



# Board of Public Health Meeting

June 12, 2012





# New Board Member

COL Brent Bracewell





# Board Member Introduction

Robert S. Harshman, M.D.





# Commissioner's Update

Brenda Fitzgerald, MD



# Georgia Newborn Screening Laboratory - Overview



Presentation to: Board of Public Health

Presented by: Arthur Hagar, PhD - GPL Director for Chemistry/Hematology  
Elizabeth A. Franko, DrPH - GPL Director

Date: 6/10/2010

# Legal Aspects

- OCGA 31-12-6 & 31-12-7
  - Requires that every live-born infant in Georgia be screened
  - Hospitals collect specimen prior to discharge
  - Specimen sent to GPHL
  - Analyzed for 28 disorders
    - Hearing screening performed in hospital

# Specimen

- Dried blood spot specimen
- Filter paper attached to form for collecting demographic information
  - FDA-licensed Medical Collection Device
- Overnight delivery from hospital to GPHL



# NBS Submission Form

**For GA State Lab Use Only**

**SUBMITTING FACILITY**  
 Submitting Facility's Name (Bill to.) \_\_\_\_\_ Submitter Code \_\_\_\_\_  
 Submitting Facility's Address \_\_\_\_\_  
 Street \_\_\_\_\_ City \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_ ZIP Code \_\_\_\_\_

**HEALTHCARE PROVIDER**  
 Health Care Provider \_\_\_\_\_ Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_ Telephone Number \_\_\_\_\_  
 Area \_\_\_\_\_ Number \_\_\_\_\_

**BABY**  
 Hospital Lab Access No. \_\_\_\_\_ Chart Number/Medical Record Number \_\_\_\_\_  
 1st Test  Routine Re-test  Re-test-Prior Unsatisfactory  Re-test-Prior Abnormal  
 Infant's Last Name \_\_\_\_\_ Birth Date \_\_\_\_\_ Birth Time (Military) \_\_\_\_\_  
 Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_  
 Infant's First Name \_\_\_\_\_ Sex  Unknown  Male  Female  NICU  Birth  Current  Birth (GMS)  Birth  Current  
 Weight (GMS) \_\_\_\_\_ Collection Date \_\_\_\_\_ Collection Time (Military) \_\_\_\_\_  
 Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_  
 Single Birth  Multiple Birth A B C D Transfusion Date: \_\_\_\_\_  
 Yes  No \_\_\_\_\_  
 Protein Feed:  Breast  Formula  Both Infant's Race:  White  Black  Asian  American Indian/Alaskan Native  Hispanic  
 Parenteral Nutrition  Yes  No Trade Name \_\_\_\_\_  Native Hawaiian/Pacific Islander  Multiracial  Unknown  Yes  No  
 Collected By (Initials) \_\_\_\_\_ Lab Use Only \_\_\_\_\_ Unsat \_\_\_\_\_

**MOTHER**  
 Mother's Last Name \_\_\_\_\_ Mother's Birth Date \_\_\_\_\_  
 Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_  
 Mother's First Name \_\_\_\_\_ Mother's or Contact's Number \_\_\_\_\_  
 Area \_\_\_\_\_ Number \_\_\_\_\_ Emergency Contact Number \_\_\_\_\_  
 Area \_\_\_\_\_ Number \_\_\_\_\_  
 Mother's Address \_\_\_\_\_  
 Street \_\_\_\_\_ City \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

**LAB DATA ENTRY COPY**

NEWBORN SCREENING UNIT  
 GA PUBLIC HEALTH LAB  
 Metabolic and Sickle Cell Disease  
 Form 3491 (Rev.3/2012)

SN 300000019

W111 LOT 6922112  
 Whatman 903™

2015-03

300000019



# FY2011 NBS Workload

- Specimens - 148,963
- Examinations - 6,859,281
- QC - 219,566

# Pre-Analytical:

- **Laboratory Services & Supply**
  - NBS specimens received throughout the day
  - The “Outfit Room” distributes blood collection forms and preaddressed mailers to major hospitals quarterly, others upon request.
  - Orders and/or receives more than \$3.6 million of laboratory supplies annually for NBS.

# Pre-Analytical (Continued):

- Central Accessioning
  - Specimens are received, stamped with date received, verified for acceptability and prepared for data entry and laboratory testing.
    - Dried blood spot specimens are delivered to NBS testing laboratory
    - Data forms are separated and sent to Data Entry Unit to be entered the same day if received prior to cutoff time.

# Pre-Analytical (Continued):

- Data Entry
  - Demographic Information is entered into the Laboratory Information Management System (LIMS)
    - Same day if received by cutoff time.
    - Next day if received after cutoff.
    - Forms are filed and stored, arranged for easy retrieval when necessary.

# Disorders

- Endocrine
  - Congenital Hypothyroidism
  - Congenital Adrenal Hyperplasia (CAH)
- Hematological
  - Sickle Cell Disease
  - Sickle Cell / C Disease
  - Sickle Cell /  $\beta$ -Thalassemia
- Cystic Fibrosis
- Metabolic
  - Galactosemia
  - Biotinidase Deficiency
  - Amino Acidopathies (6)
  - Organic Acidemias (9)
  - Fatty Acid  $\beta$ -Oxidation Defects (5)

# Post-Analytical:

- Reports & Records
  - Laboratory Result Reports: provided to hospital and health care provider
  - Customer Service
    - Duplicate Reports
    - Records Research
- Reports Available via Web Portal



# Follow-up of Presumptive Positives

- Endocrine, CF, Metabolic
  - Emory Dept of Human Genetics
- Hematological
  - DPH Newborn Screening Program
  - Georgia Health Sciences University
  - Sickle Cell Foundation
- Criticals - Same-Day Phone and Fax

# Incidences

- CH = 1:4000
- CAH = 1:20,000
- Hb SS = 1:1800
  - AA = 1:400
- Hb SC = 1:25,000
- Hb S/β Thal = 1:50,000
- CF = 1:5000
- Galactosemia = 1:50,000
- Biotinidase = 1:60,000
- Amino Acidopathies = 1:10,000
- Organic Acidemias = 1:10,000
- Fatty Acid Oxidation = 1:15,000

# 2011 Confirmed Case Summary

- Endocrine Disorders: 46
- Cystic Fibrosis: 14
- Metabolic: 23
- Amino Acidopathies: 5
- Organic Acidemias: 5
- Fatty Acid Oxidation Disorders: 9
- **Total = 102 (1:1324)**
  - Theoretical = 1:1250

# New Disorders

- HRSA advisory committee makes recommendations
- Current Recommendations
  - Severe Combined Immune Deficiency (SCID)
  - Congenital Cyanotic Heart Defect (CCHD)
    - Non-laboratory screening by pulse oximetry

# Data Entry/Reports & Records Staff





# Newborn Screening Lab Staff









# District Perspective on Accreditation

Lawton C. Davis, M.D.  
James C. Howgate II, MPH





# Resolution on Accreditation





# Board of Public Health Meeting

Next Meeting: July 10, 2012, 1:00 PM

To be added to the notification list, send an e-mail  
to Bob Shaw – [rmshaw@dhr.state.ga.us](mailto:rmshaw@dhr.state.ga.us)

