KAISER PERMANENTE

Kaiser Permanente Medical Center, San Francisco
Northern California Region
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Standard Operating Procedure

Title: QS - Notification of Critical Values		**Procedure Number** SFOSOP-0039 **Revision:** 25
Department: Chemistry Clinical Lab Post-Analytical Coagulation Hematology Immunohematology Microbiology Urinalysis **Area:** 2238 Geary Blvd SFO Clinical Lab 2425 Geary Blvd SFO Hospital Lab	***Approved & Released Standard Operating Procedure***	**Implementation Date:** 01/29/2018
Type of Document:		**Review Period -** 340 **Days**

I. POLICY STATEMENT:

Critical results of tests and diagnostic procedures fall significantly outside the normal range and may indicate a life-threatening situation. It is the policy of Kaiser Foundation Hospital (KFH) San Francisco to report critical results and diagnostic procedures on a timely basis.

II. PRINCIPLE:

A. The purpose is to provide the responsible licensed caregiver critical results within an established time frame so that the patient can be promptly treated. For the population served and services offered at this facility, this policy is designed to enhance patient safety by establishing guidelines to ensure**:** DO NOT wait for the outcome of other tests.

1. A process for timely communication of critical results among caregivers, which may include Laboratory Tests, Imaging Studies, Point of Care Testing, or other tests/studies.
2. A process for "read-back" verification of critical results reported verbally or by telephone.

B. KPNC has defined values that require notification:
Critical value (also known as panic or alarm value) is a value that represents a pathophysiological state at such variance with normal as to life threatening imminently unless something is done promptly and for which some corrective action could be taken. All critical values will have a “C” flag. See “Handling of Glucose” section for exceptions regarding glucose.

III. SCOPE/COVERAGE:

This policy applies to all employees who are employed by the following entities:

A. Kaiser Foundation Hospitals and Health Plan, Inc.
B. The Permanente Medical Group (TPMG)

IV. DEFINITIONS:

A. Verbal and Telephone Communication: The verbal transmission of Critical Results face to face or over the telephone.
B. Critical Results: Significantly abnormal laboratory values and other diagnostic test/study results that require immediate and/or emergent response by a physician/licensed independent practitioner (LIP).
C. Reporters: A physician or authorized designated staff who performs Point of Care Testing, Laboratory, or Imaging, as defined by hospital policy, and who reports the critical result(s), as soon as possible after the result is known.
D. Receivers: Persons authorized to accept and communicate critical results include RNs, licensed pharmacists may include authorized MAs, RTs, LVNs, perfusionists, allied health practitioners (PA, NP, CNM, etc.) and physicians/licensed independent practitioners (MDs, DOs, DPMs, Dentists, etc.).
E. Treating Physician: The person who will act on the test results being reported. That will usually be the attending physician but may be another licensed independent practitioner, Allied Health Practitioner (AHP), or, in certain situations, a person who is authorized to modify treatment based on a protocol.
F. NUID: The KP National Unique ID (NUID) number is a user name, which, like an email address, identifies the user of an account for a variety of purposes. The password to the account is confidential but the NUID is not confidential.

V. PROVISIONS/PROCEDURES:

Critical results of tests and diagnostic studies are reported to the treating physician/AHP within 60 minutes after the result is known. This is documented in the patient's medical record. Critical results are defined by the following:

A. Lab: Reference the current KPNC Standardized Critical Values List, (See Attachment A) Any additional tests that the facility are considering Critical Results are listed as SFO Criticals
B. Point of Care Tests (POCT): Reference the current KPNC Standardized Critical Values List (See Attachment A). Critical values for POCT and laboratory tests performed in the local or Regional Laboratories are the same.
C. Point of care tests include, but are not limited to those listed on Attachment A.
D. Critical low POCT glucose results from handheld meters should be called immediately to the treating physician/AHP. (The hand held meter glucose has a positive bias at low glucose levels, thus requires prompt action.) Critical high POCT glucose results from hand-held meters may be confirmed by repeat testing prior to notifying the treating physician.

VI. RESPONSIBILITIES:

Critical results:

A. In house testing:
    1. The technologist who verifies the critical value is responsible for notifying the responsible licensed caregiver.

2. If more than one results are critical for an accession number, use "Critical" template to document the calling for all critical results, comment in the other critical results with "see primary critical results."

B. Results from the Regional Laboratory (generally only received during downtime):
The fax report from Regional Lab will have the comment "Attention Lab! Results may require further action". The Lab Assistant receiving the report brings it to the attention of the shift Supervisor or In Charge CLS to insure proper handling. The responsibility for calling or handling of the report lies with the shift Supervisor or In Charge CLS.

