

**Date:** April 27, 2011

**To:** South East Zone – All Physicians, Infection Control,  
Pharmacy Departments: Medicine Hat Regional Hospital, Brooks Hospital,  
Bow Island Hospital  
Medicine Hat Diagnostic Laboratory,

**From:** Dr. L Steele, Clinical Lead, Microbiology Lab, Medicine Hat Regional Hospital  
Dr. M. O'Connor, Clinical Department Facility Chief (Laboratory Services)  
Medicine Hat Regional Hospital, Zone Clinical Department Head (co-lead)  
Laboratory, South Zone

**Re:** January 1-December 31, 2010 Cumulative Antimicrobial Susceptibility Report

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**Key Messages:**

Information is supplied regarding susceptibility data on selected patient microorganisms isolated in the Microbiology Lab, Medicine Hat Hospital in 2010

**Why this is important:**

This report may be used as a general guide to empiric antimicrobial therapy until specific antimicrobial susceptibility test results on a given patient's isolates become available. The patient's physician will use the susceptibility data as one, but not the only, criterion for drug choice.

**Action Required:**

See attached document: South East Zone Hospitals, January 1-December 31, 2010 Cumulative Antimicrobial Susceptibility Report

**For additional questions contact:**

Dr. L Steele, Clinical Lead, Microbiology, Medicine Hat Hospital at 403-502-8635 or  
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This bulletin has been reviewed and approved by:  
Dr. L. Steele, FASCP

**South East Zone Hospitals – Medicine Hat, Brooks, Bassano, Bow Island, Oyen**  
**January 1 – December 31, 2010 Cumulative Antimicrobial Susceptibility Report (% Susceptible)**

	No. of Isolates	Ampicillin	Cefazolin	Ceftazidime	Ceftriaxone	Cefuroxime	Cephalothin	Ciprofloxacin	Clindamycin	Erythromycin	Gentamicin	Nitrofurantoin (Urinary isolates only)	Norfloxacin (urinary isolates only)	Oxacillin	Penicillin	Piperacillin	Sulfamethoxazole /Trimethoprim	Tobramycin	Vancomycin
<i>Citrobacter freundii</i> *	20	-	-	-	-	-	-	95	-	-	95	90	95	-	-	-	75	-	-
<i>Enterobacter cloacae</i> *	36	-	-	-	-	-	-	100	-	-	97	44	100	-	-	-	97	-	-
<i>Escherichia coli</i>	1460	53	87	91	95	90	62	86	-	-	92	97	86	-	-	-	79	-	-
<i>Klebsiella pneumoniae</i>	190	-	91	96	98	91	92	91	-	-	96	52	92	-	-	-	86	-	-
<i>Proteus mirabilis</i>	50	68	91	91	96	96	89	100	-	-	94	0	100	-	-	-	83	-	-
<i>Pseudomonas aeruginosa</i>	181	-	-	95	-	-	-	87	-	-	85	-	-	-	-	95	-	90	-
<i>Staph epidermidis</i>	61	-	-	-	-	-	-	41	-	-	-	97	-	-	11	-	49	-	-
<i>Enterococcus faecalis</i>	190	96	-	-	-	-	-	74	-	-	-	98	-	-	94	-	-	-	100
Group A Streptococcus <sup>1,2</sup>	44	-	-	-	-	-	-	-	77	81	-	-	-	-	100	-	-	-	-
Group B Streptococcus <sup>2</sup>	33	-	-	-	-	-	-	-	64	64	-	-	-	-	100	-	-	-	-
<i>Staphylococcus aureus</i>	495	-	-	-	-	-	-	62	65	54	-	99	-	65	17	-	97	-	-
<i>Streptococcus pneumoniae</i>	74	-	-	-	-	-	-	-	-	27	-	-	-	-	82	-	78	-	-

<i>Staphylococcus aureus</i>
Total number of isolates tested: 495 MRSA <sup>3</sup> (173): 35 % of <i>S.aureus</i> isolates tested MSSA <sup>5</sup> (322): 65 % of <i>S.aureus</i> isolates tested

<i>Streptococcus pneumoniae</i>
Number of Penicillin Nonsusceptible isolates: 8 Intermediate ( 7 ): 88 % of nonsusceptible isolates tested Resistant ( 1 ) : 12 % of nonsusceptible isolates tested Interpretations based on non-meningitis breakpoints

ESBL Data *
Total number of ESBL producing isolates: 43 <i>E.coli</i> (43) : 2.9 % of <i>E.coli</i> isolates <i>K.pneumoniae</i> (0) : 0.0% of <i>K. pneumoniae</i> isolates

- Drug not tested or drug not indicated

\* These organisms usually produce inducible beta-lactamase which may cause failure of penicillin/cephalosporin therapy, despite an in-vitro susceptible result.

<sup>1</sup>Wound and blood culture isolates

<sup>2</sup>Due to the small number of annual isolates, analysis was performed using data obtained during the 2 year period of January 1, 2008 – December 31, 2009

<sup>3</sup>MRSA (Methicillin Resistant *Staphylococcus aureus*)

<sup>4</sup>MSSA (Methicillin Resistant *Staphylococcus aureus*)

Percent susceptible for each organism/antimicrobial combination was generated by including the first isolate only of that organism recovered from a given patient.