

MDU PHL REFERRAL FORM

SUSPECTED CARBAPENEMASE-PRODUCING ORGANISM (CPO)

MDU No.
(MDU Use only)

Microbiological Diagnostic Unit Public Health Laboratory

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FM2458

Submitting laboratory details

Laboratory:
Address:
Postcode:
Phone no: Fax no:
Requesting doctor: Requesting doctor phone no:
Copy to: Name: Fax no:

Patient details

Surname: Given Name(s): Sex: M ☐ F ☐ Not known ☐
Date of birth: Postcode: Patient identifier (UR no.):
Patient phone no:

Patient risk factors

At the time of sample collection, patient was in a:
Health care facility ☐ Aged care facility ☐ GP/Medical clinic ☐ Other ☐ Not known ☐
Facility name:
Ward or unit: Date of admission:

Isolate and sample details

Organism name (species): Submitting laboratory number:
Isolated from (sample type): Date of sample collection:
Reason for sampling: Clinically indicated ☐ Screening ☐ Not known ☐

Test results

Provide results for tests performed (see over for referral criteria):

Test	CP-Enterobacteriales (CPE)	CP-Acinetobacter spp. (CPA)	CP-Pseudomonas spp. (CPP)
Antimicrobial susceptibility test	Meropenem: ☐ MIC $\geq$ 0.5 mg/L ☐ Disc diffusion zone < 28 mm (CLSI or EUCAST) or < 6 mm (CDS) OR Other carbapenem resistance: Antibiotic: AST result:	Meropenem: ☐ MIC > 8 mg/L ☐ Disc diffusion zone < 15 mm (EUCAST) or $\leq$ 14 mm (CLSI) or < 6 mm (CDS)	Meropenem: ☐ MIC $\geq$ 4 mg/L ☐ Disc diffusion zone < 24 mm (EUCAST) or < 19 mm (CLSI) or < 6 mm (CDS) AND Piperacillin-Tazobactam: ☐ MIC $\geq$ 32 mg/L, OR ☐ Disc diffusion zone < 18 mm (EUCAST) or $\leq$ 20 mm (CLSI) or < 6 mm (CDS)
Carbapenem hydrolysis test (e.g., CarbaNP, BlueCarba)	☐ Positive ☐ Negative	☐ Positive ☐ Negative ☐ Equivocal	☐ Positive ☐ Negative
Carbapenemase inactivation method (CIM) or accepted modified CIM	☐ Positive ☐ Negative ☐ Equivocal	☐ Positive ☐ Negative ☐ Equivocal	☐ Positive ☐ Negative ☐ Equivocal
Carbapenemase gene PCR (if applicable, note which gene(s) found)	☐ Positive ☐ Negative Gene(s):	☐ Positive ☐ Negative Gene(s):	☐ Positive ☐ Negative Gene(s):

Submitted by:

Name: Signed: Date:

Referral criteria for suspected CPO as per the *Victorian CPO guideline for health services (2023)*

Isolates that meet **any** of the following screening criteria are to be referred to MDU PHL confirmatory testing and genomic analysis.

Criteria	CPE	CPA	CPP
Meropenem susceptibility test	MIC $\geq$ 0.5 mg/L OR Disc diffusion zone < 28 mm (EUCAST or CLSI) – if disk zone < 25mm, always refer – if disk zone 25-27mm, only refer if piperacillin-tazobactam is also resistant OR Disc diffusion zone < 6 mm (CDS)	MIC > 8 mg/L OR Disc diffusion zone < 15 mm (EUCAST) or $\leq$ 14 mm (CLSI) or < 6 mm (CDS)	Note: Must have evidence of reduced susceptibility meropenem AND piperacillin-tazobactam <u>Meropenem:</u> MIC $\geq$ 4 mg/L OR Disc diffusion zone $\leq$ 24 mm (EUCAST) or < 19 mm (CLSI) or < 6 mm (CDS) AND <u>Piperacillin-Tazobactam:</u> MIC $\geq$ 32 mg/L OR Disc diffusion zone < 18 mm (EUCAST) or $\leq$ 20 mm (CLSI) or < 6 mm (CDS)
Resistance to carbapenem (other than meropenem)	Where the MIC is above the clinical breakpoint as defined by CLSI or EUCAST or zone diameter suggests resistance by CDS.	N/A	N/A
Positive colorimetric test for carbapenemase (e.g., CarbaNP or BlueCarba)	Yes	Yes (including equivocal result)	Yes
Positive CIM/mCIM method	Yes (including equivocal result) Note: Isolates with elevated meropenem MICs or reduced disc diffusion zones (as above) BUT test negative by CIM test do not need to be referred.	Yes (including equivocal result) Note: Isolates with elevated meropenem MICs or reduced disc diffusion zones (as above) BUT test negative by CIM test must still be referred.	Yes (including equivocal result) Note: Isolates with elevated meropenem MICs or reduced disc diffusion zones (as above) BUT test negative by CIM test do not need to be referred.
Positive carbapenemase gene PCR	Yes Note: Isolates that meet other criteria BUT are PCR negative must still be referred.	Yes Note: Isolates that meet other criteria BUT are PCR negative must still be referred.	Yes Note: Isolates that meet other criteria BUT are PCR negative must still be referred.

CDS = Calibrated Dichotomous Sensitivity, CLSI = Clinical and Laboratory Standards Institute, EUCAST = European Committee on Antimicrobial Susceptibility Testing