C. Phone calls or faxes from other facilities sending critical results for patient's home-based in San Francisco:
The fax report from another Kaiser facility is usually preceded by a phone call from that facility. The Lab Assistant receiving the call requests a fax copy, and/ transfers the call to the shift Supervisor or In Charge CLS to insure proper handling. The responsibility for calling or handling of the report lies with the shift Supervisor or In Charge CLS.

VII. PROCEDURE FOR CRITICAL VALUES:

A. Reporters: Physicians or designated personnel who are performing or interpreting diagnostic tests including Laboratory Tests, Point of Care Testing, etc shall report results requiring immediate and/or emergent response to a treating physician/licensed independent practitioners and may be done via RNs, licensed pharmacists (may include authorized RTs, LVNs, perfusionists.) The non-treating (physician/licensed independent practitioner) individual reporting the results must:

1. Call the licensed caregiver immediately, tell him/her you have critical value results, and identify the patient. If calling to an inpatient location, ask to speak to the physician or RN taking care of the patient.Identify themselves by first and last name and ask for appropriate person (i.e. their title) to receive critical lab result then ask for NUID of the appropriate receiver for documentation purpose. A read back of NUID of receiver is performed by reporter with confirmation of correct information.
2. Request “read-back” verification if not received.
3. Confirm that the read-back is correct.
4. Document the reporting of the test and read-back as required by the reporter’s department. Documentation shall include:
   a. Critical result.
   b. Lab caller and the receiver will address each other by name in the usual way. After the read back of critical result, the Lab caller will ask for receiver's NUID for documentation purpose. To ensure the correct NUID is heard, the caller will do a read-back of NUID with the receiver.
5. Read-back occurred.
6 Date/time of the communication.
7. Voice mail messages are not acceptable.
8. In rare, emergency situations, it may not be feasible to write the Critical result down and do a formal “read-back.” In these circumstances, a “repeat-back” should be expected & confirmed when correct.
9. If critical value is called prior to RILIS verification, see Section “Entering Documentation Before Verification” for proper readback documentation.
10. <u>Follow up with fax/expedite printer copy after giving verbal results</u>: for test performed in-house. MD/RN may ask for a hard copy after the lab gave the verbal critical values and the receiver performed result read-back.
    a. Confirm the fax number with the licensed caregiver on the phone.
    b. In addition to the read-back documentation in the chartable section, also document in the non-chartable section: “Faxed to ext ____, date/time, your ID”.
11. <u>Critical values called/faxed from the Regional Lab</u>:

a. Regional Lab calls SFO Lab with the critical value result within one hour from the time result is available.
b. Regional Lab provides the following information over the phone:
    1. Patient name and MRN.
    2. Accession number.
    3. Test and critical value result.
c. Person taking the critical value do the following:
    1. Go to RILIS ORV.
    2. Type patient' MRN and confirm patient name.
    3. In ORV, select line number and double click for the test associated with the critical value.
    4. While in the General lab result screen, read back the following information: MRN, Name, Test, Result.
    5. From the ORV screen, print an expedite report.
        i. In ORV screen, select "Task", "Manual Expedite"
        ii. Maker sure "Printer" bubble is on and select a printer
        iii. Chart format = NCAL expedite chart format
        iv. Ok
d. Call the licensed caregiver and give him/her the critical values immediately following the Manual Expedite printscreen.
e. Refer to Section "Entering Documentation After verification" below.
f. If notification is not made within 1 hour from the time we received the result from Regional Lab, also document the reason for failed TAT in the non-chartable comment section:
    1. Called not initiated immediately upon critical value receipt.
    2. Called initiate promptly but office/clinic closed.
    3. Call initiated promptly but no answer even with multiple attempts.
    4. Call is answered but respondent refused to take the result.
    5. Communication hand-off between Regional and Local Lab.
g. If also faxing the expedite printout, confirm the fax number with the licensed caregiver. Document in the non-chartable comment. See section on "follow up with fax copy" above.
h. Regional Lab will fax the critical value report with the receiver's name, ext, and date/time documented.
i. Staple the expedite printout to the copy faxed by Regional Lab in the "Regional Alarm Value Fax" book.

