

**Medicine Hat and Area Critical Value Results
(CVR) List**

Effective Date: 2020MAR10

Version: 2.01

Medicine Hat and Area Critical Value Results (CVR) List

Chemistry		
Test	Units	Critical Value(s)
Acetaminophen	umol/L	> 250
Ammonia < 17y >= 17y	umol/L	>110 > 200
Bilirubin – Total <30 days	umol/L	> 300
Calcium	mmol/L	< 1.65 > 3.25
Carbamazepine	umol/L	> 63
Digoxin	nmol/L	> 2.6
Ethyl Alcohol	mmol/L	> 65.0
Gentamicin	mg/L	Trough > 4.0 Peak > 10.0
Glucose 0 – 1m 1m - 150y 0 - 150y	mmol/L	< 2.0 < 2.6 >24.9
Iron < 12y	umol/L	> 54
Lithium	mmol/L	> 2.0
Magnesium	mmol/L	< 0.4 > 1.9
Phenytoin	umol/L	> 119
Phosphorus	mmol/L	< 0.40
Potassium 0 - 28d 29d – 17y >= 18y	mmol/L	< 3.0 and >6.4 < 3.0 and >6.0 < 2.6 and > 6.2
Salicylate	mmol/L	> 2.9
Sodium	mmol/L	< 120 > 155
Troponin T (high sensitivity)	ng/L	≥ 53
Valproic Acid	umol/L	> 1040
Vancomycin, Trough	mg/L	>25.0

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Blood Gases/Co-Oximetry		
Test	Units	Critical Value(s)
Calcium- Ionized	mmol/L	<0.80 >1.50
Carboxyhemoglobin	%	> 15
HCO ₃ (Venous)	mmol/L	< 10 > 40
Lactate	mmol/L	> 4.0
Methemoglobin	%	> 10
pCO ₂ (arterial/capillary/venous)	mmHg	< 20 > 70
pH (arterial/capillary/venous)		< 7.2 > 7.6
pH (cord arterial)		< 7.15
pH (cord venous)		< 7.15
pO ₂ (arterial)	mmHg	< 40
pO ₂ (capillary)	mmHg	< 30
pO ₂ (venous)	mmHg	< 20
TCO ₂ (venous)	mmHg	< 10 > 40
BE (Cord Arterial/Cord Venous)	mmol/L	< -10
Hematology		
Test	Units	Critical Value(s)
Hemoglobin	g/L	< 70 >239
Neonates <7 days		< 80
Platelet	x 10 ⁹ /L	< 20
WBC	x 10 ⁹ /L	< 0.6 > 99.9
Absolute Neutrophil	x 10 ⁹ /L	< 0.6
Coagulation		
Test	Units	Critical Value(s)
Fibrinogen	g/L	< 1.0
INR		> 5.0
PTT	sec	>120
Notifiable Results		
Blasts present		
Malaria present		

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CRITICAL DIAGNOSES FOR SURGICAL PATHOLOGY

Cases that have immediate clinical consequences:
Glomerular disease with significant crescentic or necrotizing changes
Vasculitis
Uterine contents without clinically expected villi or trophoblast
Fat in an endometrial curettage
Mesothelial cells in a heart biopsy
Fat in colonic endoscopic polypectomies
Transplant rejection
Malignancy in superior vena cava syndrome
Neoplasms causing paralysis
Acute Leukemia
Skin necrosis in patients on warfarin
Unexpected or discrepant findings:
Significant disagreement between frozen section and final diagnosis
Significant disagreement between immediate interpretation and final FNA diagnosis
Unexpected malignancy
Significant disagreement and/or change between primary pathologist and outside pathologist consultation (at either the original or consulting institution)
Infections:
Presence of any sexually transmitted infection in boys and girls less than 16 years old and presence of sperm in PAP tests on girls less than 16 years old. <i>In addition to documenting the initial communication of the findings, a comment is included in the report indicating that this result needs to be interpreted with other clinical information to determine if investigation by Alberta Children's Services is warranted. It is the ordering Physician's responsibility to notify Regional Offices or the Provincial Child Abuse Hotline (1-800-387-5437) if indicated.</i>
Bacterial or fungi in CSF
Pneumocystis, fungi or viral cytopathic changes in bronchoalveolar lavage (BAL), bronchial brushing cytology specimens
Acid-fast bacilli / granulomatous inflammation (notifiable result)
Fungi in FNA of immunocompromised patients
Bacteria in heart valve or bone marrow
Herpes in Pap smears of near term pregnant patients
Any invasive organism in surgical pathology specimens of immunocompromised patients

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CRITICAL DIAGNOSES FOR AUTOPSY PATHOLOGY

Autopsy Pathology:

Unexpected findings that require notification of the Medical Examiner's Office. The autopsy should cease at that time.

Unexpected findings highly relevant to the clinical course (e.g. cause of death) that might influence the attending physician's completion of the Death Certificate

The pathologist performing an autopsy who discovers a reportable infectious disease should communicate that diagnosis to all involved clinicians, the Medical Officer of Health, AHS Infection Prevention and Control, the funeral home and to the microbiologist on call if appropriate.

CRITICAL DIAGNOSES FOR MICROBIOLOGY

Specimen	Critical Result
Cerebral Spinal Fluid (CSF)	Positive Gram stain Positive culture
Blood Culture	Positive Gram stain Positive preliminary Culture
Eye Cultures - other	Positive culture for <i>Neisseria gonorrhoeae</i> Positive culture for <i>Pseudomonas aeruginosa</i> Positive culture for <i>Bacillus</i> spp.
Eye cultures – sterile (vitreous, corneal scrapings)	Positive Gram stain Positive culture
RSV	Positive result
Influenza A and/or B	Positive result
Stool	Positive culture for <i>E. coli</i> O157 Positive Shiga toxin result
Sterile Body Sites (sterile fluids and tissues)	Positive Gram stain Positive culture

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