

Cross-Network Safety Quality Assurance: Guidelines for EQA Monitoring, Data and Communication Flow

Abbreviations and Acronyms

- External Quality Assurance (EQA) provider [in most instances this is the College of American Pathologists (CAP) or Accutest-DigitalPT]
- National Institutes of Health (NIH)
- Division of Acquired Immunodeficiency Syndrome (DAIDS)
- DCLOT (DAIDS Clinical Laboratory Oversight Team)
- Network members include:
 - HIV Prevention Trials Network (HPTN)
 - HIV Vaccine Trials Network (HVTN)
 - AIDS Clinical Trials Group (ACTG)
 - International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPAACT)
 - Microbicide Trials Network (MTN)
- Network Site Affiliated Laboratory (NSAL)
- HIV Clinical Trials Network Laboratories (NL)
- Primary Network Laboratory (PNL)
 - Network members above
 - National Institute of Child Health and Human Development (NICHD)
 - Non-network
- Laboratory Focus Group (LFG)
- Proficiency Testing Performance Tracking (PTPT) System
- Total Quality Management (TQM) Program
- Patient Safety Monitoring in International Laboratories (SMILE)

Introduction

The validity of diagnostic and monitoring tests is dependent on the quality of the measures employed before, during, and after each assay. The consistent production of valid results will more likely occur when an overall program that includes Quality Assurance (QA) and Quality Control (QC) is utilized. To this end, the HIV Clinical Trials Network Laboratories improve the quality and efficiency of protocol-related testing under a Total Quality Management (TQM) Program. Oversight of the TQM Program is provided by the Cross-Network Laboratory PI Committee and the Laboratory Focus Group (LFG). The Lab PI/Manager Committee will guide the working groups and participants responsible for the implementation of the TQM Program, and is comprised of representatives from DCLOT, each of the Networks, NICHD, and EQA contractors. The Laboratory Focus Group represents a subset of the Lab PI/Manager Committee and is comprised of key Network Laboratory (NL) and/or Operations personnel of each Network. These Network Laboratory and Operations personnel serve as network contacts and are responsible for monitoring EQA results for each Network. Each international laboratory is assigned a single Primary Network Laboratory (PNL) that is responsible for coordinating feedback from all affiliated network contacts to the laboratory during a proficiency testing failure. The network contacts communicate about EQA results and follow up via the Proficiency Testing Performance Tracking (PTPT) System on the HANC portal. For detailed information about the role of the PNL can be found in Appendix A: Safety Lab EQA Communication Procedure.

The QA Working Groups included the Safety Lab QA working group, which was comprised of representatives from SMILE, representatives from the DAIDS Clinical Laboratory Oversight Team (DCLOT), and representatives from each of the respective Networks. The Safety Lab QA Working Group was put on hold in January, 2008 when the PTPT System was implemented on the HANC portal. The functions of the Safety Lab QA working group included:

1. Review data from lab proficiency testing that includes safety labs and other protocol-related analytes.
2. Coordinate proficiency testing materials and shipping support.
3. Establish monitoring standards, which should differentiate between missing data, transcriptional or computational errors, and technical problems. Decisions regarding the consequences of unacceptable performance should take each of these types of problems into consideration. These standards will be applied to:
 - a. Protocol start up
 - b. Protocol continuation
 - c. Cessation of testing if established criteria are not met
 - d. Resumption of testing – determine what must be accomplished prior to sites being able to resume testing after testing has been suspended.
 - e. An individual Network may discontinue or place a protocol on hold if they perceive standards are not being met; in which case the Network will be responsible for a clear line of communication to the relevant QA Working Groups and the Lab PI/Manager Committee.

Functions 1 - 3 are performed by SMILE, the NLs and the PTPT System.

Overview of Responsibilities and Data and Communication Flow

The roles and responsibilities among the PNL, affiliated NL(s), SMILE, DCLOT, and the NSALs are summarized in the EQA flow diagram of general roles and responsibilities in Figure 1: Safety Lab Quality Assurance: EQA Monitoring, Data and Communication Flowchart.