B. Receivers: Besides physicians, a responsible licensed caregiver may be a Nurse Practitioner (NP), Physician Assistant (PA), Pharmacist (PharmD), Registered Nurse (RN), or Licensed Vocational Nurse (LVN).Staff who receives a verbal/telephone communication of critical results will:
    1. Record (write down or enter into computer) results,
    2. Read-back the result to the person who reports the information.
    3. Receive confirmation of the read-back.
    4. Give their NUID and identification to the reporter.
    5. Notify the physician/LIP/AHP responsible for the care of the patient,
    6. Request a repeat back by the physician/LIP/AHP, if not received.
    7. Physicians/LIPs/AHPs who receive a verbal/telephone communication of critical results will repeat back the test and result and receive confirmation of the read-back.

C. Documentation by the receiver:
    1. The following elements are to be documented in the medical record:
    2. Time results received (or Point of Care test completed)
    3. Test name(s)
    4. Test result(s)
    5. Name of physician/LIP/AHP notified or document "covered by current

physician/LIP/AHP orders" (in comment field in Critical Notification Flow sheet in KP HealthConnect.

D. Timeliness of Critical Results: This is the measurement of the turnaround time for the treating physician/LIP/AHP to be notified of the results.

Critical Results: The time interval of reporting is not to exceed one hour, from the identification of the critical result to the time reported to a treating physician/LIP/AHP.

E. Ambulatory After Hours Laboratory Critical Value:

1. After hours outpatient Laboratory critical results will be called by the testing laboratory to the AACC (Call Center). AACC RNs manage some critical results by approved protocols. Others are communicated directly to the Call Center Physician. The RN or the physician follow-up directly with patients and document the encounter, according to AACC protocols. The AACC may message providers with information for follow up, per approved protocols. Telephone number for AACC Advice RN is 1-866-248-0860.
2. The AACC RNs are to take the Critical Lab results for one member, and will transfer the lab back into the dedicated Lab Queue by using 866-248-0860. This workflow will be continued until all results have been reported.
3. Critical results for which there exists NCAL approved protocols or physician/LIP/AHP order in the medical record on how to manage the critical results do not require critical results reporting. The results are managed by protocol/order and are not under procedure of critical results reporting:
4. Results that fall outside of these protocols must follow the procedure for critical results reporting.
5. See tables below for department specific protocols and contact information. The protocol must appear in the medical record.
6. Results of "stat" labs and tests are NOT considered critical unless they meet criteria established in this policy/procedure or have been specified in tables below.

F. The timeliness of reporting the critical results of tests and diagnostic procedures is reviewed daily M-F (weekends reviewed on Mondays), and appropriate action taken for any fallouts. Critical value TATs are part of the Quarterly Quality Management Reports.

VIII. REPORTING:

A. <u>Entering documentation before verification</u>:

1. Go to the ARE screen. Enter the accession #. Review results for accuracy.
2. Cursor over the critical result, "comment", "edit". Type "CRIT" and hit F9.
3. **CRIT** = Critical results phoned to and verification read-back made by _____ (name), _____ (title), ____ (ext), time _____, called by _____.
4. Press P3 to advance to the next blank space. Document the name of the person notified, title of the person notified, phone number, F5 for current date/time, and your ID.
5. Press "OK" and "CLOSE".
6. VERIFY.

B. <u>Entering documentation after verification</u>:

1. Go to ORV screen. Select the test with critical value, click "Comment" then "Edit". Type in "CRIT" template and F9.
2. Use the "CRIT" template to Document the Notification:

   a. **CRIT** = Critical results phoned to and verification read-back made by _____ (name), _____ (title), ____ (ext), time _____, called by _____.
   b. Include the following in the documentation:

      1. Name of the person notified
      2. Title of the person notified

3. Phone number4/ Fax number if also faxed
4. Date and time
5. Your ID

3. Documentation in ORV will show in the General lab results screen and on the chart copy of the report, but will not appear on CIPS or HC, unless it is re-sent.
4. To re-send to CIPS and/or HC:
   After entering documentation in ORV, with cursor still on the test with critical value, "Task" "Resend" results to ESO.

