



Newborn Screening Quality Assurance Program

PROFICIENCY TESTING

Sickle Cell Disease and Other Hemoglobinopathies

Volume 21, No. 2

Panel 2

June 2011

INTRODUCTION

On May 2, 2011, 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 Hemoglobinopathies Proficiency Testing (PT) event. A total of 77 panels were mailed by overnight FedEx mail. The packages went to 50 domestic laboratories and 27 foreign laboratories. This PT report is a compilation of data reports received from 69 of the participating laboratories by the designated deadline date. There were 8 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 clinical assessment, and any other classification 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, therefore, the next shipment for the Hemoglobinopathy PT program will be on October 3, 2011. ❖

MEETINGS AND TRAINING

World Sickle Cell Awareness Day: Educate and Unite, June 23, 2011, Atlanta, GA.

1st Annual Countryside Ride for Sickle Cell, August 27, 2011, Surry, VA

SCDAA 39th Annual Convention, September 27, 2011 - October 1, 2011, Memphis, TN

SPOTLIGHT

Arkansas Governor, Mike Beebe, this spring signed a bill by Rep. Reginald Murdock, D-Marianna, that gives the University of Arkansas for Medical Sciences \$400,000 to start a clinic intended to be a center for specialized care for sickle cell patients. The disease affects about 1,000 people in Arkansas, according to health officials. New treatments have allowed those with the disease to live into their 50s, 60s or beyond, and the goal is to improve their quality of life. Arkansas Children's Hospital treats pediatric sickle cell patients, but once those patients become adults, they have to find another outlet for care. Often that means going to a local doctor, who may not be familiar with the intricacies of the condition and the vast array of other health problems it causes. Read more at the Washington Examiner June 6, 2011:

http://washingtonexaminer.com/search/apachesolr_search/sickle%20cell

ACKNOWLEDGEMENTS

The specimens for this survey were prepared from umbilical cord blood samples supplied by Cleveland Cord Blood Center, Cleveland, Ohio. They are an independent non-for profit 501©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: 2011 Panel: 2

Presumptive Clinical Phenotypes

	Specimen 21H1	Specimen 21H2	Specimen 21H3	Specimen 21H4	Specimen 21H5
Expected Presumptive Phenotype	FA	FA	FA	FAS	FAC
Accepted Presumptive Phenotypes	FA	FA	FA	FAS	FAC

Presumptive Clinical Assessments

	Specimen 21H1	Specimen1 21H2	Specimen 21H3	Specimen 21H4	Specimen 21H5
Expected Presumptive Clinical Assessment	01	01	01	02	03
Accepted Presumptive Clinical Assessments	01	01	01	02	03

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: 2011 Panel: 2

Phenotypes			Clinical Assessments		
Specimen Number	Hemoglobin Phenotypes	Frequency Distributions	Specimen Number	Presumptive Assessments	Frequency Distributions
21H1	FA	69	21H1	01 Normal	69
21H2	FA	69	21H2	01 Normal 02 hemoglobin S carrier	68 1 **
21H3	FA	69	21H3	01 Normal	69
21H4	FAS FSA FS FA	53 14 1** 1**	21H4	02 Hemoglobin S carrier 01 Normal 04 Hemoglobin SS disease	67 1** 1**
21H5	FAC FA	68 1**	21H5	03 Hemoglobin C carrier	69

Note: (**) denotes a missed phenotype and 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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