3.1

POLICY - LABORATORY MEDICINE PROGRAM

REPORTING OF CRITICAL VALUES

1) Reporting of Critical Values on Out-Patient or Clinic Patients

a) Page the attending physician. If unable to reach -

b) Telephone the attending physician's office or clinic. If unable to reach -

c) Telephone physician at home. If unable to reach the physician and a message is left for him/her to return the call, specify the time of the call and wait no longer than 30 minutes for a response. If unable to reach -

d) Contact laboratory physician or biochemist on call in your respective division and give information. The laboratory physician and/or biochemist may be required to contact the patient and if necessary, refer to the Emergency Room and notify the Emergency Room physician.

e) Document all attempts and actions, including receiver of the report, date and time.

2) Reporting of Critical Values on In Patients

a) Critical values must be reported immediately to the appropriate attending physician, or physician on call, resident or intern on that particular service, or a nurse on a particular floor on which that patient is currently located.

b) Document the receiver of the report, date and time.

c) If given unsatisfactory response, notify biochemist or laboratory physician overseeing or providing on-call services for your division.

Note:

- If a technologist is unable to notify lab physician or biochemist on call, contact Divisional Manager. Notify staff on next shift if situation is not resolved.

- It is the policy of the Laboratory Medicine Program that technologists are not to report critical values to patients.

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BIOCHEMISTRY TABLE OF CRITICAL VALUES
(ADULTS)

Test	Equal to or Less than	Equal to or Greater than	Units
Sodium	120	160	mmol/L
Potassium	2.8	6.5	mmol/L
Calcium	1.65	3.20	mmol/L
Glucose	2.50	25.0	mmol/L
Osmolality	250	325	mosol/Kg
Acetaminophen		600	umol/L
Carbamazepine		63	umol/L
Digoxin		2.5	ug/L
Lithium		1.5	mmol/L
Phenobarbital		340	umol/L

Phenytoin umol/L	120
Salicylates mmol/L	2.0
Theophylline umol/L	140

CRITICAL VALUES
(PEDIATRIC)

Test	Critical Value	Units
Alcohol (Ethanol)	> 60	mmol/L
Amylase	> 300	U/L
Bilirubin (Neonatal)	> 200	umol/L
Blood Gases (Including Ionized Calcium) (Janeway site).	All blood gas results are called	
Carboxyhemoglobin	> 0.10	
Calcium (Total)	< 1.8 or > 3.0	mmol/L
Drugs:		
Acetaminophen	> 600	umol/L
Caffeine	> 258	umol/L
Carbamazepine	> 63	umol/L
Digoxin	> 2.5	ug/L
Gentamicin	> 10 (Peak)	mg/L
	> 2 (Trough)	mg/L
Li	> 1.2	mmol/L
Methotrexate	> 5 (24 h after dose)	umol/L
	> 0.5 (48 h after dose)	umol/L
	> 0.05 (72 h after dose)	umol/L
	> 0.02 (1-2 wks post low dose)	umol/L
Phenobarbital	> 172	umol/L
Phenytoin	> 80	umol/L
Primidone	> 69	umol/L
Salicylate	> 1.45	mmol/L
Theophylline	> 110	umol/L
Tobramycin	> 10 (Peak)	mg/L
	> 2 (Trough)	mg/L
Vancomycin	> 80	mg/L
Electrolytes:		
Na+	< 125 or > 155	mmol/L
K+	< 3 or > 6.5 (0-3 months)	mmol/L
	< 3.0 or > 6.0 (3 months to 16 years)	mmol/L
Cl	< 85 or > 125	mmol/L
Glucose	< 2.5 or > 25	mmol/L
	>15 (for newborns)	mmol/L
Osmolality (Plasma)	< 260 or > 320	mOsmol/Kg
Toxicology	All TDx toxicology results are called.	
Urea	> 20 (Non-dialysis unit patients only)	mmol/L
Uric Acid	> 600	umol/L
Urinalysis and Other Tests	Out Patients: Report any	

unusual result to the Biochemist
or Senior Technologist.
Emergency: Call any unusual result.
In Patient results will not be routinely
called.

