

CDC Update

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**Deputy Director, Division of Laboratory Programs,
Standards and Services (proposed)**

CLIAC Meeting
August 21, 2013
Atlanta, Georgia

Center for Surveillance, Epidemiology, and Laboratory Services (proposed)

Division of Laboratory Programs, Standards and Services (proposed)



Topic Outline

- Organizational structure
- Updated CDC CLIA website
- National proficiency testing survey
- Cytology workload assessment and measure
- Online courses/tutorials
- Evidence-based laboratory medicine
- Evaluating laboratory practice guidelines and recommendations
- Informatics self-assessment tool

Office of Surveillance, Epidemiology and Laboratory Services (OSELS)

Proposed Restructuring



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Proposed Restructuring



Updated CDC CLIA Website

CDC Home



Centers for Disease Control and Prevention

CDC 24/7: Saving Lives. Protecting People.™

Clinical Laboratory Improvement Amendments (CLIA)

CLIA Home

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Overview

The Clinical Laboratory Improvement Amendments of 1988 (CLIA) regulations include federal standards applicable to all U.S. facilities or sites that test human specimens for health assessment or to diagnose, prevent, or treat disease. CDC, in partnership with [CMS](#) and [FDA](#), supports the CLIA program and clinical laboratory quality.

 [Email page link](#)

 [Print page](#)

Contact Us:

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 800-CDC-INFO
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Regulatory

CLIA Law & Regulations

View Clinical Laboratory Improvement Amendments of 1988 and the regulations applicable to all U.S. clinical laboratories

CLIA History

Search and view historical regulations and announcements related to CLIA

CLIAC

Visit CLIA's Federal Advisory Committee website for information on the Committee and their meetings

Resources

Laboratory Search

Look up demographic information on CLIA-certified clinical laboratories

Test Complexities

Learn how laboratory tests are evaluated by the FDA and how the CLIA regulations apply to different groups of tests

Links

Access laboratory related organizations and resources

National Proficiency Testing (PT) Survey

- **Anonymous survey conducted in collaboration with APHL now open!**
- **Purpose**
 - Gather information to understand how laboratories use PT and perceive its value
 - Identify the types of laboratories that would benefit from additional information regarding PT
 - Determine if there is a need for educational materials

Proficiency Testing Survey

- Approximately 20 minutes to complete
- One entry per laboratory
- Survey closes October 31, 2013

Win a free laboratory training course of your choice for your participation!

- Chance to win free training of your choice
- \$115 value
- Hour-long recorded online course for you and your staff
- APHL trainings address relevant, contemporary issues in laboratory testing, and usually provide continuing education credits.

Contact ptsurvey@aphl.org with any questions.

Take the survey now!
www.surveymonkey.com/s/aphl

APHL
ASSOCIATION OF
PUBLIC HEALTH LABORATORIES
6015 Greenbelt Ave, Suite 700
Silver Spring, MD 20910
www.aphl.org

*Opportunity to win
free training course
for your staff!*

Attention: Laboratory Director

Proficiency Testing Survey Invitation

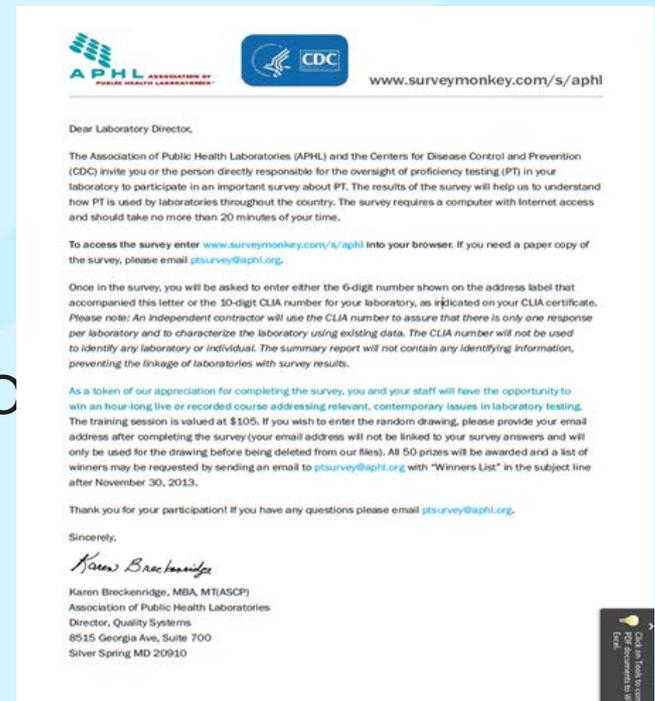
Help the Centers for Disease Control and Prevention (CDC) and the Association of Public Health Laboratories (APHL) learn about your experiences with proficiency testing with a brief survey!



