Back to Basics: In-depth Interviews and Focus Groups as Methods for Assessing Technical Competence

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Abstract: Quantitative research on laboratory personnel issues requires a solid footing in theory and a basic understanding of the issues related to the empirical question. Through a cooperative agreement with CDC, the Graduate School of Public Health at San Diego State University is assessing the relationship of personnel qualifications and laboratory performance. We have used in-depth interviews and have adapted a method of task assessment as steps in our efforts to understand technical competence.

The task analysis project seeks to understand the knowledge, skills, abilities and other traits (KSAOs) that are essential to perform a sample laboratory test, in this case Enzyme Immunoassay (EIA) testing for Human Immunodeficiency Virus (HIV) antibody, in a competent versus superior manner. A standard industrial task analysis method was modified for use. Ten subject matter experts rated each of 60 selected tasks for its frequency, criticality, and difficulty. These experts then met in a facilitated focus group to identify the mental and physical behaviors and KSAOs for the five top-rated (most important) tasks. Eight KSAOs were common to all of the five top-rated tasks. The challenges of understanding personnel competence in the context of a complex technology-dependent industry are discussed. KSAOs believed essential for superior performance were also identified. This information was used in developing an on-site observation checklist to be used in observing performance of HIV antibody testing.

Since competence assessment (C/A) under CLIA'88 is a timely and relevant issue, we used in-depth telephone interviews of laboratory supervisors and technologists responsible for implementing this aspect of laboratory quality assurance. The primary intent of the in-depth interviews was to clarify and refine research questions for further study and to better understand, from a broad cross-section of 20 laboratory supervisors, other relevant aspects of personnel competence and quality management. Results allow a preliminary picture of C/A implementation status and issues in the practice community. Content analysis of selected questions provides a method of identifying common themes and an understanding of the variety of ways that C/A is used to comply with CLIA'88 and to improve management's confidence in their personnel.

Introduction

This report describes methods used to conduct in-depth interviews, task analysis and focus groups.

The CLIA Question: How are personnel qualifications related to performance?

It is important to understand that the long range goal of this project is to develop a clearer understanding of the relationship of

the laboratory personnel, the qualifications, and how those qualifications relate to the performance of clinical laboratories. Of particular interest are the personnel qualifications that were established as a part of CLIA'88 regulations.

Literature Review

For initiating this project, an extensive literature search to examine clinical laboratory science/medical technologists' personnel qualifications, competence, and other aspects of human performance in clinical laboratories was undertaken. Unfortunately, most of the useful literature seems to end in the mid-1980s, perhaps coincident with the decline of many university-based medical technology/clinical laboratory science programs. All in all, there is a dearth of specific information about technical or other competencies needed for performance. While many studies have been undertaken, they tend to focus primarily on clinical laboratory science students and their performance. Another pattern that emerged from the literature was that while many initial investigations were conducted, potentially productive lines of research were not followed up. One of the other deficiencies found in the literature was a lack of any overall theoretical framework or conceptual models to guide research efforts in this area. In an attempt to improve our understanding of the fundamentals, we also searched non-health care literature from the human resources management, industrial psychology, and ergonomics. We identified methodological approaches and general conceptual frameworks that could be useful to conduct our research. One of the useful frameworks is the mental workload model drawn from the industrial engineering, ergonomics and industrial psychology literature.[1]

Task analysis and the focus groups are methods that were used to determine the most important tasks and to identify the physical and mental behaviors as well as knowledge, skills and other abilities (KSAOs) required to competently perform the highly complex HIV enzyme immunoassay test.

There is no one single way to conduct a task analysis or a focus group in this or any other context.[2,3] Task analysis and focus group are ambiguous terms often applied to many types of analyses and used for many purposes. We did not develop either the task analysis or focus group methodology. We have adapted and used bits and pieces of various methods, combining them to achieve our ultimate goal: to determine if we can observe significant differences in laboratory personnel behavior that might explain variations or increase in the likelihood of error in the analytical performance of this particular laboratory test.

