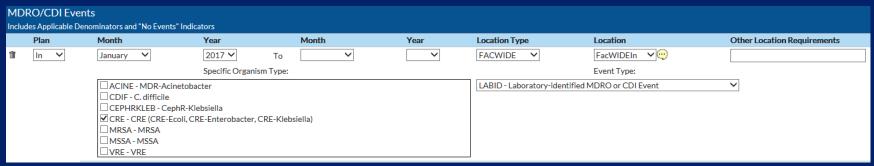




Conferring Rights (cont.)

Under MDRO/CDI Events:

- 1. Location Type: FACWIDE
- 2. Location: FacWIDEIn
 - i. NOTE: Selecting FacWIDEIn will automatically add ED and 24-HR observation areas to your reporting locations.
- 3. Specific Organism Type: CRE CRE (CRE-Ecoli, CRE-Enterobacter, CRE-Klebsiella)
- 4. Event Type: LABID Laboratory-identified MDRO or CDI Event
 - i. NOTE: Do not select Blood Specimens only. The Health Officer Order specifies CRE from any specimen source is to be reported.



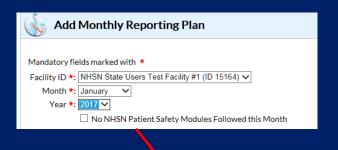


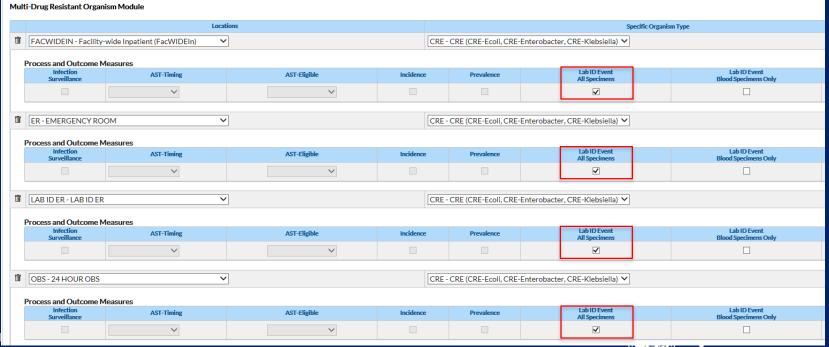
Adding CRE to Monthly Reporting Plan

- If you already have LabID CRE in your monthly reporting plan check to make sure you are reporting All Specimens
- From NHSN menu bar selecting Reporting Plan →
 Find
 - In Month field select 'January'
 - In Year field select '2017'
 - Once in the January 2017 plan scroll down to bottom of screen and select 'Edit'



Adding CRE to Monthly Reporting Plan (cont.)





Custom Reporting Fields

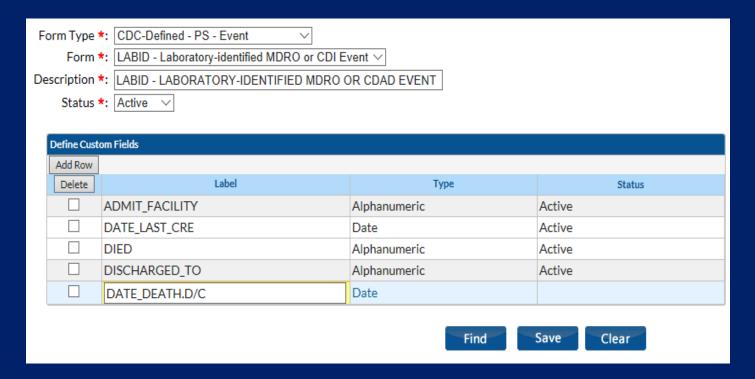
- Additional information is being requested for reported cases including prior healthcare exposures
- Note: 5 Custom Fields <u>must</u> be created in the order listed on the next slide, as NHSN will label the variables 'custom 1', 'custom 2', etc.



Custom Reporting Fields (cont.)