APHL 

National PT Survey (cont.)

- Invitational letters sent to directors of approximately 34,000 Certificate of Accreditation/Certificate of Compliance laboratories in late July 2013
- One entry per laboratory
- Promotion
 - Articles to be published in MLO and Clinical Microbiology Newsletter
 - Advertisements in CAP Today and MLC
- Access survey at:
 - www.surveymonkey.com/s/aphl
- Email inquiries to:
 - ptsurvey@aphl.org

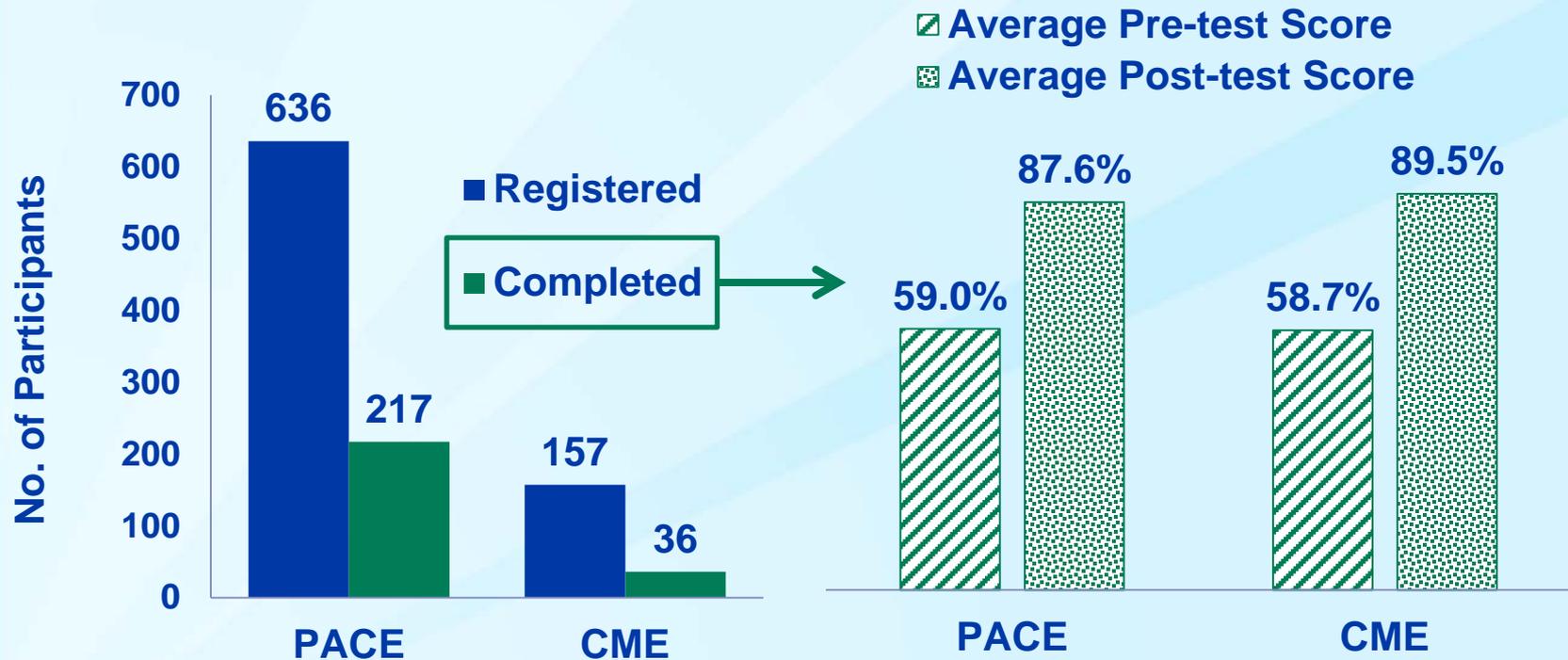


Cytology Workload Assessment

- **Contract to be awarded to assess workload for both of the FDA-approved image-assisted slide screening systems**
 - Year 1: Survey laboratory and cytotechnologists regarding practices for cytotechnologist workload assessment and limits
 - Year 2: Collect time measurement data for cytotechnologists screening Pap test glass slides using an automated review microscope
- **Contract solicitation closes August 21, 2013**

Update on Good Laboratory Practices for Molecular Genetic Testing Online Course

09/2012 - 06/2013



Knowledge Improvement

Update on Strategies for Improving RIDT in Ambulatory Settings (SIRAS) Online course