To initiate this project, we searched the literature to find commonly used task analysis methods that had been applied to clinical laboratory testing. We found no common or standard methods, although we did find several examples of analyses of tasks most commonly, surveys that were conducted to identify tasks of various levels of laboratory personnel. We also searched human resources management and organizational psychology literature for methodologies that might be useful. Several references were located and found useful, primarily from a text by Gael.[2]

Project Staff and Consultants

Theory and good research ideas are only useful if they can be implemented effectively. We are very fortunate to have hired Ms.

1.	Takes corrective action when equipment is not working.
2.	Detects physiologically impossible or unreasonable results and troubleshoots.
3.	Pipettes specimen or reagents appropriately and accurately.
4.	Performs preventive maintenance on equipment as scheduled and accurately records all quality control, test identification, maintenance.
5.	Visually looks at each specimen for hemolysis, precipitation, and quantity sufficient for testing; analyzes and makes judgments as to specimen acceptability.

The five tasks which received the highest TIV scores were considered the most important.*
* The Task Importance Value (TIV) = Frequency + (Difficulty x Criticality) was calculated for each HIV EIA task by each Subject Matter Expert. A cumulative score was determined for each task.

Table 1. Most Important HIV EIA Tasks

Linda Christian, who, in addition to experience in medical technology, has experience as a medical technology educator and laboratory manager and quality improvement coordinator. She was well versed in developing job descriptions as well as periodic personnel performance appraisals, test construction and evaluation of skills needed for the laboratory. We were assisted by a human and organizational system consultant, Ms. Veronica Myers, MSBA, from the College of Business Administration at San Diego State University. In addition to teaching human resources, she has considerable experience in a large multi-institutional health care organization in human resources development. Working with a nonlaboratorian expert helped us clarify our objectives as well as select and refine the methodologies.

Overall Strategy

The overall strategy undertaken consisted of three parts: First, relevant tasks in HIV EIA testing were identified. Second, the most important of these tasks were identified. Third, a list of knowledge, skills, abilities and other characteristics (KSAOs) of testing personnel for competent performance of the most important tasks was generated.

Identify Important Tasks

We identified from experience, review of EIA Kit inserts, previous laboratory on-site visits, previous focus group consensus, and previous laboratory written surveys, the relevant tasks involved in various methodologies of the HIV EIA test. Approximately 60 separate tasks were identified. They were categorized and may be seen in a 3-page task rating form which is included as Appendix A.

To validate our list of tasks and to identify the most important tasks in our task analysis, we recruited a panel of subject matter experts (SMEs), medical technologists who supervised HIV antibody testing in their laboratories. These SMEs were recruited at a state meeting of Clinical Laboratory Management Association, in addition to contacting laboratory supervisors who had previously participated in other focus groups. We used Likert-type rating scales for each of the 60 tasks. After they agreed to participate, rating forms were sent to 10 SMEs. Eight SMEs reviewed our list of tasks and rated each of the tasks as to its

frequency of performance, the difficulty of the task and how critical the task is in the context of the total testing process. We also asked our SMEs to add any task that we had not included, as well as tasks outside of the direct testing process that they regarded as important to the performance of this test (dilutors, specimen handling, reporting, etc.). The task rating forms were returned by mail. We calculated a Task Importance Value for each task rated by each SME using the following formula: Task Importance Value = Frequency + (Difficulty x Criticality). We then calculated a cumulative score for each task and rank ordered the tasks. The top-rated HIV EIA tasks are included as Table 1.

The Focus Group with Subject Matter Experts

We convened our focus group meeting of nine SMEs in the late afternoon after working hours, starting with a meal and refreshments in order to create a collegial atmosphere in which to conduct our group work. The SME focus group included first-line supervisors from a broad spectrum of HIV testing facilities including a public health laboratory, hospital laboratories, a blood bank laboratory, independent laboratories, and a plasma processing facility. Our goal was to thoroughly analyze as many HIV EIA tasks as possible in the given amount of time. Ms. Myers, our human resources management consultant, facilitated our focus group discussion. The focus group meeting began with the explanation of the goals of this focus group meeting and the long-range goals of our cooperative agreement and the CLIA'88 studies. We made it clear that there were no right or wrong answers and that everyone's opinion was highly valued.

