Clinical

Laboratory

Improvement

Advisory

Committee

Summary Report

September 17-18, 2003

Sheraton Colony Square Hotel
Atlanta, Georgia

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

CENTERS FOR DISEASE CONTROL AND PREVENTION

Clinical Laboratory Improvement Advisory Committee
September 17-18, 2003
Summary Report

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Record of Attendance

Committee Members Present

Dr. David Sundwall, Chair
Dr. Kimberle Chapin
Dr. Barbara Robinson-Dunn
Dr. Kathryn Foucar
Dr. Ronald Gagné
Ms. Paula Garrott
Dr. Peter John Gomatos
Dr. Cyril (Kim) Hetsko
Dr. Anthony Hui
Ms. Cynthia Johns
Mr. Kevin Kandalaft
Dr. Michael Laposata
Dr. Ronald Luff
Dr. Margaret McGovern
Dr. Valerie Ng
Dr. Jared Schwartz
Mr. Albert Stahmer
Dr. Alice Weissfeld
Dr. Jean Amos Wilson

Committee Member(s) Absent

Dr. Ronald Valdes

Acting Executive Secretary

Dr. Robert Martin

Ex Officio Members

Dr. Toby Merlin, Centers for Disease Control and Prevention (CDC)
Ms. Judith Yost, Centers for Medicare & Medicaid Services (CMS)
Dr. Steven Gutman, Food and Drug Administration (FDA)

Liaison Representative - AdvaMed

Ms. Luann Ochs, Roche Diagnostics Corporation

Centers for Disease Control and Prevention

Ms. Katie Alverson
Ms. Nancy Anderson
Ms. Pam Ayers
Ms. Diane Bosse
Ms. Carol Bigelow
Mr. Steven Boedigheimer
Dr. Joe Boone
Ms. Linda Bradley
Dr. Bin Chen
Ms. Carol Cook
Ms. Joanne Eissler
Ms. MariBeth Gagnon
Ms. Sharon Granade
Dr. Tom Hearn
Ms. Jerri Holmes
Ms. Stacey Holt
Ms. Heather Horton
Dr. Devery Howerton
Dr. Muin Khoury
Dr. Ira Lubin
Mr. David Lyle
Mr. Kevin Malone
Dr. Adam Manasterski
Ms. Leslie McDonald
Mr. Gary Myers
Ms. Anne Pollock
Ms. Andrea Pratcher
Dr. John Ridderhof
Dr. Eunice Rosner
Dr. Shahram Shahangian
Mr. Darshan Singh
Dr. Suzanne Smith
Mr. Howard Eric Thompson
Ms. Glennis Westbrook
Ms. Rhonda Whalen
Dr. Laurina Williams

Department of Health and Human Services (Agencies other than CDC)

Ms. Virginia Wanamaker (CMS)
Dr. Elliot Cowan (FDA)

In accordance with the provisions of Public Law 92-463, the meeting was open to the public. Approximately 35 public citizens attended one or both days of the meeting.

Clinical Laboratory Improvement Advisory Committee

The Secretary of Health and Human Services is authorized under Section 353 of the Public Health Service Act, as amended, to establish standards to assure consistent, accurate, and reliable test results by all clinical laboratories in the United States. The Secretary is authorized under Section 222 to establish advisory committees.

The Clinical Laboratory Improvement Advisory Committee (CLIAC) was chartered in February 1992 to provide scientific and technical advice and guidance to the Secretary and the Assistant Secretary for Health regarding the need for, and the nature of, revisions to the standards under which clinical laboratories are regulated; the impact on medical and laboratory practice of proposed revisions to the standards; and the modification of the standards to accommodate technological advances.

The Committee consists of 20 members, including the Chair. Members are selected by the Secretary from authorities knowledgeable in the fields of microbiology, immunology, chemistry, hematology, pathology, and representatives of medical technology, public health, clinical practice, and consumers. In addition, CLIAC includes three ex officio members, or designees: the Director, Centers for Disease Control and Prevention; the Commissioner, Food and Drug Administration; the Administrator, Centers for Medicare & Medicaid Services (formerly, Health Care Financing Administration); and such additional officers of the U.S. Government that the Secretary deems are necessary for the Committee to effectively carry out its functions. CLIAC also includes a non-voting liaison representative who is a member of AdvaMed (formerly, Health Industry Manufacturers Association) and such other non-voting liaison representatives that the Secretary deems are necessary for the Committee to effectively carry out its functions.

Due to the diversity of its membership, CLIAC is at times divided in the guidance and advice it offers to the Secretary. Even when all CLIAC members agree on a specific recommendation, the Secretary may not follow their advice due to other overriding concerns. Thus, while some of the actions recommended by CLIAC may eventually result in changes to the regulations, the reader should not infer that all of the advisory committee's recommendations will be automatically accepted and acted upon by the Secretary.

CALL TO ORDER – INTRODUCTIONS/FINANCIAL DISCLOSURES

Dr. David Sundwall, newly appointed CLIAC Chair, welcomed the Committee members and called the meeting to order. He introduced himself as a practicing physician with many years of experience representing the private sector on issues of public health policy. He then acknowledged the vast diversity of experience and talent represented by the CLIAC membership, which includes nine new members: Dr. Jean Amos-Wilson; Dr. Kimberle Chapin; Dr. Barbara Robinson-Dunn; Ms. Paula Garrott; Dr. Peter John Gomatos; Dr. Anthony Hui; Mr. Kevin Kandalaft; Dr. Michael Laposata; and Dr. Jared Schwartz. Dr. Sundwall expressed his confidence in the Committee's ability to provide scientific and technical advice and guidance to the Secretary of Health and Human Services (HHS), but reminded the members that their discussions and recommendations should focus on issues within the Committee's purview, as mandated in the regulations that established CLIAC.

Dr. Robert Martin, Acting Executive Secretary, also welcomed the Committee and thanked Dr. Sundwall for assuming the responsibility of CLIAC Chair. He recognized Dr. Toby Merlin, immediate past Chair of CLIAC, and welcomed him in his new roles as Associate Director for Laboratory Medicine, Division of Laboratory Systems (DLS), Public Health Practice Program Office (PHPPO), CDC, and CDC's ex officio member of CLIAC. He then introduced Dr. Suzanne Smith, Acting Director, PHPPO, CDC. Dr. Smith expressed her strong support for the Committee and indicated that one of PHPPO's primary goals is to strengthen the role of laboratories to one of leadership in public health. She noted laboratorians' experience in quality assurance and their understanding of processes and outcomes measurement are valuable tools and suggested that laboratorians can offer their expertise and guidance to public health and the healthcare system in general as it struggles with addressing the public demands for accountability.