C. Patient Locations:
1. **ED / INPATIENTS**:
   a. Notify the licensed caregiver in ED or the patient's inpatient unit.
   b. For documentation, refer to the "Notification and Documentation" section.
2. **OUTPATIENTS**: See "Outpatient Critical Values Notification Protocol"
   a. Notify the provider/licensed caregiver according to the "Outpatient Critical Value Notification Protocol" table.
   b. For documentation, refer to the "Notification and Documentation" section.
3. **OUTPATIENT ANTICOAGULATION SERVICE**: See "Outpatient Critical Value Notification Protocol" table for critical INR notification.
   Between 4:30pm and 9:00am (7-days including weekend and holidays), if clinics are closed then call AACC(Appointment and Advise Center) at ext.32200 and document the notification using SF RB. If clinics are open then call the provider in clinic and also document the notification using SF RB.
4. **TRANSPLANT PATIENTS**: Results are faxed from Regional Lab directly to the Transplant Centers.
5. **SKILLED NURSING FACILITIES (SNF's**): See "Skilled Nursing Facility Specimens - Nob Hill" procedure in the Pre-Analytic Procedure Manual.
6. **PRE-SURGERY PATIENTS**: Call the ordering MD/NP. After hours, call their pager number listed in the phone directory. If no response, call the patient's primary care physician or the After-Hours Clinic.
7. **Ordering physician is at another facility:** Call and fax the report to the laboratory at the ordering physician's facility.
8. **Critical values received from a facility other than Regional Lab:** These are results for SFO patients. Call and document read-back according to the "Notification and Documentation" section.

D. Notification Problems:
1. Use Cortext to request appropriate provider call back. See Appendix B for instructions for using Cortext. **Do not use Cortext for the actual notification. Use Cortext only for requesting a call back.**
2. In the event that appropriate provider/licensed caregiver cannot be reached, or refused to accept an alarm value.
   a. Inform the house supervisor before the one-hour TAT limit.
      The house supervisor will identify the location of the patient and refer the critical lab to a covering MD who can act quickly
   b. Document the problem:
      1. Complete a Responsible Reporting Form and submit to Risk Management.
      2. Any continuing efforts to call the result should be documented in the non-chartable comments.

Table 1:
OUTPATIENT CRITICAL VALUES NOTIFICATION PROTOCOL

Department	Weekdays 9 AM - 4:30 PM	Evenings 4:30pm - 8:00 pm & Weekend/Holidays 9am - 8:00 pm.	Nights midnight - 7am	Daily, including holidays 7 - 9 AM
OBGYN	Provider's office	L&D MD staff	L&D MD staff	L&D MD staff
Perinatology GTT3 and GLUP only	[1]Perinatologists' pager # 201-8644	[1]Perinatologists' pager # 201-8644	Wait until 7 AM to call	[1]Perinatologists' pager # 201-8644
Psychiatry	Provider's office	[2]Psychiatric MD on-call	[2]Psychiatric MD on-call	[2]Psychiatric MD on-call
Pediatrics	Provider's office	Call Pedi on-call	Call Pedi on-call	Call Pedi on-call
Tunnel Center-Rehab & Health.	Call 415-673-8405	Call 415-673-8405	Call 415-673-8405	Call 415-673-8405
Pre-Surgery Center	Pre-Surgery Center	After-hours: Call ordering MD pager or Alternate: Call PCP or AHC		
Other	Provider's office	[3]Appropriate MD on-call	ED	[3]Appropriate MD on-call
Medicine	Provider's office	See Table 2 below for after-hours notification.		
Outpt Anticoagulation Service (OACS) – **Critical INRs**	8:30am – 4.30pm weekdays: Call OACS	See Table 2 below for after-hours notification.		
Oncology	Call provider between 9:00-16:30. During lunch time, try alternative number: 1) 3-2866 (Chemo-Nurse); 2) 3-2860 (Case Manager) or 3-8734. During after hours, following the same instructions for Medicine.			