The SMEs reached consensus on the five most important tasks to analyze during the meeting from a longer list of top-rated tasks. Next Ms. Myers wrote on a flip chart the highest-rated task, which was "Take corrective action when equipment is not working." Physical and mental behaviors for that particular task were identified by the focus group using a nominal group technique to assure that all group members had an opportunity to contribute. Flipcharts were used to record behaviors and (KSAOs). Members were polled until unique behaviors could no longer be elicited from the panel. Table 2 lists the behaviors as well as KSAOs for a sample task.

Task analysis was completed on the remaining four most important tasks for a total of five highly-rated tasks. A list of KSAOs found to be common for all of the tasks we assessed is presented in Table 3.

It also became clear during the discussion that the KSAOs for superior performance might be somewhat different from those KSAOs seen in the performance of persons judged merely as competent. As the group process evolved, a list of KSAOs of superior performers was also produced. These are listed in Table 4.

The focus group lasted approximately 2.5 hours. Given the interest of the group, it might have lasted longer had it not been for a failed air conditioner on an unusually warm day. We found that the SMEs were generally interested, often enthusiastic, and willing to challenge each other and share ideas. All participated, some more vigorously than others. After the meeting, we compiled the findings of the focus group meeting and mailed these to the SMEs. We asked them to make any corrections and to provide any additional after-thoughts. We also asked them to evaluate the focus group process in order to facilitate any

TASKS	BEHAVIORS		KSAOS
H3	**Physical**	**Mental**	
Takes corrective action when washing (and other) **equipment is not working.** e.g. gets equipment up and running or chooses alternate equipment	**<u>Observe</u>** - if water on tray - if water in tank - if plugged in - if dispensing correctly - if wash volume accurate (measure) - pressure **<u>Inspect</u>** - wash manifold Seals Connection Pressure - replace broken part - log (write) actions	- mental flowchart of what to expect - not use the instrument? - notify supervisor? - call for supervisor? - spare part? - call technical service?	Written/oral communication skills Legible writing Ability to read Ability to follow instructions Knowledge of processes Attention to detail Tolerate personal protective equipment (e.g. gloves) Initiative "Awareness" Recognize a problem or the possibility of a problem Act Not wait to be told Take responsibility Decision-making Satisfied with each step of the process --- - trained on proper operation of equipment - analytical ability to judge - Know how to use/follow manual - find things - knowledge of testing process - eyesight sufficient to observe drops of water at two feet - unscrew with hand (tactile) - communicate verbally to supervisor or manufacturer and written (to document, logs)

1. Written/oral communication skills
   - A. Legible writing
2. Ability to read
3. Ability to follow instructions
4. Knowledge of processes
5. Attention to detail
6. Tolerate personal protective equipment (e.g. gloves)
7. Initiative
   - A. "Awareness"
   - B. Recognize a problem or the possibility of a problem
   - C. Act
   - D. Not wait to be told
   - E. Take responsibility
8. Decision-making
   - A. Satisfied with each step of the process

Table 3. KSAOs Common to 5 Most Important Tasks

improvements in future groups that we might conduct.

Use of Task Analysis and Focus Group Results

Now the use of the results of the task analysis can begin. In a employment setting, it would be possible to have pencil and paper tests, simulations or other types of performance evaluations to measure the KSAOs that we now know are needed for HIV EIA testing. Task-oriented screening tests could be used to identify competencies in selecting or retraining personnel. A rigorous competence assessment program could measure and assure that all personnel conducting the testing could demonstrate the KSAOs shown to be essential in competently performing HIV EIA tests.

In our research we are observing the process for HIV testing in 10 volunteer laboratories. Using an observation checklist and focusing on selected tasks, we are attempting to observe various KSAOs and other behaviors identified as most important by our focus group. We do not yet have results on the usefulness of direct observation to assess selected “critical” behaviors and KSAOs of the personnel doing the testing.