Dr. Sundwall briefly explained the requirements and process for public disclosure, including those for conflicts of interest. All members then made self-introductions and financial disclosure statements relevant to the topics to be discussed during the meeting.

AGENCY UPDATES

■ Centers for Medicare & Medicaid Services (CMS) Update *Addendum A*

Ms. Judith Yost, Director, Division of Laboratory Services, CMS, provided CLIAC with an update of CLIA laboratory enrollment statistics and presented the rationale for, and highlights of, the Final CLIA Quality System Regulations, published in the *Federal Register* on January 24, 2003. She explained the final regulations reorganized the CLIA requirements so that they mirror the flow of a specimen through the laboratory; concluded the phase-in provision for laboratory directors of high complexity testing with doctoral degrees to obtain board certification, and the quality control (QC) phase-in for moderate complexity testing; and eliminated FDA's role

(which had not been implemented) in determining a test device's QC equivalency with the CLIA QC requirements. She also shared CMS's efforts to provide information that will assist laboratories in complying with these new regulations, indicating the next cycle of laboratory inspections will be "educational," without enforcement, unless there is risk to patient safety. Ms.Yost concluded by updating the Committee on the status of the Genetic Testing Notice of Proposed Rule Making.

Committee Discussion
There were no questions or comments.

■ Food and Drug Administration (FDA) Update *Addendum B*

Dr. Steven Gutman, Director, Office of In Vitro Diagnostic Device Evaluation and Safety (OIVD), Center for Devices and Radiological Health (CDRH), FDA, briefed the Committee on FDA's strategic plan and its goals of efficient risk management, healthcare improvement through better information, improvement of patient and consumer safety, protection of America from bioterrorism, and smarter regulation through a stronger workforce. He informed the members of CDRH's process for defining its work in the context of risk management and plans for refining processes to make them meaningful by connecting regulations with healthcare outcomes. Dr. Gutman then reviewed CDRH's strategic plan and described the plan's two precepts as regulating products through their total product life cycle and better knowledge management, both internally and externally. He noted the strategic plan is being implemented largely through new resources coming to the Center through user fees, resulting in cultural and organizational changes throughout the Center. Dr. Gutman related these changes are demonstrated in OIVD through the merging of all regulatory functions into a single structural unit. Dr. Gutman encouraged the Committee to visit the new OIVD web page for more complete details on OIVD initiatives.

Committee Discussion
There were no questions or comments.

■ Centers for Disease Control and Prevention (CDC) Update

Quality Assurance Guidelines for Testing Using OraQuick® Rapid HIV-1 Antibody Test
Addendum C

Dr. Devery Howerton, Chief, Laboratory Practice Evaluation and Genomics Branch, DLS, PHPPO, CDC, announced to the Committee that a document entitled *Quality Assurance Guidelines for Testing Using the OraQuick® Rapid HIV-1 Antibody Test* is available on the CDC, PHPPO, DLS website. These guidelines represent considerable work from people within CDC and input from external experts. She briefly highlighted the guidelines' contents and noted the primary target audiences are CDC and other publicly funded sites that will be offering HIV testing using this new CLIA-waived point-of-care test. She then provided CLIAC with an overview of CDC's initiative to develop and provide rapid HIV test training for CDC-funded community-based organizations. Training consists of a 3-day session incorporating the CDC Quality Assurance Guidelines for the OraQuick® test, biosafety concepts, and instruction in HIV

prevention counseling. She informed the Committee that 25 cities have been targeted for training programs by the end of the calendar year, with additional training planned for next year.

Committee Discussion

- Dr. Sundwall informed the new members that CLIAC had recommended OraQuick® Rapid HIV-1 Antibody Test not be waived and summarized the events leading to its waiver. Dr. Howerton further clarified that FDA's premarket approval of the OraQuick® Rapid HIV-1 Antibody Test kit restricted its sale to laboratories having a CLIA certificate, a quality assurance program, and specific personnel training requirements.
- Several members asked how noncompliance with these restrictions would be determined. Dr. Gutman agreed that enforcement would be challenging, but laboratories could potentially be subject to random or for-cause FDA inspections.
- Dr. Martin pointed out that implementation of new technology is an excellent example of how existing government policy is being challenged.

Creating the Future of CDC for the 21st Century (CDC's Future Initiative)

Addendum D

Dr. Robert Martin, Director, DLS, PHPPO, CDC, presented CDC's Future Initiative as a mechanism for remaining an effective, proactive public health agency in the 21st century; an opportunity to examine CDC priorities, systems, and practices to ensure the continued success of CDC in the future; and, a collective look across the agency to determine where CDC focus should be during the next 5-10 years. He described the Initiative's three phases and timelines for their completion. Work groups and numerous channels of communication will be used to provide input from CDC and the Agency for Toxic Substances and Disease Registry (a sister agency of CDC) community and staff, the external health community, and the general public. Dr. Martin announced CDC will launch an Internet website as another channel for soliciting comments from all external customers, partners, and stakeholders. He added the Committee would be kept apprised of the Initiative and how it may impact CLIAC.

Committee Discussion

There were no questions or comments.

PRESENTATIONS AND COMMITTEE DISCUSSIONS

■ Stakeholder Survey

Addendum E

Dr. Toby Merlin explained to CLIAC that an Advisory Committee Survey (originally referred to as the Stakeholder Engagement Survey) was conducted by the Gallup Organization from late December 2002 through early January 2003. The purpose of the survey, commissioned by the General Services Administration, was to determine the satisfaction of federal government advisory committee members and provide a tool for improvement. Dr. Merlin described the responses as generally very positive, noting the former and current CLIAC members participating in the survey indicated a greater satisfaction with their Committee work than most other government advisory committee members did. Specifically, they thought the Committee's

meetings were well run, CLIAC's mission and goals clearly defined, and that the Committee is responsive and has a positive influence in its area of expertise. However, the CLIAC respondents expressed a desire to see their recommendations used more effectively, have a more positive impact on the public and external stakeholders, and receive more feedback from the federal agencies (CDC, CMS, and FDA) on the issues discussed at the meetings. Dr. Merlin concluded by opening the discussion to the Committee for comments, focusing on the strengths and areas for improvements as indicated by the survey results. He also informed the members that another survey is planned for later this year.

Committee Discussion

- Several members identified timing as a factor in the satisfaction survey results. The distribution of the survey to members coincided with FDA's announcement of waiver approval of the HIV rapid test. Since CLIAC recommended the test not be waived, members felt their recommendation was ignored.
- One member suggested more advanced notice of agenda items would offer the opportunity for better preparation and utilization of a member's expertise.
- A few members requested more frequent communication relative to the status of Committee recommendations.
- Members felt it important to ensure Committee recommendations are communicated through the most effective routes and directed to the most appropriate agencies or sources. There was also general agreement that broader recognition of the collaborative work, expertise, and thoughtful deliberation among the diverse members of the Committee could add more weight to its recommendations.
- Some members commented on the Committee's positive impact, particularly on genetic testing and the implementation of a non-punitive, educational approach to improve quality assurance in physician office laboratories. One member expressed that more of the Committee's recommendations will be realized, now that the final QC rule is in effect.

