

Date: July 14, 2010

To: South Zone - East
Physicians, Pharmacy Services - Medicine Hat Hospital, Brooks Hospital, Bow
Island Hospital, Medicine Hat Diagnostic Laboratory, Infection Control

From: AHS Laboratory Services – South Zone (East)
Microbiology Lab, Medicine Hat Hospital

Re: January 1-December 31, 2009 Cumulative Antimicrobial Susceptibility Report

PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

Key Message:

The 2009 Cumulative Antimicrobial Susceptibility Report for the Medicine Hat Hospital is now available.

Why this is important:

The Cumulative Antimicrobial Susceptibility Report includes information regarding data on selected patient microorganisms isolated in the Microbiology Lab, Medicine Hat Hospital in 2009. 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.

Action Required:

Refer to the 2009 Cumulative Antimicrobial Susceptibility Report (see attached) as a guideline to direct empiric antimicrobial therapy.

Inquiries and feedback may be directed to:

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This bulletin has been reviewed and approved by:

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Dr. Lisa Steele, South Zone East Microbiology Consultant Pathologist

**South East Zone Hospitals – Medicine Hat, Brooks, Bassano, Bow Island, Oyen
January 1 – December 31, 2009 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> *	31	-	-	-	-	-	-	83	-	-	86	95	86	-	-	-	75	-	-
<i>Enterobacter cloacae</i> *	43	-	-	-	-	-	-	100	-	-	100	40	100	-	-	-	98	-	-
<i>Escherichia coli</i>	1577	48	87	93	96	89	54	85	-	-	95	96	85	-	-	-	80	-	-
<i>Klebsiella pneumoniae</i>	188	-	96	99	99	96	90	96	-	-	99	59	96	-	-	-	92	-	-
<i>Proteus mirabilis</i>	52	79	91	92	96	94	85	100	-	-	100	0	100	-	-	-	81	-	-
<i>Pseudomonas aeruginosa</i>	148	-	-	91	-	-	-	84	-	-	89	-	-	-	-	96	-	95	-
<i>Staph epidermidis</i>	84	-	-	-	-	-	-	42	-	-	-	99	-	-	10	-	55	-	-
<i>Enterococcus faecalis</i>	199	96	-	-	-	-	-	67	-	-	-	98	-	-	95	-	-	-	100
Group A Streptococcus ^{1,2}	51	-	-	-	-	-	-	-	90	89	-	-	-	-	100	-	-	-	-
Group B Streptococcus ²	31	-	-	-	-	-	-	-	62	58	-	-	-	-	100	-	-	-	-
<i>Staphylococcus aureus</i>	509	-	-	-	-	-	-	64	63	80	-	99	-	67	15	-	98	-	-
<i>Streptococcus pneumoniae</i>	71	-	-	-	-	-	-	-	-	25	-	-	-	-	87	-	75	-	-

<i>Staphylococcus aureus</i>
Total number of isolates tested: 509 MRSA ³ (167): 33% of <i>S.aureus</i> isolates tested MSSA ⁴ (342): 67% of <i>S.aureus</i> isolates tested

<i>Streptococcus pneumoniae</i>
Number of Penicillin Nonsusceptible isolates: 9 Intermediate (5): 55 % of nonsusceptible isolates tested Resistant (4) : 45 % of nonsusceptible isolates tested Interpretations based on non-meningitis breakpoints

ESBL Data *
Total number of ESBL producing isolates: 13 <i>E.coli</i> (13) : 0.8% 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.

¹Wound isolates only

²Due 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

³MRSA (Methicillin Resistant *Staphylococcus aureus*)

⁴MSSA (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.