A thoroughly conducted task analysis is resource intensive, particularly when a focus group is used to identify behaviors and KSAOs. The biggest cost is the staff time required to develop the tasks list and task rating form, tabulate the results of the ranking survey and rank importance of the tasks, and calculate the Task Importance Values. Hiring a facilitator to lead the group discussion process also adds an expense. We also provided food and a small honorarium for our SMEs.

In a laboratory with a menu of several hundred tests, it would be difficult to conduct a rigorous task analysis for even a fraction of the tests. An alternative strategy would be to identify representative tests, the most critical tests, and/or the most critical

- Recognition of own limitations
- Ability to detect problems and act to correct
- Possesses innate curiosity about "why?"
- Understands what is doing and the importance of accuracy
- Understands the impact of actions on outcome
- Pays attention to accuracy
- Appreciates the importance of the test to the care of the patient (care about the patient)
- Willing to help others
- Pays attention to detail
- Positive attitude
- Follows procedures step by step (e.g. doesn't take shortcuts)
- Willing to make decisions and accept responsibility
- "Awareness" (not specifically defined - analogy given of flying the plane, not on autopilot)
- Possesses moral character, truthfulness, integrity (e.g. doesn't cover up mistakes)
- Pride of workmanship - relates their job to the outcome of the patient
- Meticulous
- Consistency in work

All of these characteristics would result in high quaity work, less rework, fewer mistakes. High quality performance leads to productivity (enhanced by experience)

Table 4. KSAOs of Superior Performers

processes. Rather than individual laboratories conducting task analyses, a coordinated effort might be supported by professional organizations, manufacturers, or other agencies with an interest in resolvingspecific task-skill questions. Appropriately conducted rigorous task analysis could help resolve issues related to categorizing testing methodologies as high complexity or moderate complexity tests as required by CLIA'88 regulations. It is important to place task analysis into context. No matter how many task analyses we complete, they deal only with the analytic process, only one aspect of a very complex system. Given the other requirements for managing quality, the extent to which resources could be used for this purpose would have to be determined.

In-Depth Interviews and Personnel Competence

A third method used to develop our knowledge of personnel and performance was in-depth interviews. Competency assessment is required by CLIA'88 quality assurance regulations[1]. The issue of personnel competence lies at the heart of the issue of personnel qualification and performance. Unfortunately there is little literature on this topic.[3-6] We used these interviews to identify important issues related to personnel and performance, to understand the current status of competency assessment, and to determine the feasibility of further quantitative studies of this topic.

As exploratory research, a self-reporting mailed survey is not practical. The issue of timing is also important. The length of time involved to develop, pretest, and pilot test a

written, self-reporting mailed questionnaire was not practical. In-depth telephone interviews have the advantage of being relatively rapid, providing the interviewer with the ability to probe and develop a better understanding of responses. They also allow for open-ended questions, which do not constrain the respondent to a predetermined particular short list of responses. Telephone interviews provided an opportunity to explore a broad range of complex issues.

The expense of telephone interviews is a disadvantage. Exploratory surveys with open-ended questions require a skilled individual with knowledge of the subject matter to conduct the interviews. It is also essential that the interviewer remain objective and not be judgmental when receiving responses. Open-ended questions are also labor intensive to interpret and do not lend themselves to quantitation.

In attempting to understand competency assessment, we started with regulations which stipulate what competency assessment activities occur in laboratories. A primary interest was to understand how various laboratories defined competence and competency assessment. Methods used to assess competency, such as pencil and paper examinations, specimen analysis, direct observation, or retrospective analysis of work, worksheets and quality control records were of interest as well. The relationship of competency assessment and other quality assessment or quality improvement practices, not only in the laboratory, but throughout the organization was of interest. For example, in hospital laboratories: What was the connection between competency assessment and other Joint Commission-required activities such as QA/QI programs? We were also interested in the relationship between periodic personnel appraisals and competency assessment. Were there rewards or merit pay connected with the findings of competency assessment? Were there punitive actions? In an era of cost containment, the cost of personnel resources devoted to competency assessment must be considered. We queried laboratories regarding their perceptions on the overall value or usefulness of competence assessment. Our interview recording form, which lists the questions used in the interview, is included as Appendix B.