- 1. ADMIT_FACILITY: name of facility that transferred the patient to your facility
- **2. DATE_LAST_CRE**: Enter the date of the last CRE positive test for the patient in the current admission, regardless of specimen source
- **3. DISCHARGED_TO:** If known, indicate the name of the facility to which the patient was discharged
- **4. DIED**: Indicate Yes, No, or Unk if the patient died during current hospitalization
- **5. DATE_DEATH.D/C**: Enter the date the patient was discharged; or if the patient died, enter the date of death here

Creating Custom Fields (cont.)



- 1. Click under 'Label' field and type in ADMIT_FACILITY
- 2. Click under 'Type' field and from drop down menu select Alphanumeric
- 3. Click under 'Status' field and select 'Active'
- 4. Click 'Add Row' to add the next Custom Variable Field and continue until all 5 variables are created

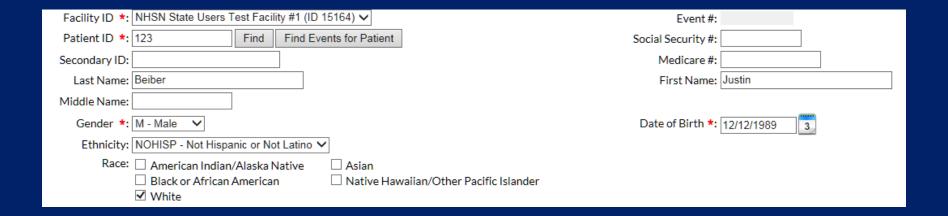
Summary Data Entry

- For each month you report into NHSN, you must enter corresponding facility level data
 - i.e., Total Patient Days, Total Facility Admissions, etc.
- Note: if you did not have a positive test for one or more of the specific CRE organisms in the Summary Data months, you must check the 'Report No Events' box for the individual organism

MDRO & CDI Infection									
Specific Organism Type	CRE- Ecoli	Report No Events	CRE- Enterobacter	Report No Events	CRE- Klebsiella	Report No Events			
Infection Surveillance									
LabID Event (All specimens)	* 🗸		* 🗸		* 🗸				
LabID Event (Blood specimens only)									



Sample Event Entry – Patient Information



Ensure that you are entering the required patient information fields, including name, DOB, Gender, and Race/Ethnicity



Sample Event Entry – Event Information

	Event Type ★: LABID - Laboratory-identified MDRO or CDI Event								
	Date Specimen Collected *: 01/13/2017								
	Specific Organism Type *: CREKLEB - CRE-Klebsiella								
	Was the bacterial isolate tested for carbapenemase? *: Y - Yes								
			If Yes, which tests were done (check all that apply): *:						
			☑ PCR-KPC - Polymerase chain reaction - Klebsiella pneumoniae carbapenemase						
			☐ PCR-NDM - Polymerase chain reaction - New Delhi metallo-ß-lactamase						
			☐ PCR-IMP - Polymerase chain reaction - Imipenemase						
			☐ PCR-VIM - Polymerase chain reaction - Verona Integron-encoded metallo-ß-lactamase						
			☐ PCR-OXA-48-like - Polymerase chain reaction - Oxacillinase-48 like						
Completion of	this section is also required by the		☐ MHT - Modified Hodge Test						
Health Officer	Order if your laboratory tests for	4	☐ CNP - Carba NP						
the presence of	of a carbapenemase		☐ MBLe - Metallo-ß-lactamase E-test						
			☐ MBLs - Metallo-ß-lactamase screen						
			☐ OTHCTM - Other (please specify)						
	☐ UNKCTM - Unknown								
	Did the isolate test positive for carbape	enemase? *:	Y - Yes						
			If Yes, please identify which carbapenamase were identified (check all that apply): *:						
			☑ (KPC) Klebsiella pneumoniae carbapenemase						
			☐ (NDM) New Delhi metallo-ß-lactamase						
			☐ (IMP) Imipenemase						
			☐ (VIM) Verona integron-encoded metallo-ß-lactamase						
			☐ (OXA-48 like) Oxacillinase-48 like						
			☐ (NS-Carba) Nonspecific carbapenemase activity (e.g., MHT or Carba NP)						
			☐ (NS-MBL) Nonspecific metallo-ß-lactamase activity (e.g., MBL E-test or MBL screen)						
			☐ OTHCDT - Other (please specify)						
			☐ UNKCDT - Unknown						
		Outpatient *:	N - No 🗸						
	Specimen Body S	ite/Source *:	CARD - Cardiovascular/ Circulatory/ Lymphatics 🗸						
	Specim	nen Source *:	BLDSPC - Blood specimen						
	Date Admitted	to Facility *:	01/08/2017 3						
		Location *:	235 - ICU 🗸						
	Date Admitted t	o Location *:	01/11/2017						