■ Waiver Criteria and Process - Background *Addendum F*

Ms. Rhonda Whalen, Chief, Laboratory Practice Standards Branch, DLS, PHPPO, CDC, detailed the chronology of waived testing, beginning with the waiver criteria specified in the CLIA law; the requirements for waived tests published in the February 1992 CLIA regulations, which reiterated the criteria specified in the law; and the eight tests initially waived under CLIA (note: in 1993 a ninth test was added to this list). She emphasized that while the regulations exempt waived testing from CLIA standards, laboratories are required to follow the manufacturer's instructions when performing a waived test. Ms. Whalen described CLIAC's early concern that the statutory waiver criteria were unclear and its recommendation in February 1993 to impose a moratorium on waiver determinations until the criteria could be clarified. During the moratorium, CDC developed draft guidelines containing clarified waiver criteria and an interim process for reviewing waiver requests. The moratorium was lifted December 1994 when the guidelines were issued to all manufacturers of moderate complexity test systems. In September 1995, the clarified waiver criteria and specific guidelines for the waiver review process were published in the *Federal Register* as a Notice of Proposed Rule Making (NPRM). Ms. Whalen next explained that the three ways a test can be waived are by FDA clearance for home use,

matching a test system listed in the CLIA regulations, or meeting the clarified criteria/guidelines in the 1995 NPRM. She mentioned the CLIA challenges to ensure quality testing, preserve access to testing, ensure cost-effectiveness, and permit technological advancement. Equally difficult are the challenges associated with waiver, such as the increasing complexity of waiver reviews, maintaining consistency in waiver decisions, the impact of new analytes and technology, and public health concerns. Finally, she reviewed the waiver issues previously considered by CLIAC and provided details of CLIAC discussions and recommendations. Ms. Whalen concluded her presentation by introducing a waiver criteria proposal submitted to CMS and FDA by AdvaMed **(Addendum G)** and providing a handout that compared the 1995 NPRM to AdvaMed's proposal and previous CLIAC waiver recommendations **(Addendum H)**.

Committee Discussion

- One Committee member asked if waived tests are exempt from CLIA standards and oversight because only the waiver guidelines are in effect, or if they will always be exempt. Ms. Whalen responded that by law, waived tests are exempt from CLIA standards and the laboratory needs only to follow the manufacturer's instructions for test performance to be in compliance, only Congress can change this provision. However, she pointed out that recommendations for the process used to make waiver determinations are within CLIAC's purview. She explained that a final waiver rule was under development when responsibility for the waiver process was transferred to FDA in January 2000, but to date the rule has not been published. Ms. Whalen commented that not having a final waiver regulation is problematic for manufacturers because the waiver application requirements and review process are not well defined and, as a result, sometimes inconsistent. She added that the final rule is still under development, so CLIAC's input is welcome and needed.
- A member asked how a manufacturer obtains waiver for a test. Dr. Gutman responded that FDA must first approve the test device for marketing. Once the test device has been approved, the manufacturer may submit a formal request for waiver. He added, upon request, FDA will meet with the manufacturer to discuss appropriate data sets needed for the waiver review, and noted that the waiver evaluation follows the same process and checklist formerly used by CDC. Another member asked if tests are compared to well-established reference methods before waiver approval is granted. Dr. Gutman assured the member that tests considered for waiver are compared to well-established reference materials or methods, or very good working methods.
- One member questioned the validity of a waived test result if quality control is not performed. This member also questioned the validity of test interpretation for waived tests using color indicators if color-blindness in test performers is not assessed. Ms. Whalen agreed that with no oversight and no fail-safe mechanism or quality control performance, there may be no way to determine whether a test system has failed. Further, if a manufacturer recommends performing external controls in the test system instructions but does not require their use, a laboratory neglecting to perform external controls could still be viewed as following the manufacturer's instructions. She also agreed that color-blindness in test performers is an issue since many waived tests use color indicators.
- A Committee member expressed serious concern about the statutory criterion wherein a waived test should pose no unreasonable risk of harm to a patient if performed incorrectly, and was unable to identify any test that would meet this definition. This member also

acknowledged the difficulty in establishing good laboratory practices in non-laboratorian staff and shared from personal experience that such individuals, even when properly trained initially, over time tended to lapse into poor practices and frequently neglected to take corrective action when quality control testing failed.

- Another member referred to a slide in Ms. Whalen's presentation listing waived tests as representing 4 percent of all categorized tests and inquired as to how the actual volume of waived tests performed relates to this figure. Ms. Yost responded that while the majority of testing is performed in larger hospitals and independent laboratories, 60 percent of all laboratories perform only waived testing. There was also a question whether waiver had ever been rescinded for any test. Ms. Whalen explained that currently there is not a process for rescinding waiver, but CLIAC has recommended establishing one.
- A member commented that the number of waived tests is growing and there is industry pressure for this to continue since this is attractive to a large number of health care delivery sites. This member expressed concern about the lack of a "Good Housekeeping Seal of Approval," which was the intent of the CLIA law. With the pressure to increase waived testing and the alternative pathway for automatic waiver of tests approved for home use, the safety net CLIA offers in protecting the public's health may be lost.
- Dr. Sundwall inquired as to the availability of data indicating trends in the number of waived tests on the market. Ms. Whalen replied that the number of waived tests has increased from 3 percent to 4 percent in the last several years.

■ Traceability in Laboratory Medicine *Addendum I*

Dr. Gary Myers, Chief, Clinical Chemistry Branch, Division of Laboratory Sciences, National Center for Environmental Health, CDC, gave an overview of traceability in laboratory medicine and noted it is an "essential requirement" for the European Union (EU) directive on in vitro diagnostic (IVD) medical devices. He explained the EU IVD directive was adopted October 1998 as the third directive of a plan for regulating medical devices in the EU and is intended to harmonize the many national regulations and legal requirements in the EU member states. Harmonization is limited to essential requirements, such as traceability, and only products fulfilling the essential requirements may be placed on the market. Dr. Myers defined "traceability" within the context of laboratory medicine as metrological traceability, which is the "property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons, all having stated uncertainties." Next, he described the concept of metrological traceability and introduced various International Organization for Standardization (ISO) reference documents for establishing traceability in calibration and control materials, and enzyme assays; and for medical laboratories establishing traceability. The NCCLS is the ISO Secretariat and maintains these documents on its web site.

