Bacterial species grouping	"Wild-type"* strain AST	Non-WT AST
Gram negatives		
Enterobacteriaceae • *E. coli* • *Klebsiella* species • *Proteus mirabilis* • *Enterobacter*-like species	+/- R to AMP (*TEM* betalac.) Always R to AMP/AMOX R to NIT (intrinsic) R to AMP, KZ, AUG *(*Class C *AMPC* betalac.)	For all, R to MEP indicates probable carbapenemase production (i.e. CPE) and R to CRO indicates an extended spectrum betalac. (*CTX-M* etc) unless Enterobacter-like. R to CMP common. R to CRO either due to de-repressed *AMPC* or ESBL gene
Pseudomonas aeruginosa Other related species are not included in the antibiogram as these more frequently represent contamination or colonisation.	Intrinsic resistance to AMP, KZ, AUG, SXT,NITRO,CMP Sophisticated methods of acquiring resistance through horizontal transfer and mutation.	R to MEP may indicate carbapenemase production; more commonly due to drug efflux pump or outer membrane porin change. *Acinetobacter baumannii* may also be important to consider in this group.
Fastidious Gram negatives • *Haemophilus influenzae* • *Moraxella catarrhalis* • *Neisseria gonorrhoeae* • *Neisseria meningitidis* • HACEK group	S to TET. May produce a class A penicillinase causing R to PEN, AMOX & AMP. S to PEN, AMOX & AMP & Betalact. production rare.	The antibiogram includes *H. influenzae* alone as *N. gono.* testing is specialised and usually done by reference labs. Extensive gono. drug resistance emerging- CIP-R, CRO-R etc. Emerging penicillin resistance in group W due to PBP changes in *N. meningitidis* clade.
Gram negative anaerobes • *Bacteroides* species • *Prevotella* species • *Fusobacterium* species	R to AMP (Class A penicillinase) S to AUG, MTZ, CMP.	R to MTZ rare. These species not regularly tested for antimicrobial susceptibility and therefore not included in the antibiogram.
Gram positive species		
Staphylococcus aureus - Separate antibiograms for MSSA and MRSA published	S to FOX (methicillin) S to SXT, TET, CMP Variable ERY (macrolide) susceptibility	% MRSA varies by region; essentially R to all betalactams VAN resistance (VRSA) rare- but should be tested routinely-*vanA*.
Streptococcus pneumoniae Other alpha-haemolytic strains not usually reported within the antibiogram owing to low no.	S to PEN, AMOX, AMP, CRO V to ERY, TET, SXT R to GENT Always betalac. negative.	R to OX by disc indicates PEN MIC of > 0.12mg/L due to PBP changes. Use CRO in meningitis. High dose PEN ok in pneumonia.
Betahaemolytic streptococci *Strep. pyogenes* (group A), *Strep. agalactiae* (gp B) and others grouped together	S to PEN, AMOX, AMP V to ERY, TET, SXT R to GENT Always betalac. negative.	
***Enterococcus* species** • *E. faecalis* • *E. faecium*	R to cephalosporins, GENT, SXT, CIP R to AMP, PEN (faecium) S to VAN	R to VAN (VRE) important to assess. Limited VRE treatment options.
Gram positive anaerobes • *Clostridium* species • *Peptostreptococci* • *Peptococcus* species • *Propionobacterium* species	S to PEN, AMP, VAN, MTZ Always betalac. negative. R to MTZ	These species not regularly tested for antimicrobial susceptibility and therefore not included in the antibiogram.

* Wild type indicates a strain that does not possess certain acquired mechanisms of antibiotic resistance.

JK Ferguson, prepared April 2018.