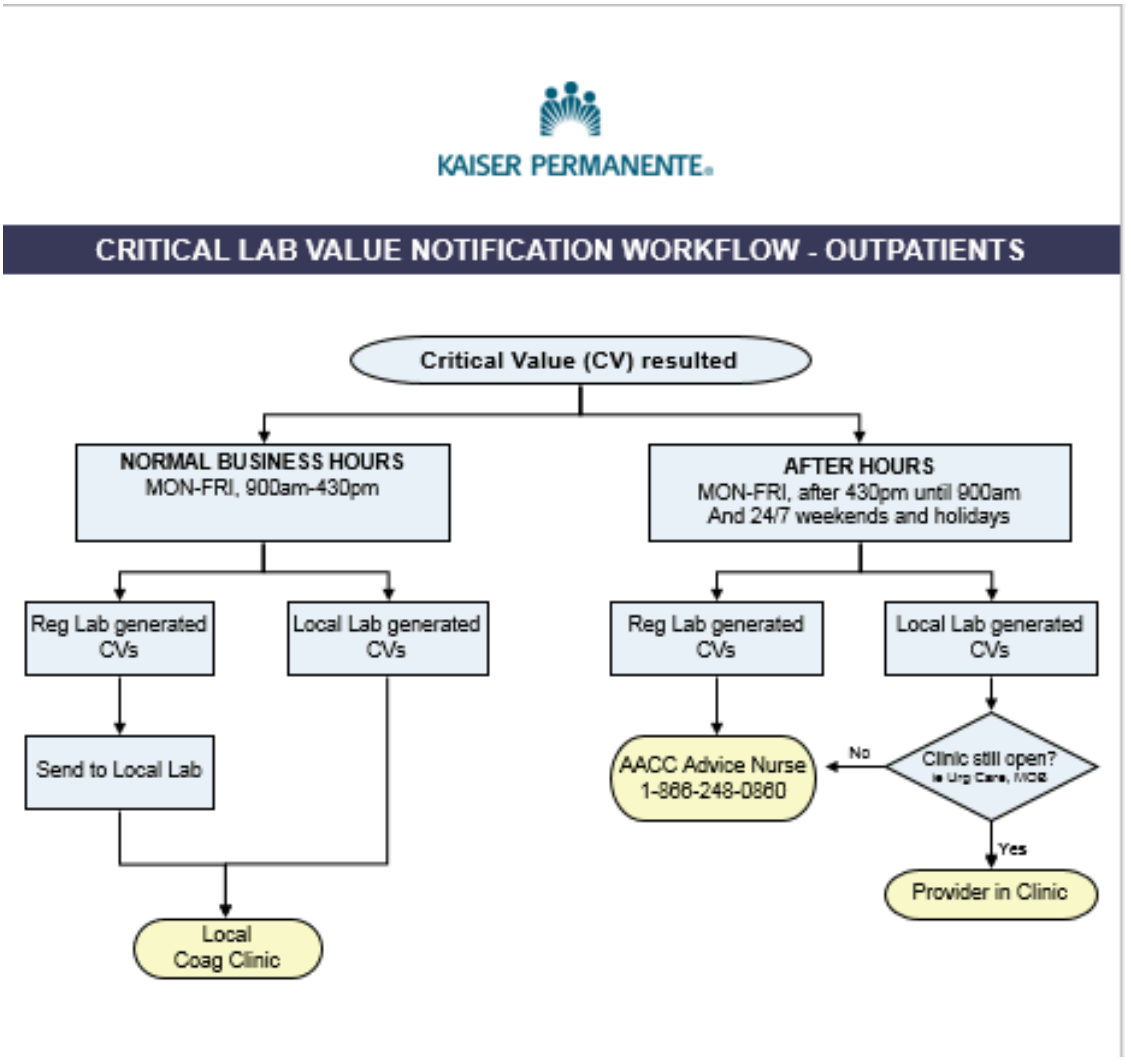
[1] If perinatologists do not respond, call the OB on-call in L&D [2] Obtain beeper number from operator. [3] Call to the staff-on-call for the ordering provider's service.

Department	Mon-Thur 9 AM - 7 PM	Friday 9 AM -5:30 PM	All other hours and Holiday
Pediatrics Bilirubin >18 mg/dL	*3-6516 (2200 O'Farrell, 6S Station) ***3-3565** (Backup)		**Call ICN (3-2525)

* LVN will be tracking these results.

**** Call ICN at 3-2525: Mon-Thur, after 7 PM, Fri 5:30 PM to Mon 9:00 AM, and on holidays.**

Table 2:
Department of Medicine - Outpatient Critical Values Notification Protocol



IX. PROCEDURE FOR HANDLING GLUCOSE RESULTS

A.. As of 6/1/2013, the reflex-testing of KETO or KETOR has been discontinued at medical center laboratories.

1. Blood ketone test ordered by providers for local testing will be reported as “Test Not Done” using the **KETO** template to report the comment “Test discontinued. Consider alternative laboratory testing as clinically warranted.”
2. Blood ketone test ordered by providers and sent to Regional lab will be performed using an alternative method for serum ketone testing.