Dr. Myers reviewed the traceability chain downwards from the SI unit (a unit of measurement according to the International System of Units), which is defined through a higher order primary reference measurement procedure, to the routine sample measurement result. He emphasized that traceability is not accuracy, but a tool to ensure accurate results. That is, a process that relates measurement values to a reference standard and is maintained through monitoring and

correction over time. He further stressed that traceability requires higher order reference measurement procedures, qualified reference materials, and suitable reference laboratories. Dr. Myers discussed the two classifications of analytes (A and B). Type A analytes include approximately 20-30 well-defined compounds (e.g., glucose, electrolytes, urea, and cholesterol) that are traceable to the SI unit and are not method dependent. Conversely, Type B analytes are a group of approximately 400-600 heterogeneous substances (e.g. tumor markers, viral antigens), which cannot be traced back to an SI unit and are thus expressed in arbitrary or conventional units; hence, the full traceability chain is not possible. However, they can achieve partial traceability, enabling them to meet the traceability requirement.

In conclusion, Dr. Myers described the 2002 formation of the Joint Committee on Traceability in Laboratory Medicine, whose general mission is "to improve the quality of healthcare with reduction in costs for governments and IVD industry through promotion of reference examination systems allowing traceability of examination results with improved comparability."

Committee Discussion
There were no questions or comments.

■ AdvaMed's Proposed Waiver Criteria *Addendum J*

Ms. Luann Ochs, AdvaMed Liaison to CLIAC, expressed AdvaMed's desire to transition from a position of uncertainty with respect to waiver criteria to one that is unambiguous. She appealed to CLIAC to bring the various stakeholders to the table to agree upon the goals, move in the same direction, and finalize a process for waiver.

Ms. Ochs then presented an overview of AdvaMed's waiver proposal **(Addendum G)**, which encompasses three principle areas: a flexible approach to the definitions of "simple" and "accurate"; a clear definition of the roles of the manufacturer in ensuring the device and test quality versus the laboratory director responsibilities for ensuring end-user competency; and recommended labeling for waived tests. AdvaMed's proposal for waiver criteria begins with an overlying assumption that a test either has obtained or is in process of obtaining FDA clearance for professional use, thus subjecting it to all of FDA's review components for professional use. Therefore, the proposal only addresses additional items that should be considered for waiver. Ms. Ochs compared FDA's review components for professional point-of-care products to those for over-the-counter (OTC)/home-use products, then detailed AdvaMed's step-wise approach for evaluating each of the factors in waiver determination: simplicity, insignificant risk of an erroneous result by the user, accuracy, and labeling. This included a review of AdvaMed's detailed Risk Assessment Approach, which requires identification of risk; implementation of risk mitigation mechanisms (e.g., error detection mechanisms, fail-safe mechanisms performed by the test system, failure alerts, quality control checks, training, enhanced instructions for use); and documentation of the effectiveness of risk mitigation. This approach is consistent with FDA's quality system regulations and Europe's IVD directive standards.

Ms. Ochs also reviewed AdvaMed's two-step traceability concept for accuracy determination in

which results from lay-user studies must demonstrate the performance of the test system to be comparable and traceable to test results obtained with a higher-order laboratory method. The studies must also demonstrate that a lay-user working only with the manufacturer's instructions can obtain test results substantially equivalent to those obtained by a professional laboratorian using the same instructions. Next, she provided AdvaMed's principles for accuracy studies, which include demographically diverse users, a statistically determined number of users, simple data analysis methods, justified acceptance criteria, and clear and understandable labeling. Ms. Ochs broached the topic of quality control versus end-user competency responsibilities, postulating that while manufacturers must ensure test system quality control methods are consistent with risk mitigation measures and demonstrate test system integrity, CLIA requires the laboratory director to ensure end-user competency. She elaborated that the laboratory director may choose to do this in consultation with the manufacturer, e.g., through a manufacturer-provided training program, or through a quality control program; however, it remains the laboratory director's ultimate responsibility to document user competency.

In conclusion, Ms. Ochs stated that AdvaMed's proposed waiver criteria build upon FDA's current 510(k) clearance process. She requested that CLIAC form a subcommittee or workgroup with interested parties to reach agreement on the waiver criteria.

Committee Discussion
Dr. Sundwall agreed that all parties concerned with waiver should work together to reach consensus regarding the criteria and process for waiver determinations. He requested that public comments on this topic be heard prior to commencing with Committee discussion.

■ Public Comments (pertaining to waiver)

Mr. John Boffa, American Association of Bioanalysts ***Addendum K***

Dr. Patricia Charache, Professor of Pathology, Medicine, and Oncology, Johns Hopkins Medical Institutions; and former member of CLIAC and the Secretary's Advisory Committee on Genetic Testing ***Addendum L***

Committee Discussion

- One member described the waiver issue as a conundrum that is impossible to solve. Once a test is waived, there is no opportunity for revocation under the law and no oversight mechanism for the diversity of facilities performing waived testing. This member suggested it is unfair to expect manufacturers to be solely responsible for all issues surrounding waiver. Dr. Martin agreed that this issue is complex and that CLIAC's role is not to identify a solution today. However, if the Committee believes the CLIA law relative to waiver of certain test systems has created a testing environment that is problematic, CLIAC may recommend to HHS that the law be readdressed. Dr. Sundwall reiterated that, even though CLIAC does not legislate, it could recommend that changes in the law be considered.
- Another member asked whether a waiver determination is irrevocable and if there is a need to monitor waived test system performance for a period after waiver has been granted. Ms. Whalen responded that in theory if a test no longer meets the waiver criteria it is no longer

eligible for waiver. However, a formal process for rescinding waiver has not been established. She added that CLIAC has previously suggested a test be waived only for a specified time with a sunset provision for tests that do not sustain performance to lose waived status. Ms. Ochs countered that FDA has a process for removing tests from the marketplace if they do not perform as labeled. Dr. Gutman agreed that FDA does have this authority, but indicated it is somewhat awkward to apply FDA rules to CLIA categorizations. However, he added that in a public health emergency involving erroneous results, FDA could approach legal council to consider adulteration or misbranding of the test.

