

Anaerobe Cumulative Antibigram Archived From CLSI Document M100 Since 2025

Appendix D. Anaerobe Cumulative Antibigram

NOTE: Isolates collected from selected US hospitals from 1 January 2013 to 31 December 2016.^a

D1. *Bacteroides* spp. and *Parabacteroides* spp.

Anaerobic Organisms	Number of Strains	Ampicillin-sulbactam		Number of Strains	Piperacillin-tazobactam		Number of Strains	Cefoxitin		Number of Strains	Ertapenem		Number of Strains	Imipenem	
Percent susceptible (% S) and percent resistant (% R) ^b		% S	% R		% S	% R		% S	% R		% S	% R		% S	% R
Breakpoints, µg/mL		≤ 8/4	≥ 32/16		≤ 16/4	≥ 128/4		≤ 16	≥ 64		≤ 4	≥ 16		≤ 4	≥ 16
<i>B. fragilis</i>	129	84	2	1030	96	1	830	100	0	133	82	14	189	97	1
<i>B. thetaiotaomicron</i>	76	82	5	502	87	0	508	13	54	-	-	-	70	100	0
<i>B. ovatus</i>	30	80	3	206	94	0	177	20	34	19 ^c	84 ^c	16 ^c	49	100	0
<i>B. vulgatus</i>	20 ^c	45 ^c	15 ^c	168	92	0	153	73	14	-	-	-	35	97	0
<i>B. uniformis</i>	19 ^c	84 ^c	0 ^c	78	96	0	72	85	10	-	-	-	19 ^c	100 ^c	0 ^c
<i>P. distasonis</i>	27 ^c	59 ^c	19 ^c	92	95	1	82	29	43	-	-	-	26 ^c	100 ^c	0

D1. *Bacteroides* spp. and *Parabacteroides* spp. (Continued)

Anaerobic Organisms	Number of Strains	Meropenem		Number of Strains	Clindamycin		Number of Strains	Moxifloxacin		Number of Strains	Metronidazole	
Percent susceptible (% S) and percent resistant (% R) ^b		% S	% R		% S	% R		% S	% R		% S	% R
Breakpoints, µg/mL		≤ 4	≥ 16		≤ 2	≥ 8		≤ 2	≥ 8		≤ 8	≥ 32
<i>B. fragilis</i>	1505	93	5	1013	26	22	256	61	32	1140	100	0
<i>B. thetaiotaomicron</i>	328	99	0	328	28	49	70	54	36	322	100	0
<i>B. ovatus</i>	236	95	1	207	46	51	59	41	25	236	100	0
<i>B. vulgatus</i>	171	96	4	171	53	46	29 ^c	31 ^c	45 ^c	186	100	0
<i>B. uniformis</i>	93	100	0	87	45	48	25 ^c	48 ^c	40 ^c	89	100	0
<i>P. distasonis</i>	119	97	2	108	43	44	37	62	35	118	100	0

Abbreviations: % R, percent resistant; % S, percent susceptible.

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Appendix D. (Continued)

Footnotes

- a. Data were generated from unique isolates from patient specimens submitted to Tufts Medical Center, Boston, Massachusetts; International Health Management Associates, Inc., Schaumburg, Illinois; R.M. Alden Research Laboratory, Culver City, California; Creighton University School of Medicine, Omaha, Nebraska; Mayo Clinic College of Medicine and Science, Rochester, Minnesota; and the Centers for Disease Control and Prevention, Atlanta, Georgia. All testing was performed by the agar dilution method. Information and analysis of previous versions of this table have been published.
- b. Intermediate category is not shown but can be derived by subtraction of % S and % R for each antimicrobial agent from % 100.
- c. Calculated from fewer than the CLSI M39¹ recommendation of 30 isolates.

Appendix D. (Continued)

D2. Anaerobic Organisms Other Than *Bacteroides* and *Parabacteroides* spp.

