STATE OF WASHINGTON

DEPARTMENT OF HEALTH

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January 3, 2023

RE: Requesting provisional reporting of carbapenem resistant (CR) organisms and carbapenemase producing organisms (CPO)

Dear Laboratory Directors, Clinicians, and State Agency and Local Public Health Partners:

Summary

The Washington State Department of Health (DOH) is committed in our ongoing efforts to prevent and control the transmission of carbapenemase producing organisms (CPO). Washington Administrative Code (WAC) 246-101-015, *Request for additional information or provisional notification and submission of specimen*, allows the state health officer to request provisional reporting of conditions determined to be a public health concern.

The Council of State and Territorial Epidemiologists (CSTE) has identified CPO as an emerging health problem and recommends that all states and territories enact laws to make these organisms reportable. Therefore, DOH requests reporting of carbapenem resistant (CR) isolates of Enterobacterales, *Pseudomonas aeruginosa,* and *Acinetobacter baumanii*, suspected and confirmed carbapenemase producing isolates, and all confirmed CPO cases to public health authorities. Additionally, DOH requests all laboratories submit these isolates to the Washington State Public Health Laboratories (PHL). Detailed reporting and submission requirements are outlined below.

Request

DOH requests reporting of carbapenem resistant (CR) isolates of Enterobacterales, *Pseudomonas aeruginosa,* and *Acinetobacter baumanii*, suspected and confirmed carbapenemase producing isolates, and all confirmed CPO cases to public health authorities. Additionally, DOH requests all laboratories submit these isolates to PHL.

Receiving these data and isolates are critical to ensure standardized statewide CPO surveillance and to support a robust public health response when carbapenemase cases are identified.

Background

CPO are an epidemiologically important group of multi-drug resistant pathogens classified by the Centers for Disease Control and Prevention (CDC) as an urgent threat to public health. The CDC's 2019 Antibiotic Resistance Threats in the United States report highlights emerging areas of concern and additional action needed.

Further, the CDC's 2022 Special Report found that much progress in combating antimicrobial resistance was lost during the COVID-19 pandemic. In recognition of this emerging public health threat, CSTE recently released an updated position statement to facilitate the containment of CPO through standardized surveillance practices.

As of January 1, 2023, chapter 246-101 WAC, *Notifiable Conditions*, requires reporting of CR Enterobacteriaceae limited to *Klebsiella* species, *E. coli*, and *Enterobacter* species by health care providers, health care facilities, and laboratories, and requires laboratory submission of isolates. New national and state surveillance data indicate that carbapenemases in species beyond those included in the WAC, such as Enterobacterales, *Pseudomonas*, and *Acinetobacter*, are increasing in frequency and have been responsible for outbreaks in health care facilities.

Under WAC 246-101-015, the state health officer may request provisional reporting of a condition other than a notifiable condition if reporting is likely to contribute to understanding the condition, provide information necessary to prevent and control the condition, and improve public health. The state health officer may request submission of case reports, laboratory reports, investigation reports, outbreak reports, animal case reports, and submission of specimens for a period of 40 months.

Reporting

DOH requests health care providers, health care facilities, laboratories, and local health jurisdictions report CPO cases as follows:

Laboratories

Laboratory directors should submit individual laboratory reports to their local health jurisdiction for:

1. CR isolates of Enterobacterales, *Pseudomonas aeruginosa*, and *Acinetobacter baumannii* for which the isolated species is not intrinsically resistant[1] and
2. Isolates with preliminary or confirmed positive carbapenemase

Laboratory reports should be submitted within two business days following the requirements in WAC 246-101-201, 246-101-205, 246-101-220, 246-101-225, and 246-101-230. In addition to information required for laboratory reports outlined in WAC 246-101-225, laboratories should also provide the following information in each laboratory report:

- Specimen source;
- Antimicrobial Susceptibility Testing (AST) results

Laboratory directors should also submit these resistant isolates and preliminary and confirmed carbapenemase positive isolates to the PHL within two business days following the requirements in WAC 246-101-210 and 246-101-215.

Laboratories should refer to Appendix I for detailed antimicrobial resistance testing criteria for reporting and submission of CR isolates and Appendix II for a list of confirmatory carbapenemase tests.

[1] In accordance with Clinical Laboratory Standards Institute (CLSI) M100-Ed32 minimum inhibitory concentration (MIC) interpretive criteria for carbapenem resistance.

The notifiable conditions rules, including this request, apply to all laboratories licensed as medical test sites in Washington state under chapter 70.42 RCW and chapter 246-338 WAC, including clinical and reference laboratories and facilities conducting rapid screening or point of care tests.