CRITICAL VALUES (ADULTS) - HAEMATOLOGY
(Does not apply to Chemotherapy Patients)

Test	Critical Value	Units
WBC	> 25.0	x10 9/L
HGB	< 65	G/L
PLT	< 30	x10 9/L
PTT	> 100	Sec
INR	> 6.0	
ANC	< 0.5	x10 9/L

Notify physician as soon as practical for the first occurrence of:

HGB	Equal to or less than 85
ANC	Less than 1.0
PLT	Equal to or less than 50
INR	Greater or equal to 5

Eastern Health

DRAFT REPORTING CRITICAL VALUES

__ - __

REPORTING CRITICAL VALUES	Laboratory __ - __
Issuing Authority (sign & date)	Dr. Oscar Howell, VP, Medical Services & Diagnostics
Office of Administrative Responsibility	Laboratory Medicine Program
Author	Lynn Wade, Program Manager, Safety & Quality Management
Level	II
Original Approval Date	
Effective Date	
Review Date	
Revision Date(s)	

Overview

Reporting of critical values is a patient safety issue that requires prompt attention by laboratory and patient care personnel.

POLICY

Laboratory personnel will provide notification of Critical Values to a responsible individual in a timely manner; values that meet or exceed the critical limits will be called as soon as possible to a nurse or physician caring for the patient.

Scope

All laboratory staff

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DRAFT REPORTING CRITICAL VALUES

Purpose

The purpose of this policy is to provide direction to laboratory personnel for action to be taken when a result meets or exceeds critical limits.

Procedure

The laboratory employee must follow the steps below when a critical result is obtained:

If the patient is an inpatient

1. Immediately phone the nursing unit on which the patient is housed and report the critical value to the nurse in charge of the patient or to his/her designate.
2. Request that the nurse read back the result to confirm accuracy.
3. Document in the LIS the name of the person taking the report and the time of the phone call.
4. Verify the result in the LIS and broadcast the report to the nursing unit printer.

If the patient is a clinic or an outpatient

1. Page the attending physician or telephone the physician's office and report the critical result to the physician.
2. Request that the physician read back the result to confirm accuracy.
3. Document in the LIS the name of the physician and the time of the phone call.
4. Verify the result in the LIS. The printed report will be generated a usual for outpatient reports.

If the technologist is unable to reach a physician after 30 minutes or receives unsatisfactory response from the receiver of the information

1. Document the time of the phone call(s) in the LIS.
2. Contact the laboratory division chief or designate-on-call who will make a decision regarding contacting the patient and directing him/her to the nearest Emergency Department.

3. If the laboratory division chief or designate-on-call directs the patient to the Emergency department (s)he will also contact the Emergency Department physician and inform them of the critical result.
4. If the technologist is completing a shift, notify the relief technologist of the status of any outstanding critical reports.

Guideline

- A technologist will not contact a patient regarding his/her critical result. The laboratory physician or designate may contact the patient and direct him/her to the nearest Emergency Department.
- All physicians who submit requests to the laboratory must ensure that there is updated contact information for use when a critical value must be communicated.

Supporting Documents *(References, Industry Best Practice, Legislation, etc)*

- CCHSA. *National Specific Standard Requirements for Biomedical Laboratory Services*
- CLSI. *Application of a Quality Management System Model for Laboratory Services; Approved Guideline- Third Edition.* GP26-A3

Linkages

Appendix A: List of Critical Value Limits

Key Words

Critical Value

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DRAFT REPORTING CRITICAL VALUES

Definitions & Acronyms

LIS	Laboratory Information System (Meditech)
Critical Value	A result indicating that the patient is in imminent danger unless appropriate therapy is promptly initiated. (Clinical Laboratory News. August 2007: Volume 33, Number 8)

Policy History

Policy Name (if different)	HCCSJ: Reporting of Critical Values
Policy # (if different)	
Date(s) Revised	

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DRAFT REPORTING CRITICAL VALUES