Sample of Laboratories

An objective of exploratory in-depth interviews is to obtain a representative rather than statistically valid sample. The objective was to incorporate the views and qualitatively describe the practices of a diverse set of laboratories. To ensure that we obtained interviews from this broad range, we stratified our sample into four categories to include physician office laboratories, blood banks, hospitals, and commercial reference laboratories. The initial contacts were made to organizations that were known to have considerable experience in competency assessment. The initial case study was conducted by a health administration graduate student, Ms. Jean Breheme, who is a laboratory manager in a multi-institutional laboratory system. This laboratory has spent considerable resources over the past several years implementing a rigorous C/A program. Baseline information from this case study helped provide a framework for the interviews. We also contacted several individuals who had published or presented educational sessions on C/A at professional meetings. Literature we found is provided in the references.[4-8] From these leaders we also asked for

contacts at other laboratories who they believed to be doing a thorough job of implementing C/A. In the communication literature, identifying additional sample members by another case is known as a "snowball technique". Such a snowball technique is efficient because it allows identification of laboratories that have spent considerable resources. It also speeds the sampling process by identifying contact individuals rather than having to make "cold calls" to laboratories. We called several other laboratories that had cooperated with us in other aspects of various research projects. While this method is efficient, it could lead to a nonrepresentative picture by including only the most well-developed C/A programs in the sample. To identify a more representative sample, we turned to the on-line electronic yellow pages. Using the CompuServe Business File, we randomly chose metropolitan areas outside of California and identified laboratories to call. While it was easy to find blood banks, clinic laboratories, and hospitals, finding physician offices and medical group practices with CLIA-certified laboratories proved somewhat more difficult, many non-productive cold calls were made. Identifying internal medicine specialists/group practices was the most productive method to identify small physician office laboratories.

We called approximately 35 medical groups and physician's offices to identify laboratories for five in-depth interviews. We scheduled times that were convenient for the person most familiar with competency assessment to be interviewed. On average, it took about three calls to arrange and complete the interviews. Telephone surveys are labor-intensive. Interviews took approximately 30 to 60 minutes to complete.

Conclusions on Competence Assessment

We found a continuum of the formality in implementing C/A as required by CLIA'88. At one end of the continuum several laboratories had extensive, formal competency assessment programs that far exceeded the CLIA'88 requirements. At the other end of the spectrum were laboratories with virtually no C/A activities and demonstrating minimal compliance. Blood bank and hospital laboratories had the most formalized C/A programs. Competency assessment tended to focus on technical competence of the analytic phase of testing, documenting the ability to do testing, being able to follow manufacturer's and the laboratory's standard operating procedures. Productivity was also important. The other domain of personnel competence of equal or greater importance was the "professionalism" of personnel. Professionalism was the ability to trust individuals to follow through and do what would be expected in situations. Further analysis and reporting of these results is currently underway.

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worked on the task analysis and focus group project.