Overview from CDC Flu Division

Menu

Glossary

Resources

Help

Exit

Uptake: mid-October 2012 launch through June 2013

5495 hits to the SIRAS website
1287 registered for Module I course (462 completions, 36%)
278 viewed the specimen collection module, Module II
11,880 viewed the specimen collection videos on YouTube

Impact: through June 2013 (completed course responses)

99% course was useful
97% improved understanding of subject
36% planned to change practice
45% course validated current practices

Next steps:

dividing course content into shorter learning components
broader dissemination & content updates

LMBP™* *New Online Tutorial Released*

07/2013

Six Quality Improvement Project Planning Steps that Support the Application of the A-6 Cycle Methods

- Practical steps to design and implement evidence-based QI studies
- Module accesses published journal articles, templates, websites
- CME, CEU, CECH credits available

*Laboratory Medicine
Best Practices



Define the quality problem to be addressed and formulate one or more answerable questions



Conduct a literature search and examine available evidence



Determine the value of the evidence collected



Develop a QI project to fit your setting and resources



Implement the QI project



Evaluate the results and compare the effectiveness of the QI practice

<https://www.futurelabmedicine.org/tutorials/>

LMBP™ Systematic Reviews



- **Biomarkers and Risk of Cardiovascular Disease:** Effective biomarkers to improve risk stratification of populations at risk for cardiovascular events (using the Framingham Risk Score for myocardial infarction and death)
- **Coagulation Testing:** Coagulation Test Screening of Pre-surgical, Emergency Department or ICU Patients
- **Red Blood Cell (RBC) Transfusion Utilization:** Effective practices for utilization of red blood cell transfusions in surgical patients and non-surgical adult patients with anemia
- **ASM-CDC Urine Specimen Transport:** Effective practices for pre-analytical phase of laboratory testing for urinary tract infections

Clinical Laboratory Integration into Healthcare Collaborative (CLIHC™)

- Developed new strategic goals
 - Assist laboratories by defining more effective communication strategies with physicians (e.g., consultation services, diagnostic management teams, result reporting models)
 - Improve utilization of clinical laboratory services by integrating electronic tools into the EHR (e.g., test algorithms, clinical decision support, consultation alerts)
 - Broaden scope of communication and enhance collaboration in development of CLIHC™ products (e.g., with informatics experts, messaging media, evaluation studies of impact)
- Build on CLIHC™ achievements
 - identifying physician challenges with test ordering, interpretation, nomenclature
 - algorithm design and integration into the EHR





Genetics Publications

- Lisa Kalman, et al. **Development of a Genomic DNA Reference Material Panel for Myotonic Dystrophy type 1 (DM1) Genetic Testing.** *J Molec Diag* 2013 15:518-525
- Lisa V. Kalman, et al. **Current Landscape and New Paradigms of Proficiency Testing and External Quality Assessment for Molecular Genetics.** *Arch Pathol Lab Med* 2013 137:983-998
- Book Chapter: Lubin IM, Kalman L, Gargis AS. **Guidelines and Approaches to Compliance with Regulatory and Clinical Standards: Quality Control Procedures and Quality Assurance.** *In Translational Next Generation Sequencing*, edited by Lee-Jun C. Wong. Elsevier, (2013)

GeT-RM* and Next-Generation Sequencing, Virtual Reference Material tool –

NCBI Resources How To

GeT-RM Version 1.2

Testing labs compare their human cell line sequences with previously compiled data in an online format to determine accuracy for QC and validation.

GeT-RM Browser Using web site Submit data to GeT-RM Details about submitted data Statistics FTP

GeT-RM Browser

Homo sapiens: GRCh37.p11 Chr 1 (NC_000001.10): 1 - 249.25M

p36.3 p36.1 p35 p34.2 p33 p32.2 p31.2 p31.1 p22.3 p22.1 p21 p13.3 p13.1 p11 q12 q21.1 q21.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 X Y MT

Go Enter a location, gene name or phenotype

Select sample: NA12878

Genes

Items 1 - 10 of 3569

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Gene	CytoBand	Concordance
MTOR		
MTHFR		
NPPB		
JUN		
GSTM1		

NC_000001.10: 1..249M (249Mbp)