- A Committee member referred to CMS data showing approximately 48 percent of laboratories holding a CLIA certificate of waiver do not follow manufacturer's recommendations or instructions for test performance. Another member asserted a need to recognize the large volume of waived testing that is performed and expressed a responsibility to the public trust and public well-being to ensure quality testing. This member stressed the value of quality control, quality assurance, proficiency testing, surveys and accreditation, stating it is not in the public interest to make it easier to avoid these components of laboratory medicine and strongly suggested that consideration be given to the elimination of the waiver process. A third member asked whether data are available regarding misuse of waived testing or of patients being harmed as a result of waived testing.
- Other members stated there are valid reasons for waived testing and acknowledged there is evidence most users want to perform testing correctly. However, there is a need for education and training of waived test users. Most members agreed that processes to ensure quality testing should be in place for waived test performance.
- Several members noted the importance of considering all phases of testing when evaluating a test for waiver. One member stressed that as technology advances there may be tests, such as some genetic tests, that could be easy to perform but difficult to interpret; thus, they would be inappropriate for waiver.
- One member pointed out that while AdvaMed's proposal refers to the laboratory director's responsibilities in assuring user competency, CLIA does not mandate personnel standards or competency assessment requirements for waived testing.
- Several members voiced concern with AdvaMed's proposal to expand specimen sources to include serum and plasma, and addressed Ms. Ochs' earlier statement that CLIA does not apply to specimen processing. These members pointed out that laboratories receiving specimens are responsible for determining the integrity of those specimens and waived laboratories lacking oversight or personnel standards and competency assessment requirements may not have the skills to determine specimen integrity.
- One member queried the impact on access to testing if the outcome of a workgroup addressing waiver criteria and process was unfavorable to AdvaMed, asking if waived tests would disappear completely or become more expensive. A second question posed how realistic is it that laboratories would voluntarily perform quality control testing and follow manufacturers' instructions when there is no oversight of waived testing. Ms. Ochs responded that there are analytes not eligible for consideration for waiver because of the lack of a well-characterized reference method or gold standard. Thus, with the current guidelines for waiver approval, there could be a simple, accurate test that could never be waived. She stated such a test would be categorized as moderate complexity and therein lies the cost. In response to the second question, she stated that laboratories are required by law to perform

tests per manufacturers' written instructions, which may include quality control recommendations or requirements, and the problem with waiver is lack of oversight of those laboratories.
- Members expressed overwhelming support for AdvaMed's recommendation that a collaborative effort be established to develop waiver criteria and a process for waiver approval.

Discussion on Process
- Dr. Sundwall requested that Ms. Whalen review the mechanisms for establishing a subcommittee versus a workgroup. Ms. Whalen explained that subcommittees consist only of CLIAC members and in the past, this proved to be limiting. Workgroups can include members other than CLIAC members and generally work better for teasing out details. The output from workgroups are not binding as recommendations, but can be refined by the Committee in the form of recommendations. Depending on the issue, previous CLIAC workgroups have typically met for just one day.
- A CLIAC member made a formal motion that a workgroup of appropriate members be tasked with the development of criteria and a process for waived test approval for consideration by CLIAC. Another member seconded this motion.
- Dr. Merlin asked for clarification on the motion, stating that AdvaMed was proposing a process of negotiated guidance, whereas CLIAC was discussing a workgroup. Ms. Ochs responded that AdvaMed is advocating an effort that will produce a useable product, not just a written summary of issues with no action taken. AdvaMed realizes the process of negotiated rulemaking would take too long, so they have proposed negotiated guidance. Ms. Whalen explained the approach for negotiated guidance would consist of the three government agencies (CDC, CMS, FDA) working with manufacturers to reach a consensus, whereas a workgroup would involve representation from CLIAC as well as other interested stakeholders. The workgroup approach keeps CLIAC "in the loop," whereas negotiated guidance does not.
- All members agreed the formation of a workgroup, comprised of federal agencies, industry, CLIAC, and other stakeholders, is important. A resolution stating the purpose and intention of CLIAC to establish a workgroup was drafted and passed unanimously by CLIAC **[Addendum M]**. It was agreed that the workgroup would report its recommendations to the Committee at its next scheduled meeting, Feb 11-12, 2004.

■ Coordinating Council on the Clinical Laboratory Workforce Update

Addendum N

Ms. Cynthia Johns, Laboratory Manager, Esoterix Coagulation, and CLIAC representative to the Coordinating Council on the Clinical Laboratory Workforce (CCCLW), provided an overview of the Council, listing the participating professional organizations, federal agencies, and industry partners and summarizing the factors contributing to the workforce shortage. She also reviewed the Council's purpose, initiatives and progress; shared data from a survey performed by the American Society for Clinical Pathology (ASCP) on wage and vacancy levels in clinical laboratories ("2002 Wage and Vacancy Survey of Medical Laboratories, Part I: Salaries Continue to Show Moderate Gains," *Laboratory Medicine*, Vol. 34, No. 9, September 2003; "2002 Wage and Vacancy Survey of Medical Laboratories; Part II: Modest Easement of Staffing

Shortage," *Laboratory Medicine*, Vol. 34, No. 10, October 2003); and reported on the various efforts of states, universities/colleges, corporations, and the Veterans Administration to recruit and retain personnel in laboratory medicine. Ms. Johns concluded her presentation by requesting CLIAC's assistance with a CCCLW draft press release addressing the seriousness of the laboratory staffing shortage, suggestions for which audiences to target with the press release, and recommendations for additional recruitment and retention programs.

Committee Discussion

- Committee members acknowledged the critical workforce shortage in the clinical laboratory field and the need to continue efforts to recruit and retain personnel. Alternatives to traditional education and training were mentioned, such as distance-based learning (satellite/internet), weekend/night classes, and partnering with hospitals and organizations. Also mentioned was the possibility of training individuals with science degrees (e.g., chemistry or microbiology) to work in specialty areas of the laboratory. A member commented that university programs are responding by developing a variety of models to attract students to the field of laboratory medicine; however, the clinical laboratory field is competing for the best students and without sufficient salaries and the opportunity for upward mobility and challenge, recruitment and retention is difficult.
- One member inquired whether foreign graduates were considered in recruitment efforts. Ms. Johns responded that some professional organizations are considering foreign graduates as recruitment targets, but noted that we must first determine the educational and training backgrounds of these graduates to assure they meet U.S. standards.
- Another member suggested that recruitment efforts by the nursing field could serve as a model, but acknowledged that with a decrease in the number of schools offering a laboratory training program, it could prove to be difficult. A former CLIAC member expressed concern about comparing the clinical laboratory workforce shortage with the nursing shortage, stating that in the hospital setting laboratory personnel are as visible to administrators and patients. Hence, hospital administrators often view laboratory vacancies as cost-saving and nursing vacancies as a loss in revenue because nursing shortages may result in closing a ward. This former member suggested efforts in reducing the workforce shortage be tailored more toward the efforts of the pharmacists in making themselves more visible and becoming an integrated part of the healthcare management team by demonstrating how patient outcomes can be improved and the hospital can save money by more effectively utilizing laboratory professionals in the provision of patient care. Another former member reiterated that the clinical laboratory field must be more aggressive in marketing the abilities of laboratory professionals.
- Members briefly discussed the pros and cons of personnel licensure, with specific mention of California's budget problems and its affect on the State's laboratory licensure program. A majority of members recognized the advantages of laboratory personnel licensure and certification, but agreed that current staffing shortages require flexibility and creativity in developing non-traditional routes for entry into the laboratory field.

