TRAINING UPDATE

Lab Location:	GEC, SGMC & WOMC	**Date Distributed:**	10/17/2019
Department:	Core lab	**Due Date:**	11/5/2019
		Implementation:	**11/5/2019**

DESCRIPTION OF PROCEDURE REVISION

Name of procedure:
Delta Check SGAH.QA25 v6
Description of change(s):
Header: Change WAH to WOMC Section 2, 4 & 6: Add DI Section 9: Change time search for HGB, MCV & RBC from 24 to 36hr This revised SOP was implemented on November 5, 2019

Document your compliance with this training update by taking the quiz in the MTS system.

Non-Technical SOP

Title	**Delta Check**	
Prepared by	Leslie Barrett	Date: 8/20/2009
Owner	Robert SanLuis	Date: 2/20/2015

Laboratory Approval		
Print Name and Title	**Signature**	**Date**
Refer to the electronic signature page for approval and approval dates.		
Local Issue Date:	Local Effective Date:	

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1. PURPOSE

Delta checking is employed by the laboratory to check for unexpected changes in patient test results that may indicate a significant change in the patient's clinical status. Delta checking also serves as a quality assurance tool to check for analytical errors, and to ensure that the specimen tested, and results obtained, are consistent with patient clinical condition.

2. SCOPE

Delta check parameters are set up in the test files in the Laboratory Information System (LIS) and Data Innovations (DI). During delta checking, these systems compare the current result to the previous result. If the difference in results exceeds predetermined limits (%D and absolute D), the system alerts the technologist to the delta check failure.

3. RESPONSIBILITY

The Laboratory Medical Director approves the delta check parameters.

Technologists verify the validity of any result that fails delta checking. This validity check is documented as a comment in the LIS.

The Supervisor or designee prints a failed delta check report each working day and checks that delta failures are investigated and documented by the technologist.
The reviewer checks the report for trends such as an unusual number of delta failures for an analyte that may not be seen by a single technologist and takes appropriate corrective action as needed. Delta check reports are retained for two years.

4. DEFINITIONS

Delta check - a comparison of consecutive values for a given test in a patient's laboratory file used to detect abrupt changes, usually generated as a part of a computer-based quality control program.

5. PROCEDURE

A. Delta checking is automatically performed by the LIS and DI on all qualifying results before verification.

B. The "fail delta" flag will alert the technologist.

C. The technologist will take appropriate action to resolve the delta check before releasing the result. Items to consider:

1. An unexpected number of delta failures for the same analyte may indicate an assay problem. The analyst will troubleshoot the instrument for problems including running additional quality control samples as needed to ensure expected assay performance.

2. Specimen quality will be checked. Hemolysis is a reasonable explanation for an elevated potassium result that fails delta checking. Check the assay SOP or instrument operations manual for assays that are affected by specimen quality. **Note**: an improperly handled specimen may also fall into this group.

3. Patient information will be checked for an explanation. Patient treatment or change in status can affect results. Where possible check laboratory patient status reports or patient history for information on transfusions or anticoagulant therapy. Contact the patient's nurse or physician to gather more clinical history.

4. If there is no known reason for the change in the result, suggest to the nurse or physician that the patient be redrawn to verify the result. Hold the result in the LIS until redraw is tested and result is confirmed.

5. If the nurse or physician does not want the patient redrawn, accept the results and document this information via free text in the LIS and/or DI.

D. If it is determined that the specimen has been misidentified (misdrawn or mislabeled), the results may not be released. Notify the patient's nurse or physician and complete a Quality Variance form.

6. RELATED DOCUMENTS

Delta Value - LIS Investigation, LIS procedure
Failed Delta Value Report, LIS procedure
Data Innovations Instrument Manager, General Lab procedure

7. REFERENCES

Stedman's Medical Dictionary, 26th edition, 1995.

8. REVISION HISTORY

Version	Date	Reason for Revision	Revised By	Approved By
		Supersedes SOP L014.002		
000	11/17/10	Section 9: Update addenda	L Barrett	C Bowman
001	2/4/13	Section 5: Revise PI form to Quality Variance Section 9: Remove TBIL, DBIL, CBIL, PHOS, revise SOD and CL	L Barrett	C Bowman
002	2/20/15	Update owner Section 9: Remove CL, CREAT, FIBR, LI, GENP, GENT, PHENB, PTA, PTT, THEO, TOBP, TOBT, VANT, VANP. Revise INR to 60% Footer: version # leading zero's dropped due to new EDCS in use as of 10/7/13	L Barrett	R SanLuis
3	2/23/17	Header: add other sites	L Barrett	C Bowman
4	5/23/18	Section 9: Change platelets time frame from 24hr to 72hr	L Barrett R SanLuis	C Bowman-Gholston
5	10/15/19	Header: Change WAH to WOMC Section 2, 4 & 6: Add DI Section 9: Change time search for HGB, MCV & RBC from 24 to 36hr	L Barrett	C Bowman-Gholston

9. ADDENDA AND APPENDICES

LIS Delta Values

LIS DELTA VALUES

Test code	Test Name	Time Search	Delta %	Absolute
CA	Calcium	24hr	25	
CKMB	CKMB	12hr	100	
DIG	Digoxin	24hr	40	
GLUC	Glucose	24hr	100	
HGB	HGB	36hr		3
INR	INR	24hr	50	
MG	Magnesium	24hr	60	
MCV	MCV	36hr		3
SOD	Sodium	24hr		8
PLTC	Platelets	72hr	80	
K	Potassium	24hr	45	
RBC	RBC	36hr	35	
OSMO	Serum Osmo	24hr	50	
TROPI	Troponin I	12hr	150	