Segmental Duplications on GRCh37

Genes, NCBI Homo sapiens Annotation Release 104

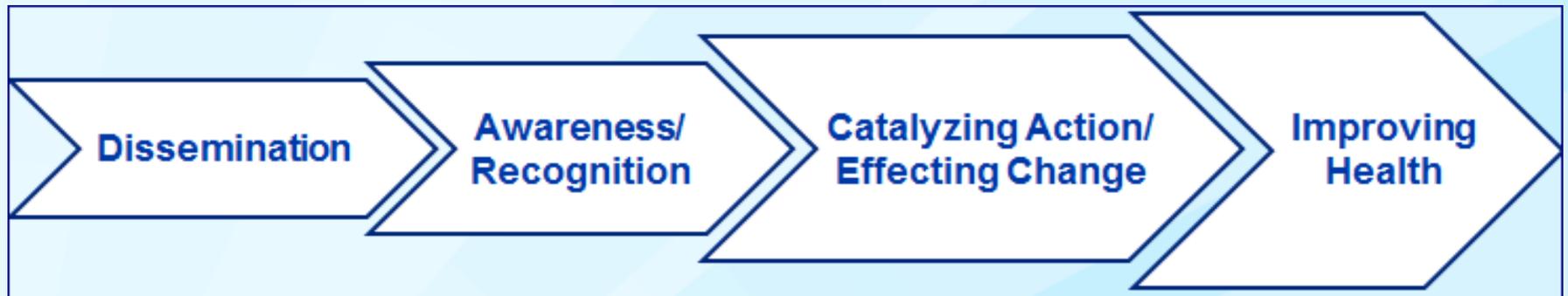
Clinical Channel

SNP

online via NCBI <http://www.ncbi.nlm.nih.gov/variation/tools/get-rm/browse/>
*Genetic Testing Reference Material project

Evaluating the Effectiveness & Impact of CDC Recommendations

- Conceptual model for progression of science impact*



- Recognizes impact at distinct, consecutive stages
- Guides identification of indicators for each stage
- Guides systematic evaluation of science impact

* Based on CDC Science Impact Framework , developed by extending IOM “Degrees of Impact” model

Studies to Evaluate Laboratory Practice Recommendations and Guidelines

- Evaluate the effectiveness of implementation of recommendations in laboratory settings with measured changes: Do they make a difference?
- Three pronged approach for evaluation:
 - Evidence-based, LMBP™ recommendation to reduce hemolysis of clinical specimens (1 site)
 - Framework to measure impact of good laboratory practices for biochemical genetics and newborn screening (CDC MMWR- from CLIAAC recommendations) (1 organization)
 - Promoting impact assessments of national laboratory organizations' laboratory practice guidelines (3 organizations)

Informatics Self-Assessment Tool

for Public Health Laboratories 2013



Tool Highlights

- Developed as a collaboration between CDC and APHL
- To assist state and local public health laboratories (PHL) in assessing their own informatics capabilities and gaps across a broad range of topics
- Not a survey, no information is collected
- Not limited to use by informatics experts or PHLs
- Flexible, generalizable and applicable to clinical laboratories
- Supports the long term goal/strategy of moving toward greater interoperability and harmonization
- Available on the APHL website:
<http://www.aphl.org/aphlprograms/lss/Laboratory-Efficiencies-Initiative/Pages/Informatics.aspx>

Informatics Capability Areas

Table 1: 19 Capability Areas

CA #1	Laboratory Test Request and Sample receiving
CA #2	Test Preparation, LIMS Processing, Test Results Recording and Verification
CA #3	Report Preparation and Distribution
CA #4	Laboratory Test Scheduling
CA #5	Prescheduled Testing
CA #6	Specimen and Sample Tracking/Chain of Custody
CA #7	Media, Reagents, Controls: Manufacturing and Inventory
CA #8	Interoperability and Data Exchange
CA #9	Statistical Analysis and Surveillance
CA #10	Billing for Laboratory Services

CA #11	Contract and Grant Management
CA #12	Training, Education and Resource Management
CA #13	Laboratory Certifications/Licensing
CA #14	Customer Relationship Management
CA #15	Quality Control (QC) and Quality Assurance (QA) Management
CA #16	Laboratory Safety and Accident Investigation
CA #17	Laboratory Mutual Assistance/Disaster Recovery
CA #18	Core IT Services: Hardware, Software and Services
CA #19	Policies and Procedures, including Budgeting and Funding



Laboratory Self-Assessment Benefits

- Enhance basic understanding of laboratory informatics processes and efficiencies
- Monitor informatics capabilities by repeating the assessment at desired intervals
- Use assessment findings to develop policies and inform management of needed IT improvements and projected costs
- Prioritize use of existing resources



For more information please contact Centers for Disease Control and Prevention

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Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

Visit: www.cdc.gov | Contact CDC at: 1-800-CDC-INFO or www.cdc.gov/info

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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