Appendix A: List of Critical Value Limits

BIOCHEMISTRY TABLE OF CRITICAL VALUES (ADULTS)			
Test	Equal to or Less Than	Equal to or Greater Than	Units
Sodium	120	160	mmol/L
Potassium	2.8	6.5	mmol/L
Calcium	1.65	3.20	mmol/L
Glucose	2.50	25.0	mmol/L
Osmolality	250	325	mosol/Kg
Acetaminophen		600	umol/L
Carbamazepine		63	umol/L
Digoxin		2.5	ug/L
Lithium		1.5	mmol/L
Phenobarbital		340	umol/L
Phenytoin		120	umol/L
Salicylates		2.0	mmol/L
Theophylline		140	umol/L

PEDIATRIC		
Test	Critical Value	Units
Alcohol (Ethanol)	> 60	mmol/L
Amylase	> 300	U/L
Bilirubin (Neonatal)	> 200	umol/L
Blood Gases (Including Ionized Calcium) All paediatric blood gas results are called		
Carboxyhemoglobin	> 0.10	
Calcium (Total)	< 1.8 or > 3.0	mmol/L
Drugs		
Acetaminophen	> 600	umol/L
Caffeine	> 258	umol/L
Carbamazepine	> 63	umol/L
Digoxin	> 2.5	ug/L
Gentamicin	> 10 (Peak)	mg/L
	> 2 (Trough)	mg/L
Li	> 1.2	mmol/L
Methotrexate	> 5 (24 h after dose)	umol/L
	> 0.5 (48 h after dose)	umol/L
	> 0.05 (72 h after dose)	umol/L
	> 0.02 (1-2 wks post low	umol/L

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DRAFT REPORTING CRITICAL VALUES

	dose)	
Phenobarbital	> 172	umol/L
Phenytoin	> 80	umol/L
	PEDIATRIC (Cont'd)	
Test	**Critical Value**	**Units**
Primidone	> 69	umol/L
Salicylate	> 1.45	mmol/L
Theophylline	> 110	umol/L
Tobramycin	> 10 (Peak)	mg/L
	> 2 (Trough)	mg/L
Vancomycin	> 80	mg/L
Electrolytes		
Na+	< 125 or > 155	mmol/L
K+	< 3 or > 6.5 (0-3 months)	mmol/L
	< 3.0 or > 6.0 (3 months to 16 years)	mol/L
Cl	< 85 or > 125	mmol/L
Glucose	< 2.5 or > 25	mmol/L
	>15 (for newborns)	mmol/L
Osmolality (Plasma)	< 260 or > 320	Osmol/Kg
Urea	> 20 (Non-dialysis unit patients only)	mmol/L
Uric Acid	> 600	umol/L

Urinalysis and Other Tests	Out Patients: Report any unusual result to the Biochemist or Senior Technologist. Emergency: Call any unusual result. In Patient results will **not** be Routinely called.

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DRAFT REPORTING CRITICAL VALUES

CRITICAL VALUES (ADULTS) - HAEMATOLOGY
(Does not apply to Chemotherapy Patients)

Test	Critical Value	Units
WBC	> 25.0	x10 9/L
HGB	< 65	G/L
PLT	< 30	x10 9/L
PTT	> 100	Sec
INR	> 6.0	
ANC	< 0.5	x10 9/L

Notify physician as soon as practical for the first occurrence of:

HGB	Equal to or less than 85
ANC	Less than 1.0
PLT	Equal to or less than 50
INR	Greater or equal to 5

Eastern Health - Rural Avalon - Policy and Procedure

SECTION: **ADMINISTRATION/ ORGANIZATION**	POLICY: **1231** PAGE: 1 OF 1
APPLICABLE TO: **All** DEPARTMENTS: **Laboratory**	REVIEW DATE: September 2003 EFFECTIVE DATE:
SUBJECT: **Laboratory - Reporting of Critical Values**	ISSUED BY: *Medical Services Director*

REPORTING OF CRITICAL VALUES

1. Reporting of critical values on **Out-Patient** or **Clinic Patients**

   (a) Telephone the attending physician's office or clinic.

   (b) If unable to reach, telephone physician at home. If unable to reach the physician and a message is left for him/her to return the call, specify the time of the call and wait no longer than 30 minutes for a response.

   (c) If unable to reach, contact Laboratory Physician on call in your respective division and give information. The Pathologist may be required to contact the patient and if necessary, refer to the Emergency Room and notify the Emergency Room physician.