Anaerobic Organisms	Number of Strains	Ampicillin-sulbactam		Number of Strains	Piperacillin-tazobactam		Number of Strains	Imipenem		Number of Strains	Meropenem	
Percent susceptible (% S) and percent resistant (% R) ^b		% S	% R		% S	% R		% S	% R		% S	% R
Breakpoints, µg/mL		≤ 8/4	≥ 32/16		≤ 32/4	≥ 128/4		≤ 4	≥ 16		≤ 4	≥ 16
<i>Prevotella</i> spp.	29 ^c	97 ^c	3 ^c	63	100	0	29 ^c	100	0	92	98	0
<i>Fusobacterium</i> spp.	20 ^c	100 ^c	0 ^c	55	96	2	75	95	4	20 ^c	100 ^c	0 ^c
Anaerobic gram-positive cocci ^e	— ^d	— ^d	— ^d	1853	99	1	134	99	0	1647	100	0
<i>Cutibacterium</i> (formerly <i>Propionibacterium</i>) <i>acnes</i> ^f	— ^d	— ^d	— ^d	18 ^c	100 ^c	0 ^c	17 ^c	94 ^c	0 ^d	— ^d	— ^d	— ^d
<i>Clostridium perfringens</i>	15 ^c	100 ^c	0	410	100	0	23 ^c	100 ^c	0 ^c	417	100	0
<i>Clostridioides</i> (formerly <i>Clostridium</i>) <i>difficile</i> ^g	76	99	0	542	93	0	480	69	4	609	99	0
Other <i>Clostridium</i> spp.	— ^d	— ^d	— ^d	439	94	1	71	99	0	390	100	0

D2. Anaerobic Organisms Other Than *Bacteroides* spp. and *Parabacteroides* spp. (Continued)

Anaerobic Organisms	Number of Strains	Penicillin		Number of Strains	Clindamycin		Number of Strains	Moxifloxacin		Number of Strains	Metronidazole	
Percent susceptible (% S) and percent resistant (%R) ^b		% S	% R		% S	% R		% S	% R		% S	% R
Breakpoints, µg/mL		≤ 0.5	≥ 2		≤ 2	≥ 8		≤ 2	≥ 8		≤ 8	≥ 32
<i>Prevotella</i> spp.	63	100	0	29 ^c	69 ^c	28 ^c	92	66	25	92	99	0
<i>Fusobacterium</i> spp.	— ^d	— ^d	— ^d	75	77	21	75	68	23	75	95	5
Anaerobic gram-positive cocci ^e	1647	100	0	1826	97	3	300	72	21	1692	100	0
<i>C. acnes</i> ^f	— ^d	— ^d	— ^d	17 ^c	53 ^c	35 ^c	114	95	4	18 ^c	0 ^c	100 ^c
<i>C. perfringens</i>	402	90	4	425	83	12	23 ^c	83 ^c	9 ^c	425	100	0
<i>C. difficile</i> ^g	533	6	37	1013	32	38	480	74	25	1343	100	0
Other <i>Clostridium</i> spp.	390	69	13	461	67	25	71	62	35	461	100	0

Abbreviations: % R, percent resistant; % S, percent susceptible; MIC, minimal inhibitory concentration.

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- a. Data were generated from unique isolates from patient specimens submitted to Tufts Medical Center, Boston, Massachusetts; International Health Management Associates, Inc., Schaumburg, Illinois; R.M. Alden Research Laboratory, Culver City, California; Creighton University School of Medicine, Omaha, Nebraska; Mayo Clinic College of Medicine and Science, Rochester, Minnesota; and the Centers for Disease Control and Prevention, Atlanta, Georgia. All testing was performed by the agar dilution method. Information and analysis of previous versions of this table have been published.
- b. Intermediate category is not shown but can be derived by subtraction of % S and % R for each antimicrobial agent from % 100.
- c. Calculated from fewer than the CLSI M39¹ recommendation of 30 isolates.
- d. A dash (-) indicates that data were not available.
- e. Anaerobic gram-positive cocci include *Peptococcus*, *Peptostreptococcus*, *Finegoldia*, *Peptoniphilus*, and *Anaerococcus* spp.
- f. Eighty isolates of *C. acnes* from 2 of the sites generated MIC values for rifampin ≤ 0.03 $\mu\text{g/mL}$ using the agar dilution method. There are no interpretive breakpoints for this antimicrobial agent-organism combination.
- g. *C. difficile* isolates are from an intestinal source; these results do not imply efficacy for intraluminal infections. Vancomycin MICs for isolates were < 4 $\mu\text{g/mL}$.

Reference for Appendix D

¹ CLSI. *Analysis and Presentation of Cumulative Antimicrobial Susceptibility Test Data*. 5th ed. CLSI guideline M39. Clinical and Laboratory Standards Institute; 2022.