Evaluation of an Automated System for Reading and Interpreting Disk Diffusion Antimicrobial Susceptibility Testing of Fastidious Bacteria

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S1 Table. Susceptibility of isolates determined by manual reading (standard method) and performance of automated reading of disk diffusion antimicrobial susceptibility testing (**without visual adjustment**) for fastidious bacteria, compared to manual reading as standard method, n=144

Antimicrobial agent	No. of isolate-antibiotic combinations	No. of resistant isolates[a]	No. of susceptible isolates	No. (%) of very major errors[b]	No. (%) of major errors[b]	No. (%) of minor errors[b]	Categorical agreement, %
***S. agalactiae*, n=29**	**348**	**31**	**314**	**3 (9.7)**	**54 (17.2)**	**3 (0.9)**	**82.8**
Penicillin G	29	0	29				
Levofloxacin	29	0	29		4		
Moxifloxacin	29	0	29		8		
Norfloxacin	29	0	29		8		
Teicoplanin	29	0	29		3		

Vancomycin	29	0	29				
Erythromycin	29	7	20	1		2	
Clindamycin	29	4	25	2	6		
Tetracycline	29	20	8		7	1	
Tigecycline	29	0	29		17		
Linezolid	29	0	29		1		
Trimethoprim/ sulfamethoxazole	29	0	29				
***S. dysgalactiae*, n=14**	**168**	**12**	**152**	**1 (8.3)**	**32 (21.1)**	**4 (2.4)**	**78.0**
Penicillin G	14	0	14				
Levofloxacin	14	2	12		2		
Moxifloxacin	14	0	14		6		
Norfloxacin	14	1	13		5		
Teicoplanin	14	0	14		3		
Vancomycin	14	0	14				
Erythromycin	14	2	12	1			

Clindamycin	14	1	13		1		
Tetracycline	14	6	6		5	2	
Tigecycline	14	0	13		8	1	
Linezolid	14	0	14		2		
Trimethoprim/ sulfamethoxazole	14	0	13			1	
***S. pyogenes*, n=25**	**300**	**6**	**293**	**0 (0)**	**69 (23.5)**	**1 (0.3)**	**76.7**
Penicillin G	25	0	25				
Levofloxacin	25	0	25		5		
Moxifloxacin	25	0	25		10		
Norfloxacin	25	2	23		9		
Teicoplanin	25	0	25		8		
Vancomycin	25	0	25				
Erythromycin	25	0	24			1	
Clindamycin	25	0	25		6		
Tetracycline	25	4	21		14		

Tigecycline	25	0	25		16		
Linezolid	25	0	25				
Trimethoprim/ sulfamethoxazole	25	0	25		1		
***S. pneumoniae*, n=28**	**336**	**29**	**301**	**3 (10.3)**	**50 (16.6)**	**5 (1.5)**	**82.7**
Levofloxacin	28	0	28		10		
Moxifloxacin	28	0	28		9		
Norfloxacin	28	1	27	1			
Teicoplanin	28	0	28		6		
Vancomycin	28	0	28		7		
Erythromycin	28	7	21		3		
Clindamycin	28	5	23	1	5		
Tetracycline	28	5	23	1	5		
Linezolid	28	0	28		2		
Trimethoprim/ sulfamethoxazole	28	4	24		2		

Oxacillin	28	7	21				
Cefaclor	28	0	22		1	5	
Viridans group streptococci, n=18	**126**	**3**	**123**	**0 (0)**	**1 (0.8)**	**0 (0)**	**99.2**
Penicillin G	18	0	18				
Teicoplanin	18	0	18				
Vancomycin	18	0	18				
Ampicillin	18	0	18				
Cefotaxime	18	0	18				
Cefuroxime iv[c]	18	2	16				
Cefepime	18	1	17		1		
***H. influenzae*, n=13**	**156**	**8**	**134**	**7 (87.5)**	**19 (14.2)**	**9 (5.8)**	**77.6**
Penicillin G	13	2	11	2			
Levofloxacin	13	0	13		5		
Erythromycin	13	0	0			8	

Tetracycline	13	0	13				
Trimethoprim/ sulfamethoxazole	13	1	11	1		1	
Ampicillin	13	1	12				
Amoxicillin/clavulanic acid	13	1	12	1	1		
Cefotaxime	13	0	13		1		
Cefuroxime iv[c]	13	3	10	3	2		
Meropenem	13	0	13				
Ciprofloxacin	13	0	13		2		
Nalidixic acid	13	0	13		8		
***M. catarrhalis*, n=7**	**84**	**1**	**82**	**0 (0)**	**16 (19.5)**	**1 (1.2)**	**79.8**
Levofloxacin	7	0	7				
Moxifloxacin	7	0	7		2		
Erythromycin	7	0	7				
Tetracycline	7	0	7		1		

Trimethoprim/ sulfamethoxazole	7	0	7				
Amoxicillin/clavulanic acid	7	0	7				
Cefotaxime	7	0	7		3		
Cefuroxime iv[c]	7	0	7		2		
Meropenem	7	0	7		5		
Ciprofloxacin	7	0	7				
Nalidixic acid	7	1	6		2		
Cefixime	7	0	6		1	1	
***C. jejuni*, n=10**	**30**	**5**	**25**	**0 (0)**	**10 (40)**	**0 (0)**	**66.7**
Erythromycin	10	0	10		4		
Tetracycline	10	2	8		6		
Ciprofloxacin	10	3	7				
TOTAL, n=144	**1548**	**95**	**1424**	**14 (14.7)**	**251 (17.6)**	**23 (1.5)**	**81.4**

[a] Number of results within intermediate category can be calculated by subtracting resistant and susceptible results from the number of isolate-antibiotic combinations tested

[b] Error rates are reported as required by the ISO 20776-2 guideline: VME (%), number of VMEs (i.e. false susceptible results) divided by the number of isolates determined resistant by the standard method; ME (%), number of MEs (i.e. false resistant results) divided by the number of isolates determined susceptible by the standard method); mE (%), number of mEs (i.e. false categorization involving intermediate result) divided by the total number of tested isolates; Categorical agreement (i.e. results within the same interpretative category)

[c] iv, interpretation according to breakpoints for intravenous use