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TO: Hospital and Laboratory Reporting Staff
 FROM: Iowa Department of Public Health, Center for Acute Disease Epidemiology
 DATE: December 9, 2016
 RE: Guidance for Electronic Laboratory Reporting of Carbapenem-resistant Enterobacteriaceae (CRE) infection or Colonization in Iowa Residents

Effective January 1, 2017, all Iowa health care providers and public, private, and hospital laboratories are required to report in three days any suspected or confirmed cases of Carbapenem-Resistant Enterobacteriaceae infection or colonization to the department. In addition, all laboratories are required to forward CRE isolates from any body site (e.g., urine, blood, sputum, wound, etc.) and the results of antibiotic susceptibility testing and carbapenemase testing performed on the isolate to the State Hygienic Laboratory.

Electronic Laboratory Reporting:

A new item called [Carbapenem-resistant Enterobacteriaceae – CRE](#) has been added to the smartLab alphabetical Organism-Condition list. The mapping includes the following LOINC & SNOMED code combinations:

LOINC Code	LOINC Description	SNOMED Code	SNOMED Description
73834-4	Bacteria.carbapenem resistant identified : Prid : Pt : Anal : Nom	715307006	Carbapenem resistant Escherichia coli
73834-4	Bacteria.carbapenem resistant identified : Prid : Pt : Anal : Nom	IDPHR-353	Carbapenem resistant Klebsiella spp
73834-4	Bacteria.carbapenem resistant identified : Prid : Pt : Anal : Nom	IDPHR-354	Carbapenem resistant Enterobacter spp
73834-4	Bacteria.carbapenem resistant identified : Prid : Pt : Anal : Nom	IDPHR-355	Carbapenem resistant Citrobacter spp

NOTE: specimen information encoded in the LOINC code is ignored and captured from the specimen (SPM) segment in the HL7 message.

Antibiotic information will be collected by non-electronic means and need not be included in the HL7 message. If it is included in the message, additional mapping is necessary under the [Susceptibility – Susceptibility](#) category in the Organism-Condition list. The following LOINC & SNOMED code combinations are provide for translation purposes.

Depending on how your lab intends to express the result, there are 2 codes to choose from;

1. Quantitative results (QN) – the numeric LOINC codes in the table below; no SNOMED mapping required, but **please pass an interpretation value (Resistant, Intermediate, Susceptible) in OBX8, Abnormal Flags (see next section below).**
2. Ordinal results (ORD) – the LOINC codes in the table below that begin with “DPH”; SNOMED mapping is required. Resistant, Intermediate, and Susceptible values are available on the smartLab CRE SNOMED tab.

LOINC Code	LOINC Description	SNOMED Code	SNOMED Description
18932-4	Imipenem : Susc : Pt : Isolate : Qn	N/A	N/A
DPH18932-4	Imipenem : Susc : Pt : Isolate : Ord	30714006	Resistant
18943-1	Meropenem : Susc : Pt : Isolate : Qn	N/A	N/A
DPH18943-1	Meropenem : Susc : Pt : Isolate : Ord	30714006	Resistant
60535-2	Doripenem : Susc : Pt : Isolate : Qn	N/A	N/A
DPH60535-2	Doripenem : Susc : Pt : Isolate : Ord	30714006	Resistant
35802-8	Ertapenem : Susc : Pt : Isolate : Qn	N/A	N/A
DPH35802-8	Ertapenem : Susc : Pt : Isolate : Ord	30714006	Resistant
NOTE: specimen information encoded in the LOINC code is ignored and captured from the specimen (SPM) segment in the HL7 message.			
When sending a quantitative (QN) result , OBX8, Abnormal Flags, becomes required and must be mapped. You will find the Abnormal Flags table on the Vocabulary tab in the smartLab. Local codes populating the 2 nd triplet of the OBX8 field (positions OBX8.4, OBX8.5) must be mapped to the corresponding values in the smartLab.			
LOINC Code	LOINC Description	Local Code	Local Description
I	Intermediate	Hospital/Lab values here	Hospital/Lab values here
R	Resistant	Hospital/Lab values here	Hospital/Lab values here
S	Susceptible	Hospital/Lab values here	Hospital/Lab values here

The smartLab UAT is ready for testing.

Thank you.

John Satre

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