■ Quality Institute Conference 2003 - Outcome/Next Steps *Addendum O*

Dr. Joe Boone, DLS, PHPPO, CDC, presented a summary of the Quality Institute Conference sponsored by CDC and held April 2003 in Atlanta, Georgia. He explained the issues in health laboratory practice that prompted this Conference and other CDC-sponsored institutes; and why there is a disconnect in healthcare services and laboratory services, as documented in the Institute of Medicine's reports and other journals. Dr. Boone described the diverse background of the 40 partners represented at the Conference and expounded on the three main goals of the Conference (to develop a framework for a National Report, criteria for quality indicators of laboratory services, and an ongoing process to collect and analyze data through a Quality Institute) by summarizing the results of the Conference's various workgroup discussions. Dr. Boone concluded his presentation by listing follow-up steps taken since the Conference was held and future activities for the Institute, which may change its name from the Quality Institute to the Institute of Laboratory Medicine. He also noted that a second Quality Institute is planned for October 2004.

Committee Discussion

- CLIAC members congratulated CDC on the success of the Conference and reiterated the importance of keeping the Institute and its related activities ongoing. One member commended the Conference for not only addressing problems caused by inappropriate use of laboratory tests, but for addressing problems caused when laboratory testing is not used.
- A former CLIAC member voiced some concern that anatomical pathology was not as strongly represented at the Quality Institute, as were clinical pathology areas. A current Committee member concurred that quality in anatomical pathology should be included.
- Several members agreed the name change from Quality Institute to the Institute of Laboratory Medicine would lend more credibility and status to Institute activities. Among CLIAC members, there was a consensus that CDC should take a lead role in the Institute to keep activities focused on improvement outcomes and not on blame for laboratory errors.

■ Direct Access Testing - Summary of March 2003 CLIAC Meeting

Addendum P

Dr. Toby Merlin, Associate Director for Laboratory Medicine, DLS, PHPPO, CDC, began his overview of direct access testing (DAT) by describing the general characteristics of this consumer-driven laboratory testing and its distribution channels. He noted that while DAT is still a very small portion of the total laboratory industry, it is garnering a lot of media attention. Dr. Merlin reminded the Committee that CLIA applies to all facilities that perform "examination of materials derived from the human body for the purpose of providing information for the diagnosis, prevention, or treatment of any disease of, impairment of, or the assessment of the health of human beings." Therefore, CLIA requires certification of all facilities providing DAT and these facilities must meet the regulations applicable to the complexity of the test(s) they offer directly to consumers. He then summarized state laws and regulations relative to DAT and reviewed the perspectives (physician, laboratory, and consumer), discussions, and public comments presented at the March 2003 CLIAC meeting. Dr. Merlin concluded his presentation by asking the Committee to consider how to assure appropriate DAT; that is, the roles education, guidelines and regulations should play; and what, if any, is CLIAC's role.

Committee Discussion on DAT follows the presentation on Lab Tests Online.

■ Lab Tests Online *Addendum Q*

Mr. George Linzer, Executive Producer of Lab Tests Online (LTO), described LTO as a peer-reviewed, non-commercial, patient-focused online resource for laboratory tests and related topics. He shared LTO's vision to create a comprehensive, accurate, dynamic, and interactive website to inform the public about clinical laboratory testing. Mr. Linzer reviewed the collaborative efforts of numerous professional organizations to build and support the website (www.labtestsonline.org) and its content, including the public reminders for routine screening tests and links to other informational websites. He concluded his presentation by summarizing media reviews of LTO, statistics for visitor traffic, and efforts to offer the site internationally.

Committee Discussion

- Two physician members told the Committee that when patients come to them with DAT results, they generally repeat the tests, especially if the results are abnormal. Both physicians expressed approval for patients taking an active role in their health, but believe the consumer/patient should be warned not to interpret his/her own test results. Another member noted that pathologists and doctors do not want to consult on test results when they do not have the complete patient history.
- One member asked if DAT facilities give the consumer information/advice on preanalytic steps such as "fasting." Dr. Sundwall noted that some laboratories go to great lengths to assist consumers ordering their own tests.
- Members considered the interpretation of DAT results and the role of the clinical consultant. One member did not think it was the responsibility of the laboratory director to explain the interpretation of results to the patient, since this may be encroaching on the practice of medicine. A former CLIAC member mentioned that a laboratory director can serve as a clinical consultant or employ qualified personnel to provide the consultation and added that appropriate report format and consultation should be provided by those laboratories offering DAT. Ms. Whalen explained that the CLIA regulations do address test interpretation and it is clearly within the purview of the laboratory director. However, CLIA does not encompass what the test result means in conjunction with other clinical information or the relevance of the result to the patient; how the information is interpreted in clinical practice is the responsibility of the physician. She also noted that CLIA requires the individual serving as the laboratory's clinical consultant to have the appropriate qualifications. Some CLIAC members suggested facilities offering DAT be monitored for compliance with the CLIA interpretation requirements. Ms. Whalen informed the Committee that CMS monitors DAT laboratories performing nonwaived testing for compliance with regulations.
- A brief discussion centered on the overlap of DAT and waived testing. DAT facilities offering only waived testing have no oversight and are not required to provide its clients (consumers) appropriate consultation and assistance with interpreting test results. For this reason, one member thought DAT was more problematic than waived testing.
- A member asked for clarification of CLIAC's role relative to DAT. Dr. Merlin reiterated that CLIAC advises HHS on quality issues related to laboratory testing and other matters pertaining to the CLIA regulations. He cautioned that the Committee must be careful not to make recommendations that crossover to the medical/clinician side of a particular issue, but

may express its concern about DAT and suggest HHS monitor DAT and its impact on public health.

- Another member acknowledged that DAT will continue and suggested laboratorians should focus on developing "Best Practices" for DAT.
- Dr. Martin reminded CLIAC that it cannot address state laws, advertising, or clinical application. He suggested that while costly, monitoring and surveillance is important and may be the most practical approach for this new, but growing area of laboratory practice. Dr. Sundwall echoed that no one really knows what the impact of DAT will be and suggested CLIAC "keep DAT on the Committee's radar." Members agreed, acknowledging the issue needs monitoring and surveillance, and should be readdressed at a later date, if needed.