B. Critical **High** Glucose:

1. For local testing, results will be considered a Critical High Glucose and get a “C” flag if the value is ≥ 450 mg/dL for all adult patients.
   Notify the licensed caregiver and document according to the section “ **PROCEDURE for Critical Values”. This applies to all adult patients.**
2. For local testing, results will be considered a Critical High Glucose and get a “C”

flag if the value is ≥ 201 mg/dL for all pediatric patients.
Notify the licensed caregiver and document according to the section " **PROCEDURE for Critical Values". This applies to all pediatric patients.**

3. For samples tested at Regional lab, results will be considered a Critical High Glucose and get a "C" flag if the value is ≥ 450 mg/dL andthe serum ketone test is positive for all adult patients. Results will also be considered a Critical High Glucose and get a "C" flag if the value if ≥ 600 mg/dL for all adult patients. Notify the licensed caregiver and document according to the section "**PROCEDURE for Critical Values". This applies to all adult patients.**

C. Critical **Low** Glucose:

1. For both local testing and at Regional lab, results will be considered a Critical Low Glucose and get a "C" flag if the value if ≤ 39 mg/dL for all adult patients. Notify the licensed caregiver and document according to the section " **PROCEDURE for Critical Values". This applies to all adult patients.**
2. For local testing, results will be considered a Critical Low Glucose and get a "C" flag if the value if ≤ 34 mg/dL for all pediatric patients. Notify the licensed caregiver and document according to the section "**PROCEDURE for Critical Values". This applies to all pediatric patients.**

X. OUTPATIENT MICROBIOLOGY RESULTS THAT ARE FAXED TO THE HOSPITAL LAB:

	Pediatrics	Medicine
Group A Strep	Fax to ext 3-3566 (24/7)	Mon-Fri 9am-4.30pm: Call provider's office After Hours/Weekend/Holidays: Save for day shift to follow up next business day.

XI. REGION-WIDE CRITICAL VALUES AND ALERT VALUES LIST (For printable table, see Attachment A)

This list was developed by the Inter-Laboratory Quality Team (Laboratory Quality & Compliance) and approved by the Medical Center Department Chiefs of Services and the Quality Utilization Executive Oversight Committee.

NCAL Standardized Critical Value List - Effective September 2, 2014

	Test Name	Regionwide Critical Values (Panic flag !! in Health Connect)		Alert Values** (Low Panic Flag ! in Health Connect)	
		Low (= or <)	High (= or >)	Low (= or <)	High (= or >)
CHEMISTRY	Amylase (U/L)				576
	AST (U/L)				301
	Ca (mg/dL)	5.9	14.1	6.9	13.1
	CK (U/L)				1001
	CO2 (mmol/L)			11	40
	Creatinine (mg/dL)				7.1
	Glucose (mg/dL) – Medical Center Labs *See note 1 for Regional Laboratory*	39	450	49	400
	Prenatal Glucose (mg/dL); GTT3 (3 hr GTT) and GLUCP (50 gm – 1 hr) Medical Center Labs *See note 1 for Regional Laboratory*	39	450	49	300
	Lactate (mmol/L), all other Lactate (mmol/L), iSTAT, Capillary, Age 0-7days		2.0 4.0		
	Magnesium (mg/dL)			1.1	4.9
	Phosphorus (mg/dL)			1.4	
	Potassium (mmol/L)	2.5	6.1	2.7	5.8
	Sodium (mmol/L)	119	156		
BB	Positive DAT (neonates first week)	Positive			
	Following Emergency Release of Uncrossmatched Blood* *Refer to approved procedure.	Historic Antibody Screen Positive OR Current Antibody Screen Positive; AND Incompatible Crossmatch			
HEMCOAG	aPTT (sec)		65.1		
	Hematocrit (%)	18		20	61
	Hemoglobin (g/dL)	6.0			21
	Heparin (Anti-Xa), UFH (units/mL) LMWH Q12H (units/mL)		0.80 1.30 *(see note 2)*		
	Platelets (per cu mm)	20,000		30,000	
	Presence of blast cells				Yes
	PT (INR)		5.1		
	WBC (K/uL)	0.9			30.1
MICRO	Positive AFB smear				Yes
	Positive Blood Cultures	Yes (Reg Lab notifies provider directly)			
	Positive CSF Gram Stain/culture	Yes (Performing lab notifies providers directly)			
	Positive joint fluid Gram Stain / culture	Yes (Performing lab notifies providers directly)			
	Positive malaria smear				Yes
	Positive pericardial fluid Gram Stain / culture	Yes (Performing lab notifies providers directly)			
TDM	Acetaminophen (ug/mL)		31		
	Amikacin Trough Amikacin Peak Amikacin Random				10.1 35.1 15.1
	Carbamazepine (ug/mL)		20.0		12.1
	Caffeine-neonatal (ug/mL)		16		
	Digoxin (ng/mL)		2.5		
	Gentamicin (ug/mL)				Trough: 2.1
	Lithium (mEq/L)		2.0		1.6
	Methotrexate (umol/L) 24 hrs after 48 hrs after 72 hrs after		10.01 1.01 0.11		
	Phenobarbital (ug/mL)		61		
	Phenytoin (ug/mL)		41		30
	Salicylate (mg/dL)		31		
	Theophylline (ug/mL)		25		20
	Tobramycin (ug/mL)				Trough: 2.1
	Valproic acid (ug/mL)		200		
	Vancomycin (ug/mL)				Trough: 21