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Instructions Task statements are grouped below under general categories. Read each task statement carefully and decide whether or not the task is part of the HIV EIA test as performed by your personnel. If it is not, place a (v) in the NA column. Write in any additional task statements you believe are appropriate to the category. Some tasks may be considered more important /significant to the test outcome than others. Therefore, consider the following factors involved in judging the importance/significance of these tasks: **Frequency - How frequently is this task performed related to other HIV EIA test tasks?** **Difficulty - How difficult is this task compared to other HIV EIA test tasks?** **Criticality - To what degree does incorrect performance of this task results in adverse consequences or results?**	NA (v)	Frequency 1=very infrequent 3=average 5=substantial	Difficulty 1=not difficult 2=below average 3=average 4=considerable 5=substantial	Criticality 1=not critical 2=below average 3=average 4=considerable 5=substantial
A. EQUIPMENT				
1. Performs preventive maintenance on equipment as scheduled.				
2. Checks temperatures of incubator, water bath.				
3. Takes corrective action if temperatures deviate from acceptable range.				
4. Aspirates liquid using aspirating equipment.				
5. Washes beads using washing equipment.				
6. Primes dispenser immediately prior to dispensing color development solution.				
7. Blanks spectrophotometer at appropriate wavelength.				
8. Determines absorbance of control and specimens.				
9.				
B. SPECIMENS				
1. Clarifies specimen when specimen is determined to contain precipitate.				
2. Stores specimens appropriately.				
3. Avoids multiple freeze-thaw of specimens.				
4. Mixes specimens adequately before sampling.				
5. Determines which specimens and controls need to be tested				
6. Appropriately makes dilutions when necessary.				
7. Determines which specimens need repeating, pulls them and stores appropriately.				
8. Identifies and prepares/stores those specimens for confirmatory testing.				
9.				
C. SPECIMEN IDENTIFICATION				
1. Labels tubes/trays/wells legibly and appropriately.				
2. Accurately identifies results of specimen/controls from instrument printout.				
D. REAGENTS				
1. Stores reagents appropriately				
2. Determines if reagents are acceptable for use (checks expiration, checks for visible signs of deterioration).				
3. Prepares reagents by reconstitution, measuring, pipetting.				

Frequency - How frequently is this task performed related to other HIV EIA test tasks? Difficulty - How difficult is this task compared to other HIV EIA test tasks? Criticality - To what degree does incorrect performance of this task results in adverse consequences or results?	NA (v)	Frequency 1=very infrequent 3=average 5=substantial	Difficulty 1=not difficult 2=below average 3=average 4=considerable 5=substantial	Criticality 1=not critical 2=below average 3=average 4=considerable 5=substantial
D. REAGENTS (CONT'D)				
5. Makes sufficient color development solution for testing.				
E. QUALITY CONTROL				
1. Prepares and pipets blank tubes.				
2. Accurately records all quality control, test identification, maintenance.				
F. PSYCHOMOTOR				
1. Mixes reagents prior to use.				
2. Pipets specimen or reagents appropriately and accurately				
3. Mixes dilutions tubes/wells adequately.				
4. Adds beads carefully to appropriate wells.				
5. Accurately times the incubations periods.				
6. Swirls color development solution gently prior to use.				
7. Transfers beads to appropriately labeled tubes.				
8. Inspects trays for trapped air bubbles.				
G. DECISION-MAKING				
1. Visually looks at each specimen for hemolysis, precipitation, and quality sufficient for testing; analyzes and makes judgements as to specimen acceptability				
2. Decides if specimen needs to be rejected.				
3. Determines validity of run by assessing quality control results.				
4. Determines validity of reagents by absorbance difference between positive and negative controls.				
5. Determines whether additional tests are appropriate based on the results				
6. Evaluates results to determine if the result is an accurate automated reading or the result of an equipment malfunction, reagent problems, or protocol deviation, and takes appropriate corrective action.				
7. Detects physiologically impossible or unreasonable results and troubleshoots.				
H. CORRECTIVE ACTION				
1. Takes corrective action if trapped air bubbles detected in trays.				
2. Takes corrective action when aspirating equipment is not working.				
3. Takes corrective action when washing equipment is not working.				
4. Takes appropriate action if QC is not acceptable.				
5. Takes action when impossible or unreasonable results are obtained.				