Sample Event Entry – Additional Patient Information

Last physical overnight location of patient immed facility (applies to specimen(s) collected in outpati		lursing Home/Skilled Nursing Facility
Has patient been discharged from your f	facility in the past 4 weeks?: Y - Yes	
Date of last dis	scharge from your facility *: 12/28/20	16
Has the patient been discharged from another f	facility in the past 4 weeks?: Y - Yes	
	(i.e., acut	ng Home/Skilled Nursing Facility r Inpatient Healthcare Setting e care hospital, IRF, LTAC, etc.)
Documented evidence of previous infection or co organism type from a previously reported LabID	Event in any prior month ?: N - NO	
Custom Fields		
ADMIT_FACILITY: LAC SNF	DATE_LAST_CRE: 01/19/2017	
DIED: NO	DISCHARGED_TO: LAC SNF	
DATE_DEATH.D/C: 01/20/2017		

 If the last physical overnight location for the patient was a SNF or other inpatient facility please complete this section regardless of when the specimen was collected during the admission.



NHSN Summary

- Ensure you join and confer rights to the <u>new</u> LA County CRE NHSN group
- Add CRE reporting of all specimens to monthly plan
- Create custom variables
- Ensure reporting of carbapenemase testing



Reporting for Facilities Not Enrolled in NHSN



Reporting in Other Jurisdictions

- SNFs in Pasadena Public Health Department or Long Beach Department of Health and Human Services jurisdictions will report to the appropriate health department
- Long Beach DHHS reporting info
 - Submit lab report via fax to (562) 570-4374
 - Questions to Emily Holman: emily.holman@longbeach.gov
- Pasadena PHD reporting info
 - Submit CMR and lab report via fax to (626) 744-6115
 - Questions to (626) 744-6089

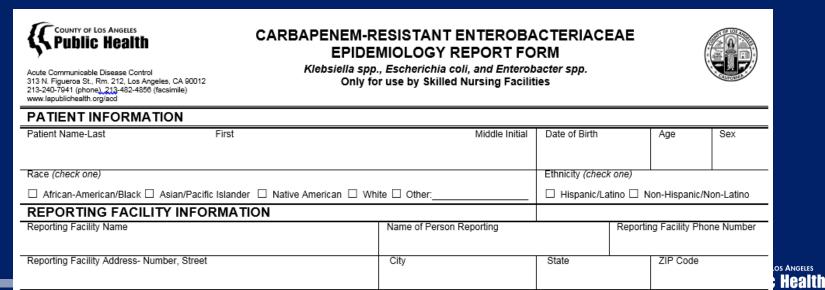


Reporting to LACDPH Morbidity Unit

- CRE Epidemiology Report Form will be available at http://ph.lacounty.gov/acd/EpiForms.htm
- Submit completed CRE Epi Form and laboratory report with susceptibility data to:
 - LACDPH Morbidity Unit at (888) 397-3778
- Note: reference lab submission of lab report does not fulfill the reporting requirement; CRE Epi Form must be submitted

CRE Epidemiology Form – Patient Information

- Similar to the standard LACDPH CMR form, include:
 - patient information (name, DOB, etc.)
 - reporting facility name, address
 - name and phone number of the person submitting the report



CRE Epidemiology Form - Diagnostic Information

- This section of the form is similar to the NHSN event entry form
 - Specimen and organism information
 - Testing methods
 - Was the isolate tested for carbapenemases?
 - If so, what was the result?