Note 1: Glucose critical values for Regional Laboratory testing:
Critical Low: < or = 39 mg/dL, Critical High: > or = 450 mg/dL & BHB >1.0 mmol/L, OR > or = 600 mg/dL

Note 2: Laboratory cannot distinguish between LMWH Q12H and Q24H dosing. Clinician must interpret LMWH results in correct context. In addition, clinicians may be notified of a "Critical Value" even though "therapeutic" for the q24 hour dosing regimen. The therapeutic ranges for q12 and q24 dosing of LMWH will be printed on the laboratory report to assist with the interpretation of the results.

** Alert values are results that are significantly abnormal but are not at the critical levels. Alert values are formerly known as Early Notification with supplemental notification by the laboratory in addition to flagging in Health Connect. Effective September 2, 2014, Alert values continue to be flagged in Health Connect but the supplemental notification by the laboratory is discontinued. RWLQCFCD-0013

XII. SFO CRITICAL VALUES LIST

SFO Critical Values List

Call 24 hours/day		
Test	**Low (<=)**	**High (>=)**
Alcohol		300.1 mg/dL (0.3%)
Blood gases: pH Arterial pCO2 pO2 Carboxyhemoglobin Methemoglobin Lactate	 7.19 19 mm Hg 39 mm Hg	 7.61 71 mm Hg ------- >20% >35% >/= 2.0 mmol/L
Positive gram stain/wet preps on Sterile fluids	Yes	

SFO Pediatric Critical Values List

Call 24 hours/day		
Test	**Low (<=)**	**High (>=)**
Bilirubin – Total (0 – 3 months)		18.1 mg/dL
Calcium (0 – 1 week)	6.4 mg/dL	12.8 mg/dL
Creatinine (0 – 12 years)		3.9 mg/dL
Glucose (Random or Fasting) Infant (0-1 week):	34 mg/dL	a) 201 mg/dL
Glucose – urine on infants <1yo		a) Pos b) Ketones > 2+ (40 mg/dL)
Magnesium (0 – 15 years)	1.4 mg/dL	4.1 mg/dL
Phosphorus (0 – 15 years)	2.9 mg/dL	10.1 mg/dL
Potassium (0 – 10 days)	2.7 mEq/L	6.1 mEq/L
Reducing sugars -urine on infants <1 year old		Pos
Sodium	119 mEq/L	156 mEq/L
Hemoglobin 0 - 2 weeks 2 weeks - 12 years	 6.9 g/dL 6.9 g/dL	 20.1 g/dL
Hematocrit 0 - 1 month 1 month - 12 years	 20.9 % 20.9 %	 60.1 %
Platelet	20 K/uL	
WBC Infant (0-2 weeks)	 3.9 K/uL	 40.1 K/uL

XIII. REFERENCES:

A. The Joint Commission: National Patient Safety Goals: NPSG.02.03.01
B. Federal CMS CLIA 42 CFR§493.1291 and College of American Pathologists (CAP) Requirements COM.30000

XIV. APPENDICES:

A	SFOWI-0039 Appendix A, Critical Value Tables-Printable

	NCAL_Std_Crit_Val_List_RWLQCFCD-0013-Eff_9-2-14.pdf
2	SFOWI-0039 Appendix B, Cortext Instructions.pdf

Associated Documents:

External Documents

SFOFCD-0465 NCAL Standardized Critical Value List

CVN OP Flowchart_Rev062817.ppt

Associated Quality System Documents - None

Documents Generated:

Document Revision History:

Revision: 25	**Date Created:** 12/07/2006 **Date of Last Revision:** 01/29/2018	**Last Approval Date:** 01/29/2018

Document Author: Richard Chui/CA/KAIPERM	**Document Manager:** Maureen R Fitzgibbons/CA/KAIPERM

Reason for Change:

Revision:	Sec/Para Changed	Change Made:	Date
1	Outpt Critical Values Notification Table	New notification guidelines for Outpt Anticoagulation Service	12/17/2006
2	Section C, Para d	Use order comment window instead of result comment window to document SF RB.	1/19/2007
3	Dept name	Department names updated.	2/12/2007
4	Table 1, 2, & 3	New after-hours notification protocol for Medicine Dept and Outpt Anticoagulation Clinic	4/27/2007
5	Section C, 1, c	Updated new instructions for critical values from Regional Lab	6/4/2007
6	Section D 1.	Remove Section D-1. Delete recheck value.	8/22/2007
7	Section C, 1, d, ix. and C, 1, e, vi, 2, a	Removed the requirement for documenting repeat critical values.	2/26/2008
8	Table 1, 2 & Section F	Table 1: Changed Pedi protocol, added Pedi Bili Table 2: Pos GCCT & Strep results held until 9am for adult patients New Section F: Microbiology results will be processed as alerts and will be faxed or held.	3/2/2009
9	Section 2 b (iii), c,Table 1, 2,3 & Section F	Section 2 b: Deleted Medicine Outpatient Critical value calling protocol. Section 2 c: Changed Critical value calling protocol. Table 1: Changed Outpatient Anticoagulation Service weekday protocol. Table 2: Changed to revised Critical value calling protocol.	3/12/2009

		Section F: Changed the old protocol instruction to current protocol.	
10	Table 1	Revised neonatal bili notification informaton.	9/4/2009
11	Table 1	Revised neonatal bili notification information.	7/1/2010
12	Proc. F	Revised positive SAP reporting; AACC after-hour notification process.	2/28/2011
13	Table 1	Clarified after-hours outpatient C.V. reporting. Removed NP from Pre-Surgery Center Evening column per Mary Fitzgerald.	8/22/2011
14	Entire Content	Sections relating to RILIS functions: updated processes from Classic to Millenium; Section E: updated to reflect change in policy per Regional Technical Bulletin regarding serum ketones; rewrote for clarity regarding ENV and Critical glucose; added items relating to prenatal and pediatric patients; Sectio G and H: added content from SFOSOP-0101 to consolidate critical value policies into one QSI document. Will submit SFOSOP-0101 for obsolescence; Entire Content: fixed formatting for printability	6/01/2012
15	Approver	Changed approver to Junming Fang	2/4/2013
16	Attachment A SFO Pediatrics Critical Values List	Updated with 9/12/2011 version from Dianna Martin; Added POCT whole blood glucose screening protocol for Neonatal hypoglycemia	2/12/2013
17	SFO Pediatric Critical Values List	Removed POCT whole blood glucose screening protocol for Neonatal hypoglycemia since it belongs only to hospital-wide policy per Dianna Martin	3/5/2013
18	Attachment A SFO Pediatric CV List Section E,1,1a	Updated NCAL Standardized (Adults) Critical Value Triaging Model with 3/5/2012 version from Ron Lualhati; Removed Ketones in Glucose (Random or Fasting) High Column - test discontinued at local facility Updated with serum ketones removal effective date; updated with new KETO template for test not done comment	6/28/2013
19	Appendix A	Added printable tables	12/3/2013
20	Content and Appendix A	Removed Early Notification Values sections and updated Appendix A with new list from Region	8/15/2014
21	H. SFO pediatric Critical value test.	Deleted Unknown patient	11/18/2014
22	C. 3 a) I. Appendices	Added Cortext instructions.	5/8/2015
23	N/A	Change of Directorship	6/29/2016
24	All Policy Statement II III IV V - XIV XII XIV	Generalized formatting to remove redundancies, and improve readability Added Policy Statement Removed reference to two categories. Updated Principle Added Scope/Coverage (alignment with Regional Policy) Added Definitions Aligned with Regional policy and local policy Updated SFO Critical Values List to match current practice Added References	08/19/2016
25	Section VIII Table 1	Updated to include most recent Regional diagram.	01/24/2018

	Sextion XI Appendices and Associated documents	Replaced Critical List with most recent Regional List from LabLink. Replaced links and copies with most recent Regional documents and SFO FCDs.	

Notification List:

Approvals:

First Approver's Signature

Name: Diane I Johnson/CA/KAIPERM Jan 29, 2018 03:50:23 PM PST - Approved by: Diane I Johnson/CA/KAIPERM
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Second Approver's Signature

Name: Eric Suba/CA/KAIPERM Jan 29, 2018 03:51:11 PM PST - Approved by: Eric Suba/CA/KAIPERM
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Document History Section