■ Genetics Overview

Genetic Testing -CLIAC Report ***Addendum R***

Dr. Patricia Charache, Professor of Pathology, Medicine, and Oncology, Johns Hopkins Medical Institutions, and former member of CLIAC and the Secretary's Advisory Committee on Genetic Testing (SACGT), presented an overview of CLIAC's previous discussions and recommendations (1997-2002) on issues pertaining to genetic testing. She began by reviewing the recommendations in the 1997 report of the National Institutes of Health and Department of Energy Task Force, which was charged to create a framework for ensuring the safety and effectiveness of genetic tests in the United States. The Task Force's recommendations included establishing a Secretary's Advisory Committee on Genetic Testing (SACGT) and expanding CLIA oversight for genetic testing. As a result, in 1998, SACGT was established and subsequently recommended to the Secretary that FDA regulate laboratory-developed genetic tests ("home-brews") using an innovative, flexible approach; CLIA oversight be expanded to incorporate specific provisions for genetic testing laboratories; and private and public collaborations be established to ensure continued analysis of post-market data for genetic tests. In response to the CLIA oversight recommendation, CLIAC formed a Genetics Workgroup to consider how to revise the CLIA regulations to address genetic testing and report its findings to the full Committee. After careful consideration and discussion, the Committee recommended that the regulations be modified to establish genetic testing as a new specialty, which would include three subspecialties: molecular genetics, cytogenetics, and biochemical genetics, and would cover testing for both heritable and acquired mutation testing. Dr. Charache reviewed CLIAC's numerous recommendations specific to genetic testing and their inclusion in a Notice of Intent (NOI) published in the *Federal Register* on May 4, 2000. A second CLIAC Genetics Workgroup was established to consider the public comments received in response to the NOI. The Workgroup's recommendations for modifications to the previous CLIAC recommendations were addressed by the full Committee and the recommendations finalized at its February 2001 meeting. Dr. Charache noted that while SACGT was supportive of CLIAC's recommendations, there was continued concern about waived testing and its potential impact on genetic testing. SACGT expressed its concern in a letter to the Secretary of HHS, advising attention to this issue. Dr. Charache concluded by acknowledging the tremendous effort and numerous activities CDC's Division of Laboratory Systems has undertaken related to improving laboratory practice in genetic testing.

Committee discussion:

- A Committee member inquired about the status of the CLIA final rule for genetic testing. Ms. Whalen replied that the May 2000 NOI was a first step in the rulemaking process. CDC is presently working with CMS to develop a proposed rule and is in the process of finishing a regulatory impact analysis, which must be performed, with few exceptions, for all rulemaking. The proposed rule must go through CMS, HHS, and the Office of Management and Budget's clearance processes before it can be published and, when published, will include a public comment period. Once the comments are evaluated and addressed, the rule can be published as a final rule.
- Dr. Martin pointed out that the publication of the NOI has led to a number of beneficial activities, including collaborative efforts between CDC and many professional organizations, individuals, and private sector groups, and other stakeholders in genetics fields.
- A former CLIAC member complimented Dr. Charache on her presentation and requested clarification on the CLIAC-recommended levels of informed consent for testing for somatic mutations versus heritable conditions. Dr. Charache explained the level of informed consent would depend on the intended use of the test, that is, the level of consent required would be disease-based, not method-based. Thus, only a small subset of genetic tests would be subject to the highest level of consent. Dr. Charache added that SACGT had published a brochure on informed consent issues related to genetic tests, which was intended to provide information to the public about the advantages, limitations, and potential ethical, social and legal implications of genetic testing.

Special Recognition:

Following the Committee's discussion, Drs. Martin and Merlin presented Dr. Charache with a plaque, and a certificate signed by Dr. Julie Gerberding, CDC Director, acknowledging her service on CLIAC and help in addressing public health issues. Drs. Martin and Merlin also expressed appreciation for her thoughtful and expert counsel on genetic testing issues. CLIAC members honored Dr. Charache with a standing ovation. In turn, she expressed her respect for the work CLIAC does and her appreciation for the opportunity to work with the diverse membership of the Committee, noting that it has been an honor for her and one of the most stimulating experiences of her career.

■ HHS Genetic Activities

SACGT to SACGHS ***Addendum S***

Scheduled speaker Ms. Sarah Carr, Executive Secretary, Secretary's Advisory Committee on Genetics, Health, and Society (SACGHS), was unable to attend the Committee meeting. Using the presentation Ms. Carr submitted prior to the meeting, Dr. Joe Boone, DLS, PHPPO, CDC, reviewed the mandate, scope, areas of interest, and key oversight recommendations of the Secretary's Advisory Committee on Genetic Testing (SACGT) from June 1998 through August 2002. Dr. Boone explained that one of the greatest challenges for SACGT was in understanding the various federal regulatory agencies' oversight authorities relative to genetic testing. Dr. Boone then mentioned that in the summer of 2002, as part of an HHS review of all advisory committees, it was determined that advice was needed on a broader range of genetic issues. As a result, SACGT's charter was revised to form the Secretary's Advisory Committee on Genetics,

Health, and Society (SACGHS) with the mandate "to explore, analyze, and deliberate on the broad range of human health and societal issues raised by the development and use, as well as potential misuse, of genetic technologies and make recommendations to the Secretary of HHS, and other entities as appropriate." Dr. Boone reviewed SACGHS's broader scope of interests, its composition and roster, and priority setting process. He also shared SACGHS's short- and long-term action items, as well as priority issues related to genetic testing for CDC, CMS, and FDA.

Committee Discussion
There were no questions or comments.

■ CDC Genetic Activities

Genomics and Public Health: CDC Update - 2003 ***Addendum T***

Dr. Muin Khoury, Director, Office of Genomics and Disease Prevention, CDC, described 2003 as the Year of the Human Genome, pointing out that in addition to it being the 50th anniversary of the discovery of DNA, we are celebrating completion of the human genome sequence. He informed the Committee that at a May 2003 CDC symposium on genomics and the future of public health, Dr. Julie Gerberding, CDC Director, acknowledged the importance of the role of human genomics in the future of the agency. He continued, "Our challenge is not the avalanche of genetic tests, but what to do with the impending information and its potential relevance to all areas of health and disease." Emphasizing the agency's commitment to genomics, Dr. Khoury reported that the Office of Genomics and Disease Prevention has relocated from the National Center for Environmental Health to CDC's Office of the Director. In addition, CDC continues to collaborate with the National Institutes of Health on population-based genomic research and will be developing a forum to encourage input from diverse stakeholders on the various areas of genomics.

Dr. Khoury then reviewed CDC's genomic and public health priorities in integrating human genomics into the sciences, services, and systems of public health. He explained sciences as assessing the impact of genomic variation on public health; services as using and evaluating genomic information in prevention and practice; and systems as integrating genomic information into the public health information network. Dr. Khoury described several CDC activities for each of the priority areas including efforts of CDC's National Center for Infectious Diseases (NCID) in integrating human genomics into epidemic investigations to help determine susceptibility to infection. In this regard, Dr. Khoury predicted that within 10 years every health investigation would have a genetic component enabling refinement of risk estimates and better definition of control measures for reducing the burden of disease. In addition, he outlined the goals and objectives of the CDC-funded Centers for Genomics and Public Health to develop a regional hub of expertise for using genetic information to improve health and prevent disease, train the public health workforce, and provide technical assistance to their public health constituents. CDC has also established internet resources (www.cdc.gov/genomics), including HuGE net and HuGE reviews, to provide up-to-date and organized information on genetics and genomics.