DIAGNOSTIC TESTS							
Organism identified: ☐ Klebsiella spp. ☐ E. coli ☐ Enterobacter spp			Date of collection:				
Specimen source: Blood Sputum Wound- sterile site Wound- non-sterile site Urine Rectal swab Other:							
Patient status at time specimen was collected: Was the bacterial isolate tested for the presence of a carbapenemase?							
presence of a calibapenemase?		•	☐ Broth MIC ☐ PCR ☐ ETest ☐ CarbaNP				
☐ Colonization ☐ Infection ☐ Unsure/unknown ☐ Yes ☐ No ☐ Unk			☐ MHT ☐ Unk ☐ Other (specify):				
If Yes, what carbapenemase was detected (check all that apply):							
□ Klebsiella pneumoniae carbapenemase (KPC) □ New Delhi metallo-β-lactamase (NDM) □ Imipenemase (IMP) □ OXA-48-like							
□ Verona integron-encoded metallo-β-lactamase (VIM) □ Negative/none detected □ Other specify):							

CRE Epidemiology Form - Healthcare Presentation

- Information for this section should be taken from the resident's current admission
 - If resident was admitted from a different healthcare facility in the 4 weeks prior to current positive test, indicate the type of facility and its name (if known)
 - Indicate if and where the resident has been discharged to, or if they have died-include dates

HEALTHCARE PRESENTATION							
Date of admission:	Has the patient b months?	een a resident of your facility for more than 3	Was the resident admitted from a healthcare facility in the four weeks prior to their current positive test?				
	☐ Yes ☐ No	□ Unk	☐ Yes ☐ No ☐ Unk				
If Yes, what type of facility?		Disposition:					
☐ Hospital ☐ LTAC ☐ Other SNF		☐ Current resident ☐ Discharged to hospi	ital 🔲 Discharged to LTAC 🔲 Discharged to another SNF				
Facility name:		☐ Discharged home ☐ Date of discharge	: Died - Date of Death:				
Additional notes:							

Non-NHSN Reporting Summary

- For facilities in Pasadena and Long Beach:
 - Report to your health department using the appropriate CMR form
- For facilities in LAC:
 - Report to the LACDPH Morbidity Unit
 - Complete the CRE Epidemiology Report Form, and include the final lab report including susceptibility testing



Antibiogram Reporting Instructions



Submission of Antibiogram Data

- Mandated facilities include:
 - General acute care hospitals
 - Long-term acute care hospitals
 - Skilled nursing facilities
- Submit annual antibiograms via email by <u>June 1st</u>
 - LA County and Long Beach: hai@ph.lacounty.gov
 - Pasadena: hai@cityofpasadena.net

Requirements

- Submit data in Excel format (.xls or .xlsx)
- Include (%S) from all specimen sources
- Report number of isolates tested for each drug-bug combo
- Report 1 year of inpatient data only

More information can be found in **Section 1** of the "Instructions for Complying with the 2017 Antibiogram Reporting Requirements" document



Recommendations for Preparation of an Antibiogram

- Include only final, verified results
- Include only drugs that are routinely tested
 - Do not include those tested on request, by reflex, or via stepped/cascade testing protocol
- Include the first isolate per patient per year
- Exclude results obtained from surveillance studies
- Use most current breakpoints (when possible)

More information can be found in **Section 2** of the "Instructions for Complying with the 2017 Antibiogram Reporting Requirements" document



Example Submission Template

,									
		Ampicillin		Ceftaroline		Ceftriaxone		Ciprofloxacin	
Organism Name	Total number of isolates (N)	N isolates tested	%S						
E. faecalis									
E. faecium									
Enterococcus spp.									
Methicillin-resistant Staphylococcus aureus									
Methicillin-sensitive Staphylococcus aureus									
Streptococcus agalactiae (Group B Strep)									
Streptococcus pneumoniae (Group A Strep)									
Streptococcus pneumoniae (meningitis)									
Streptococcus pyogenes									
N/A: not applicable									
*less than 30 isolates tested									

