

Newborn Screening Quality Assurance Program

PROFICIENCY TESTING

Sickle Cell Disease and Other Hemoglobinopathies

Volume 23, No. 1

Panel 1

February 2013

INTRODUCTION

On January 7, 2013, 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 Hemoglobinopathies Proficiency Testing (PT) event. A total of 73 panels were mailed by overnight FedEx mail. The packages went to 49 domestic laboratories and 24 foreign laboratories. This PT report is a compilation of data reports received from 70 of the participating laboratories by the designated deadline date. There were 3 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 (Hb) 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.

We will continue to ship three PT panels this year for Hemoglobinopathies. The next shipment of materials from the Sickle Cell and Hemoglobinopathies PT program will be on April 29, 2013. ❖

MEETINGS AND TRAINING

7th Annual Sickle Cell Disease Research & Educational Symposium and National Sickle Cell Disease, Miami, Florida on April 14-17, 2013. ❖

SPOTLIGHT

NCAA delegates voted 254 to 200 in favor of mandatory confirmation of sickle cell trait status in Division III student athletes. Confirmation of sickle cell status will be required of

all incoming student athletes in the 2013-2014 school year and for all athletes by 2014-2015. Mandatory sickle cell screening is already required by the NCAA in Division I and Division II athletes. ❖

<http://www.medpagetoday.com/Orthopedics/SportsMedicine/36947>

ACKNOWLEDGMENTS

The specimens for this survey were prepared from umbilical cord blood samples supplied by Cleveland Cord Blood Center, Cleveland, Ohio. They are an independent not-for-profit 501(c)3 organization that accepts donated cord blood for clinical use. ❖

CDC/APHL

This program is cosponsored by the Centers for Disease Control and Prevention (CDC) and the Association of Public Health Laboratories (APHL).

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

Specimen and Lab Certification

Year: 2013 Panel: 1

Presumptive Clinical Phenotypes

	Specimen 113H1	Specimen 113H2	Specimen 113H3	Specimen 113H4	Specimen 113H5
Expected Presumptive Phenotype	FA	FA	FA	FAS	FA
Accepted Presumptive Phenotypes	FA	FA	FA	FAS	FA

Presumptive Clinical Assessments

	Specimen 113H1	Specimen1 113H2	Specimen 113H3	Specimen 113H4	Specimen 113H5
Expected Presumptive Clinical Assessment	01	01	01	02	01
Accepted Presumptive Clinical Assessments	01	01	01	02	01

NORMAL HEMOGLOBIN PATTERN

- 01 Normal - no abnormal Hb found
- 02 Hemoglobin S carrier
- 03 Hemoglobin C carrier
- 08 Hemoglobin D carrier
- 09 Hemoglobin E carrier

SICKLE CELL DISEASES

- 04 Hemoglobin SS disease (Sickle cell anemia)
- 05 Hemoglobin SC disease
- 06 Hemoglobin SD disease
- 12 Hemoglobin SE disease

OTHER REPORTABLE FINDINGS

- 16 Alpha thalassemia (Bart's Hb)
- 18 Hemoglobin E, E disease
- 19 Fast or aging bands (clinically insignificant)
- 20 Assessment not listed
- 21 Unsatisfactory sample
- 22 Unidentified variant carrier

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Frequency Distributions

Year: 2013 Panel:1

Phenotypes			Clinical Assessments		
Specimen Number	Hemoglobin Phenotypes	Frequency Distributions	Specimen Number	Presumptive Assessments	Frequency Distributions
113H1	FA	70	113H1	01 Normal	70
113H2	FA	70	113H2	01 Normal	70
113H3	FA FAS	69 1*	113H3	01 Normal 02 Hemoglobin S carrier	69 1*
113H4	FAS FA	69 1*	113H4	02 Hemoglobin S carrier 01 Normal	69 1*
113H5	FA	70	113H5	01 Normal	70

Note: An astrick (*) denotes a missed phenotype or assessment.

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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