Dr. Khoury concluded by reiterating the importance of viewing genomics within the context of

other clinical medicine and prevention activities and appropriately integrating it into the science, service, and systems bases of public health.

Committee Discussion
There were no questions or comments.

■ DLS Genetic Activities

Communication: Key to Appropriate Genetic Test Referral, Result Reporting, Interpretation, and Use ***Addendum U***

Dr. Ira Lubin, Geneticist, Laboratory Practice Evaluation and Genomics Branch, DLS, PHPPO, CDC, discussed the efforts of DLS to address communication issues that impact genetic test referrals, result reporting, and interpretation. He emphasized that a critical question is how to ensure that health-related decision-making in clinical and laboratory practice is based on proper ordering, reporting, and use of genetic tests. In this regard, DLS has focused on addressing variability in the ordering and result reporting of genetic tests and genetic service issues in clinical practice and the laboratory. He described several collaborative studies pertaining to these issues conducted by Mt. Sinai School of Medicine and Tulane University Schools of Medicine and Public Health. Dr. Lubin then stated that although CLIA and some state regulations provide requirements for test reporting and a number of professional organizations and some states have developed guidance, the implementation of these regulations/guidelines has been problematic. The problems became apparent in 2001 when the American College of Obstetricians and Gynecologists and the American College of Medical Genetics recommended pre-conception and prenatal carrier testing for cystic fibrosis (CF) when there is a family history of CF. The recommendations led to a five-fold increase in the referral rate for CF testing in the first few months and far more since then. In addition, misuse or misunderstanding of the test results have led to unnecessary follow-up testing. In response to these and other pre- and post-analytic testing process issues, DLS convened a multi-disciplinary group in May 2003 at the Mt. Sinai School of Medicine to identify key issues in the genetic testing process. Dr. Lubin ended his presentation by summarizing the "next steps" for domestic and international efforts developed by the conference participants.

Committee Discussion
One member asked if the Mt. Sinai conference addressed the pre- and post-testing issues related to the trend of genetic testing moving out of genetic specialty laboratories and into hospitals, with the increasing analytic simplicity of the tests. Dr. Lubin responded that this issue was discussed and there was consensus that as genetic testing moves into a variety of settings, availability and accessibility of pre- and post-test practical tools in clinical practice will be critical. He indicated some existing decision tools may be adaptable to genetics, and commented that genetic testing is already being performed in physicians' office laboratories.

Developing Quality Control Materials for Genetic Testing ***Addendum V***
Dr. Joe Boone, DLS, PHPPO, CDC, summarized a September 2003 conference hosted by CDC, which focused on developing a sustainable process for ensuring the availability of validated

quality control (QC) materials and proficiency testing (PT) samples for genetic testing. He listed availability, collection and storage, validation, cost and accessibility as issues that must be addressed in the process. The conference attendees identified the following critical needs: better collaboration among researchers, better coordination of federal funding, professional guidance on appropriate QC and validation processes, establishment of cell banks, and priority setting for QC material development. At the conclusion of the conference, eight workgroups were assigned to address each of the identified needs. Dr. Boone announced that the next conference is planned for March 2004 in Orlando, Florida and will provide a forum to review the workgroups' activities and discuss future projects.

Committee Discussion
There were no questions or comments.

Developing a Proposed Regulation for Genetic Testing ***Addendum W***
Dr. Bin Chen, Geneticist, Laboratory Practice Evaluation and Genomics Branch, DLS, PHPPO, CDC, described the development of a Notice of Proposed Rulemaking (NPRM) for Genetic Testing under CLIA. She reviewed the existing CLIA regulations applicable to genetic testing, noting while the general requirements for nonwaived testing apply to this area of testing, there are no specific requirements other than those for clinical cytogenetics (i.e., genetics is not a specialty). Next, she reviewed CLIAC's initial recommendations for genetic testing, which were included in the May 2000 *Federal Register* publication of the Notice of Intent (NOI) for genetic testing. Nine major issues were identified from the public comments received in response to the NOI. As a result, a second CLIAC genetic workgroup was convened and based on their suggestions, CLIAC revised its previous recommendations. Dr. Chen stated the revised recommendations have been taken into consideration in the development of the draft NPRM. She then reported on the development of a regulatory impact analysis (RIA) for the proposed rule, which includes a cost-benefit analysis of impact over a five-year period. When the RIA is completed, the NPRM must go through CMS, HHS and OMB clearance before it is published for public comment. Comments received to the NPRM must be evaluated and addressed before a Final Rule can be developed and published.

Committee Discussion
One member commented that certain organizations had not understood the CLIAC recommendations included in the NOI, suggesting that more effort needs to be focused on educating all entities involved in genetic testing.

PUBLIC COMMENTS

Waiver Criteria/Process
Mr. John Boffa, American Association of Bioanalysts ***Addendum K***

Dr. Patricia Charache, Professor of Pathology, Medicine, and Oncology, Johns Hopkins Medical Institutions, and former member of CLIAC and the Secretary's Advisory Committee on Genetic Testing. ***Addendum L***

Refer to Committee discussion that follows Ms. Luann Och's presentation

Genetic Testing

Dr. Debra Leonard, Associate Professor of Pathology and Laboratory Medicine, University of Pennsylvania, Director of Molecular Pathology Laboratory, University of Pennsylvania Hospital, and representative for College of American Pathologists ***Addendum X***

There were no Committee comments or questions.

Dermatophyte Test Media Quality Control

Dr. Walter Wood, Dermatologist - written comment expressing concern and disagreement with the CLIA end-user quality control requirements for dermatophyte test media (DTM). ***Addendum Y***

Drs. Gail Cassell and Joseph Campos, Public and Scientific Affairs Board, American Society for Microbiology (ASM) - a written response to Dr. Wood's concerns provided at CDC's request. ***Addendum Z***

Committee Discussion

The Committee accepted ASM's recommendation to not exclude DTM from end-user quality control and asked that the agencies (CDC, CMS) follow-up as necessary.

ADJOURN

Dr. Sundwall adjourned the CLIAC meeting. The next meeting is scheduled for February 11-12, 2004.

I certify this summary report of the September 17-18, 2003 meeting of the Clinical Laboratory Improvement Advisory Committee is an accurate and correct representation of the meeting.

/s/

David Sundwall, M.D., CLIAC Chair

Dated: December 10, 2003