1 Available at: http://publichealth.lacounty.gov/acd/antibiogram.htm



Antimicrobial Stewardship & Resources

LACDPH Website:

http://publichealth.lacounty.gov/acd/AntimicrobialStewardship.htm

Acute Communicable Disease Control News & Updates Diseases & Conditions Health Care Professionals Guidelines/Manuals Reporting a Disease Materials Los Angeles Health Alert Network (LAHAN) Skilled Nursing Facilities Resources Info for the Public (FAQ's) Report a Problem Health Advisories Health Ed Materials Reports, Publications & Presentations Frequently Used Links

Contact Information

County of Los Angeles Department of Public Health Acute Communicable Disease Control 313 N. Figueroa Street, #212 Los Angeles, CA 90012

Phone: (213) 240-7941

Acute Communicable Disease Control

Antimicrobial Stewardship

Antimicrobial stewardship is a set of coordinated approaches to improve the use of antimicrobials, such as antibiotics, within a healthcare facility. Antimicrobial stewardship is not only important in preventing the spread of antimicrobial resistance, but also improves patient outcomes and reduces costs for healthcare facilities.

Everyone in a healthcare facility has a role in making sure antimicrobials are used appropriately. Check out the additional resources below to learn more about how you and your facility can develop and/or improve your antimicrobial stewardship program.

New Resources

- 2015 Los Angeles County Department of Public Health Hospital Questionnaire Regarding Nurse Competency and Education in Antimicrobials: A Summary (10-28-16)
- 2015 LACDPH Hospital Questionnaire Regarding Antimicrobial Stewardship Programs: Final Results (6-20-16)
- NQF Antibiotic Stewardship Playbook (May 2016)
- IDSA/SHEA Guidelines for Implementing an Antibiotic Stewardship <u>Program</u> (May 2016)

Additional Resources

- CDC: Core Elements of Hospital Antibiotic Stewardship Program
- CDC: Core Elements of Antibiotic Stewardship for Nursing Homes
- CDC: Stewardship Program Examples
- CDPH: 2015 Antimicrobial Stewardship Program (ASP) Toolkit



Get Smart: Know When Antibiotics Work Tri-fold Brochure (English) (Spanish)



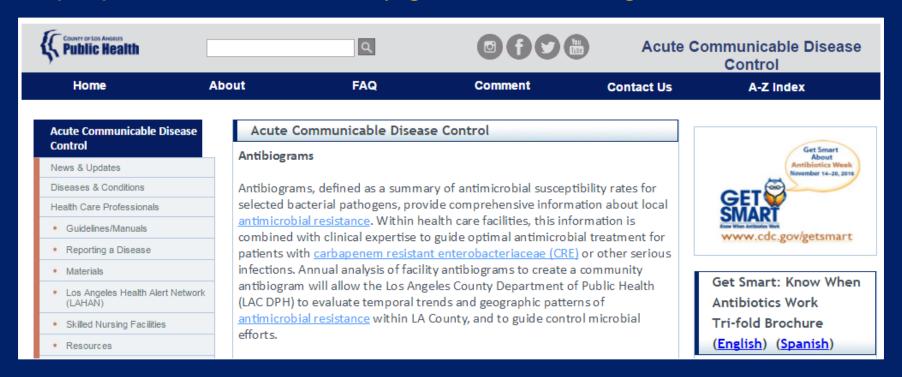
Get Smart: Know When Antibiotics Work Rx Pad



Updates & More Resources

LACDPH Website:

http://publichealth.lacounty.gov/acd/antibiogram.htm



LACDPH CONTACTS

- LA County hospitals: contact your LA County LPHN
- LA County SNFs: hai@ph.lacounty.gov
- CRE reporting updates: http://publichealth.lacounty.gov/acd/Diseases/CRE.htm
- Antibiogram reporting updates: http://publichealth.lacounty.gov/acd/antibiogram.htm

