



Newborn Screening Quality Assurance Program

PROFICIENCY TESTING

Sickle Cell Disease and Other Hemoglobinopathies

Volume 19, No. 2

Panel 2

June 2009

INTRODUCTION

On May 4, 2009, we distributed five dried-blood-spot (DBS) specimens prepared from umbilical cord bloods to all active participants for the Panel 2 Sickle Cell Disease and Hemoglobinopathy Proficiency Testing (PT) event. A total of 76 panels were mailed by overnight FedEx mail. The packages went to 51 domestic laboratories and 25 foreign laboratories. This PT report is a compilation of data reports received from 67 of the participating laboratories by the designated deadline date. There were 9 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.

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 October 5, 2009. ❖

MEETINGS

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

The specimens for this survey were prepared from umbilical cord blood samples supplied by Alabama State Public Health Laboratory. ❖

CDC/APHL

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

Specimen and Lab Certification

Year: 2009 Panel: 2

Presumptive Clinical Phenotypes

	Specimen 29H1	Specimen 29H2	Specimen 29H3	Specimen 29H4	Specimen 29H5
Expected Presumptive Phenotype	FA	FAS	FAS	FA	FAC

Presumptive Clinical Assessments

	Specimen 29H1	Specimen1 29H2	Specimen 29H3	Specimen 29H4	Specimen 29H5
Expected Presumptive Clinical Assessment	01	02	02	01	03

- 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: 2

Phenotypes			Clinical Assessments		
Specimen Number	Hemoglobin Phenotypes	Frequency Distributions	Specimen Number	Presumptive Assessments	Frequency Distributions
29H1	FA	65	29H1	01 Normal Hemoglobin	65
	FAS	1		02 Hemoglobin S carrier	1
29H2	FAS	63	29H2	02 Hemoglobin S carrier	63
	FAC	1		03 Hemoglobin C carrier	1
	FS	2		04 Hemoglobin SS disease	2
29H3	FAS	63	29H3	02 Hemoglobin S carrier	63
	FAC	1		03 Hemoglobin C carrier	1
	FS	2		04 Hemoglobin SS disease	2
29H4	FA	65	29H4	01 Normal Hemoglobin	64
	FAS	1		02 Hemoglobin S carrier	1
				03 Hemoglobin C carrier	1
29H5	FAC	57	29H5	03 Hemoglobin C carrier	63
	FCA	6		02 Hemoglobin S carrier	1
	FAS	1		05 Hemoglobin SC disease	1
	FC	2		20 Assessment not listed	1

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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