



Newborn Screening Quality Assurance Program

PROFICIENCY TESTING

Sickle Cell Disease and Other Hemoglobinopathies

Volume 19, No. 1

Panel 1

February 2009

INTRODUCTION

On January 12, 2009, we distributed five dried-blood-spot (DBS) specimens prepared from umbilical cord bloods to all active participants for the Panel 1 Sickle Cell Disease and Hemoglobinopathy Proficiency Testing (PT) event. A total of 75 panels were mailed by overnight FedEx mail. The packages went to 50 domestic laboratories and 25 foreign laboratories. This PT report is a compilation of data reports received from 71 of the participating laboratories by the designated deadline date. There were 4 laboratories that did not report this quarter. We distribute this quarterly report to all participants, state laboratory directors, and to program colleagues by request.

We requested that participants assay all survey specimens by the analytical schemes they routinely use and report for each specimen the presumptive phenotype, the presumptive clinical assessment, and any other clinical classifications that they deem consistent with their analytic results and program operations. ❖

PARTICIPANTS' RESULTS

The certification report listing hemoglobins (Hbs) by phenotype and their presumptive clinical assessments appears on page 2.

The frequency distribution of reported presumptive phenotypes and clinical assessments appears on page 3.

The individual data verification for each laboratory with evaluation comments appears on page 4.

For Panel 1, 2009 there were no misclassifications.

The State of Alabama is phasing out their use of umbilical cord bloods this year and we will no longer be able to use them as a source for our hemoglobin PT program. Until we find a suitable substitute, we will be reducing our panels to three times a year to conserve materials. Therefore, the next shipment for the Hemoglobinopathy PT program will be on May 4, 2009. ❖

MEETINGS

February 15-20, 2009: The Combined 3rd Annual Sickle Cell Disease Research and Educational Symposium and Annual Sickle Cell Scientific Meeting, Memorial Healthcare System, Hollywood, Florida <http://floridasickle.org/>

September 30 – October 3, 2009
Orlando FL: Sickle Cell Disease Association of America, Inc. 37th Annual Convention, Caribe Royale, 8101 World Center Drive, Orlando, FL <http://www.sicklecelldisease.org/docs/37th%20annual%20convention.pdf> ❖

ACKNOWLEDGMENTS

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CDC/APHL

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**Newborn Screening Quality Assurance Program
Sickle Cell Disease and Other Hemoglobinopathies**

Specimen and Lab Certification

Year: 2009 Panel: 1

Presumptive Clinical Phenotypes

	Specimen 19H1	Specimen 19H2	Specimen 19H3	Specimen 19H4	Specimen 19H5
Expected Presumptive Phenotype	FA	FAC	FAC	FAS	FAS
Accepted Presumptive Phenotypes					

Presumptive Clinical Assessments

	Specimen 19H1	Specimen1 9H2	Specimen 19H3	Specimen 19H4	Specimen 19H5
Expected Presumptive Clinical Assessment	01	03	03	02	02
Accepted Presumptive Clinical Assessments					

- 01 Normal--no abnormal Hb found
- 02 Hemoglobin S carrier
- 03 Hemoglobin C carrier
- 04 Hemoglobin SS disease (Sickle cell anemia)
- 05 Hemoglobin SC disease
- 06 Hemoglobin SD disease
- 08 Hemoglobin D carrier
- 09 Hemoglobin E carrier
- 12 Hemoglobin SE disease

- 16 Alpha-thalassemia (Bart's Hb)
- 18 Hemoglobin EE disease
- 20 Assessment not listed
- 21 Unsatisfactory specimen
- 22 Unidentified variant, fast or aging band
Specimen not evaluated (NE)

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Frequency Distributions

Year: 2009 Panel: 1

Phenotypes			Clinical Assessments		
Specimen Number	Hemoglobin Phenotypes	Frequency Distributions	Specimen Number	Presumptive Assessments	Frequency Distributions
19H1	FA AF	70 1	19H1	01 Normal Hemoglobin	71
19H2	FAC FCA AFC	65 5 1	19H2	03 Hemoglobin C carrier	71
19H3	FAC FCA AFC	64 6 1	19H3	03 Hemoglobin C carrier	71
19H4	FAS AFS	70 1	19H4	02 Hemoglobin S carrier	71
19H5	FAS AFS	70 1	19H5	02 Hemoglobin S carrier	71

This *NEWBORN SCREENING QUALITY ASSURANCE PROGRAM* report is an internal publication distributed to program participants and selected program colleagues. The laboratory quality assurance program is a project cosponsored by the **Centers for Disease Control and Prevention (CDC)** and the **Association of Public Health Laboratories**.

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