   (d) Document all attempts and actions, including receiver of the report, date and time.

2. Reporting of critical values on **In Patients**

   (a) Critical values must be reported immediately to the appropriate attending physician or physician on call on that particular service or a nurse on a particular floor on which that patient is currently located.

   (b) Document the receiver of the report, date and time.

   (c) If given unsatisfactory response, notify Laboratory Physician overseeing or providing on-call services for your division.

   NOTE: If a technologist is unable to notify the Pathologist, contact Site Manager. Notify staff on next shift if situation is not resolved.

   It is the policy of the Laboratory Medicine Program that technologists are not to report critical values to patients.

APPROVED BY: _____ **DATE:** _____

POLICY - LABORATORY MEDICINE PROGRAM
HEALTH CARE CORPORATION

RELEASE OF LABORATORY RESULTS TO PATIENTS AND PHYSICIANS' OFFICES REGARDING SPECIFIC REQUESTS

(1) Laboratory results will not be released to patients by telephone.

(2) If, at the time of blood collection, the patient requests a laboratory result, this will be **restricted to INR and PT levels only**. If the patient waits for a result, he/she will be given a hard copy of the result when completed.

(3) If that patient chooses to leave and return back to Blood Collection, the patient/or designate will receive a hard copy of the laboratory result upon supplying proper identification. This will be limited to INR and PT levels only.

(4) With the exception of cytology reports and surgical pathology reports, laboratory test results other than PT and INR may also be released to a patient, but only upon the following conditions:

a) Provision of a request from the treating physician, either in writing or by way of a telephone call from the physician's office, which clearly identifies the physician requesting the release of results, the patient, and the particular laboratory results to be released to the patient;

b) A hard copy of the results requested will be released to the patient or designate upon that person providing appropriate identification and, if that person is a designate, appropriate authorization.

c) If Health Care Corporation personnel are in doubt as to either the identification of the physician or the patient, or as to the legitimacy of the request for release of results, Health Care Corporation personnel shall either obtain a written request from the physician or call back to the physician's office to verify the request.

(5) A patient's laboratory test results may be released to that patient's treating physician upon receipt of a written request or a telephone request from the physician or physician's office, clearly identifying the physician, the patient, and the particular laboratory results requested. If Health Care Corporation personnel receiving a telephone request for release of results are in doubt as to the identification of the physician or the patient, or as to the legitimacy of the request, Health Care Corporation personnel shall either obtain a written request from the physician or call back to the physician's office to verify the request.

(6) Laboratory results may be released to a minor or to the parent or legal guardian of a minor if a written request is received from the physician treating the minor.

(7) Any report given to a patient will be stamped with a statement indicating that results are provided at the request of the patient or the patient's physician and that the patient should consult the family doctor or other treating physician for interpretation of the report. Laboratory reports will not be provided with explanatory notes, e.g., the meaning of abbreviations, whether or not the result is normal or abnormal

(8) Autopsy reports will **not** be released, by the laboratory, to the next of kin, but may be requested from medical records.

(9) The laboratory staff will respond to any enquiries about a laboratory report by referring the patient to the treating physician.

(10) Normally, when certain significantly abnormal (critical) laboratory results are obtained, these are directly reported to the treating physician by the laboratory technical staff. Under exceptional circumstances when the physician cannot be reached, the appropriate Divisional Chief in the Laboratory Medicine Program or his delegate will contact the patient and advise him/her of the abnormal laboratory result and advise him/her to go to the Emergency Department. This is discussed further under the Program Policy "Reporting of Critical Laboratory Values".

January 16, 2003

TO: Physicians' offices with Meditech hook-up
FR: Lynn Wade, Client Services Manager

SUBJECT: **Lab Reports**

This is to inform you that effective immediately the laboratories will not fax lab reports to any physician's office that is linked to Meditech and can thus access reports directly.

The laboratory "Reporting of Critical Values" policy states that critical results will be phoned to physicians at the time of testing.

Those offices that are not linked to Meditech should limit phone calls for results to those of urgent nature only.

Hard copy of results will continue to be sent out at this time.

Any physician in the region who would like further information about Meditech connection should contact the Information Management and Technology helpdesk at 777-1950 and request the information package.