Frequency - How frequently is this task performed related to other HIV test tasks? **Difficulty - How difficult is this task compared to other HIV test tasks?** **Criticality - To what degree does incorrect performance of this task results in adverse consequences or results?**	NA (v)	Frequency 1=very infrequent 3=average 5=substantial	Difficulty 1=not difficult 2=below average 3=average 4=considerable 5=substantial	Criticality 1=not critical 2=below average 3=average 4=considerable 5=substantial
H. CORRECTIVE ACTION (CONT'D)				
6.				
I. CALCULATIONS				
1. Correctly determines the cutoff value.				
2. Correctly compares the resulting absorbances to the cutoff and classifies each specimen as to negative or reactive.				
3. Correctly follows testing algorithm and determines which specimens are negative, reactive, repeatably reactive, need to be confirmed, reported.				
4.				
J. RECORDKEEPING				
1. Prepares load list/worksheet.				
2. Records absorbances.				
3. Correctly follows testing algorithm and reports acceptable results.				
4.				
K. PROBLEM SOLVING				
1. Recognizes problems and identifies the cause.				
2. Solves problems by implementing or suggesting satisfactory solutions.				
L. COMMUNICATION				
1. Demonstrates professional interpersonal communications with patients, laboratory personnel, physicians, or other healthcare professionals about results or other aspects of the test.				
2. Prepares and transmits written and oral reports clearly and accurately.				
3.				
M. OTHER				
1. Follows all steps of protocol/procedure during testing.				
2. Protects oneself and coworkers by following safety precautions and using appropriate personal protective equipment.				
3. Increases and improves professional knowledge and skills by attending/presenting inservice lectures, seminars.				
4. Maintains confidentiality of all results				

APPENDIX B
COMPETENCY ASSESSMENT QUESTIONS

Date: Contact person:

QUESTIONS	Laboratory Name/Address	Code
DESCRIPTION OF LABORATORY		
Location of Lab (city, state)		
What type of Laboratory? Hospital Reference Physician Office Lab (POL) Group Practice Lab (GPL) Blood Bank (BB)		
If hospital, # beds		
If GPL or POL, # doctors		
If GPL or POL, kinds of lab services offered		
# licensed testing personnel		
# unlicensed testing personnel		
By which agencies are you accredited or licensed? AABB, State lic, JCAHO, CAP, COLA, others:		
HISTORY AND DEVELOPMENT		
Do you have a written Policy/ Procedure for competency assessment?		
When was it written?		
When did you begin competency testing? Or are you in the planning stages?		
Do you have an error detection system in place to pinpoint areas where competence needs improvement?		
What corrective actions are instituted to assist employees when problems are identified?		
Do you have a mechanism for assessing the competence of consultants:		
DEFINITION OF COMPETENCY		
How do you interpret “competent staff” as mandated by CLIA?		
What is the best indicator of competency?		
What are other indicators of competency?		

PROCEDURE DETAILS	
How are competency areas chosen?	
How often is competency testing done?	
Will all tests performed be observed eventually?	
"Passing" score	
What is done with/for employees who do not obtain a passing score?	
How does the lab assure that an individual who had problems in performance is competent after appropriate training and technical assistance is completed?	
How does the lab evaluate personnel for consistency in slide review (i.e. ANA, parasitology, cytology, hematology)?	
INTERRELATIONSHIPS (QA/QI, PERIODIC EMPLOYEE EVALUATION, OTHER)	
Is competency assessment of individuals linked to performance evaluations?	
Is competency assessment program linked to QA or QI program?	
What other activities besides competency assessment are done to improve quality?	
EVALUATION OF COMPETENCY ASSESSMENT	
What is the best assessment method?	
May I have copies of your competency assessment P/P and assessment instruments?	
May I have a copy of a performance evaluation form?	
Have you evaluated your competency assessment plan? Changed anything?	
Have you estimated how costly the competency assessment program has been?	
What benefits do you see from having a competency assessment program?	
What are your plans for the future as you envision competency assessment?	

ASSESSMENT METHOD	
Direct observation of test performance by supervisor Checklist used? Which tests/procedures do you observe?	
Direct observation of test performance by peer Checklist used?	
Direct observation of instrument maintenance Checklist used?	
Technical staff to perform Proficiency testing samples with performance documented (wet)	
Internal blind testing samples with performance documented (wet)	
"Leftover" proficiency testing specimens with performance documented. (wet)	
Pencil/Paper quiz of knowledge of SOPs, policies, basic troubleshooting for problem situations. (dry)	
Problem solving exercises with documentation (e.g. BB)	
Performance deficiencies or Incident reports in employee's file	
Other competency assessment methods?	