Health care providers and health care facilities

Health care providers and health care facilities should report confirmed CPO cases to their local health jurisdiction within two business days as individual case reports following the requirements in WAC 246-101-101, WAC 246-101-105, WAC 246-101-110, WAC 246-101-115, and WAC 246-101-120. In addition to the information required for case reports outlined in WAC 246-101-115, health care providers and health care facilities should also provide the following information with each test ordered and each case report:

- Specimen source

Health care providers and health care facilities should refer to Appendix II for a list of confirmatory carbapenemase tests.

Local health jurisdictions

Local health officers should provide notification and submit investigation reports for confirmed CPO cases to DOH as required under WAC 246-101-505, WAC 246-101-510, WAC 246-101-513, and WAC 246-101-515. The local health officer should notify DOH within three business day(s) upon receiving notification of a confirmed CPO case report or laboratory report. In addition to the required reportable data components in WAC 246-101-513, the following information should be included with each investigation report to DOH:

- Specimen source

We highly value and are grateful for the contributions that laboratories, clinicians, and local public health partners are making to respond to this emerging public health threat. We appreciate your assistance in submitting these test results. This letter will be in effect until May 1, 2026 unless rescinded at an earlier date by the state health officer.

Best,

Umair A. Shah, MD, MPH
Secretary of Health

CC: Elizabeth Perez, Chief of Public Affairs & Equity, Department of Health
Kristin Peterson, Chief of Policy, Planning & Evaluation, Department of Health
Jessica Todorovich, Chief of Staff, Department of Health

Appendix I: Reporting and submission criteria for carbapenem resistant Enterobacterales,

Bacterial Order, Family or Genus	Antibiotic Resistance Criteria
Carbapenem-resistant Enterobacterales[1] (excluding *Morganella*, *Proteus*, and *Providencia* spp.)	Resistant to ≥ 1 carbapenem: Minimum inhibitory concentrations (MIC) ≥4 µg/ml for meropenem, imipenem, and doripenem, and ≥ 2 µg/ml for ertapenem **OR** Kirby-Bauer zone of inhibition diameter (ZID) ≤ 19 mm for meropenem, imipenem, and doripenem, and ≤ 18 mm for ertapenem
Carbapenem-resistant *Morganella, Proteus* and *Providencia* spp.	Resistant to ≥ 1 carbapenem excluding imipenem: MIC ≥ 4 µg/ml for meropenem and doripenem, and ≥ 2µg/ml for ertapenem **OR** Kirby-Bauer ZID ≤ 19 mm for meropenem and doripenem, and ≤ 18 mm for ertapenem
Carbapenem-resistant *Acinetobacter baumanii*	Resistant to ≥1 carbapenem excluding ertapenem: MIC ≥8 µg/mL for meropenem, imipenem, and doripenem **OR** Kirby-Bauer ZID ≤ 14 mm for doripenem and meropenem, and ≤ 18 mm for imipenem
Carbapenem-resistant *Pseudomonas aeruginosa* (non-mucoid)	Resistant to ≥1 carbapenem, excluding ertapenem: MIC ≥ 8 µg/mL for meropenem, imipenem, and doripenem, **AND** MIC ≥ 16 µg/mL for ceftazidime and cefepime **OR** Kirby-Bauer ZID ≤ 15 mm for meropenem, imipenem, and doripenem, **AND** Kirby Bauer ZID ≤ 17 mm for ceftazidime and cefepime

Acinetobacter baumannii*, and *Pseudomonas aeruginosa

[1]Refer to National Center for Biotechnology Information Taxonomy Browser for a list of bacterial families, genera and species in the taxonomic order, Enterobacterales (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=91347).

Appendix II: Confirmatory carbapenemase test results

Category of Test	Examples
Phenotypic Test[1]	• Metallo-β-lactamase test (MBL) • Modified Hodge test (MHT) • Carba NP • Carbapenem inactivation method (CIM) • Modified carbapenem inactivation method (mCIM) • EDTA-modified carbapenem inactivation method (eCIM) • Immunochromatography tests (ICT)
Molecular Test[1]	• Xpert Carba-R • VERIGENE • Streck ARM-D • Cepheid • Validated laboratory-developed nucleic acid amplification test (NAAT)
Next Generation Sequencing (NGS)	• Detection of a carbapenemase gene
Culture Independent Diagnostic Test	• Other culture independent diagnostic test (CIDT)

[1] Isolates that are phenotypically positive for carbapenemase production but negative for a carbapenemase gene via a molecular test should be reported and submitted.