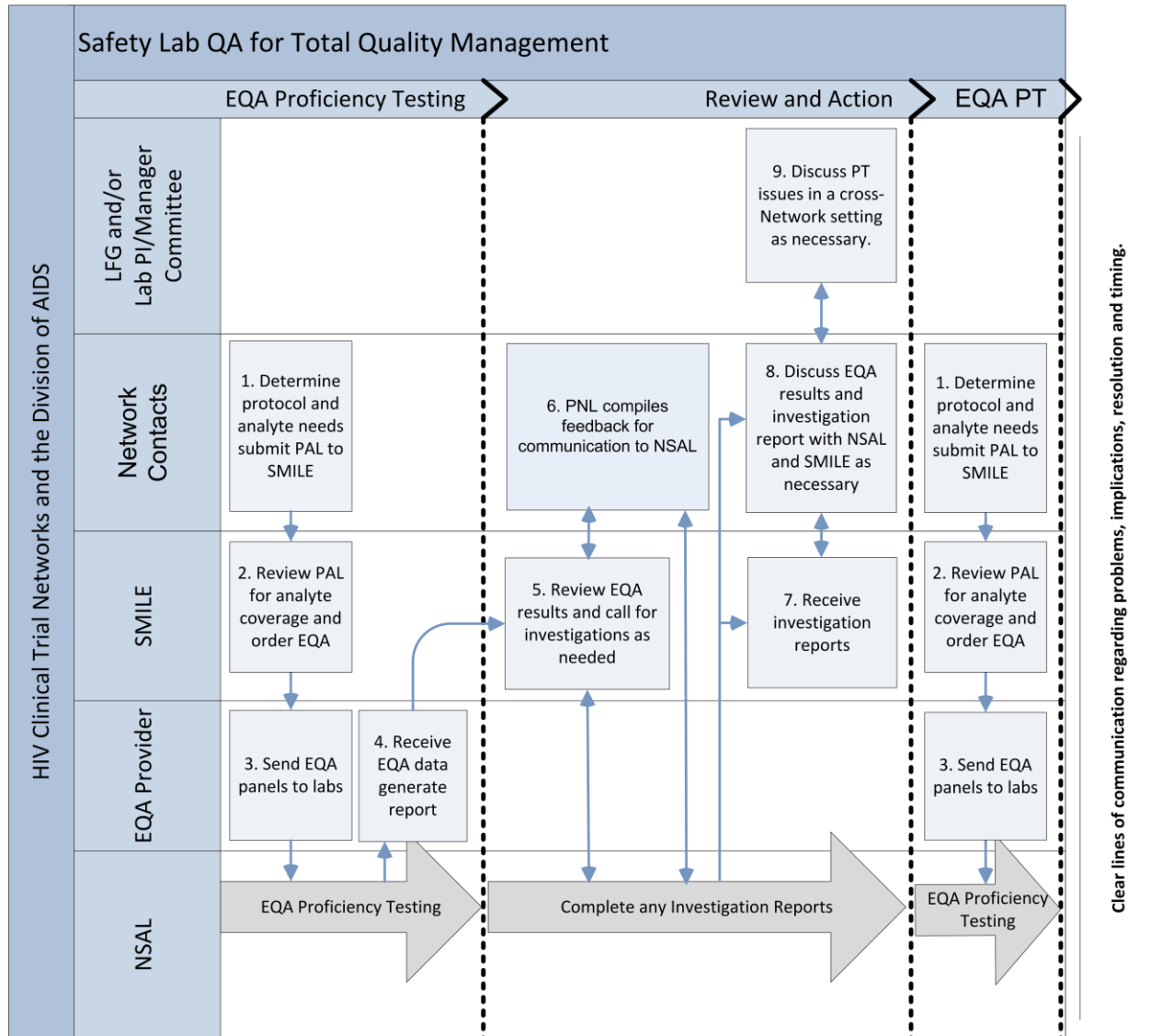
The following are the steps in the iterative process for data and communication flow:

1. The network contacts will notify SMILE of specific NSAL EQA needs.
 - a. For each new NSAL, the network contacts will provide SMILE with a Protocol Analyte List (PAL) for each protocol to be conducted at the NSAL. See Appendix B: FDA Template – Protocol Analyte List.
 - b. For current NSAL, the network contacts will provide SMILE with a PAL for new protocols that are added or changes made to current protocols. Additions should be communicated early with sufficient time to allow for the purchase, performance and documentation of two rounds of acceptable EQA prior to study initiation.
2. SMILE will coordinate with the network contacts and NSAL to order, or assist in ordering, appropriate EQA panels.
 - a. Communicate with EQA vendors to ensure that all laboratories have EQA coverage for all protocol analyte testing.
 - b. Purchase EQA material, as directed by DAIDS.
 - c. Arrange shipping as appropriate.
 - d. Develop and provide to the NSAL and networks EQA shipping schedules that will cover all EQA providers and surveys ordered for the year.

- e. Request NSAL to obtain the necessary import permits and forward paperwork to all relevant EQA providers. A copy of the permits should also be sent to SMILE to facilitate import problems.
3. The EQA provider will ship survey material to the NSAL on the given shipping date. SMILE will:
 - a. Use direct shipping by EQA provider and arrange third party shippers, as needed.
 - b. Resolve delivery problems with the EQA provider and arrange for replacement surveys when appropriate, subject to availability.
4. The NSAL will submit survey results directly to the EQA provider. SMILE will:
 - a. Provide support to the NSAL to ensure survey results are correctly submitted to EQA providers on time. This support may consist of facilitating electronic access, FAX, or email submission.
 - b. Work with the NSAL to ensure on-time submission of results. Failure to notify the EQA provider and SMILE of submission difficulties prior to deadlines may result in EQA failures.
5. SMILE will review EQA results, including:
 - a. Obtain EQA survey event evaluations from the EQA provider, or if necessary, manually grade survey results. SMILE will retrieve evaluated Provider EQA Report for all resulted survey events at least once per month for each NSAL. For labs using EQA providers where electronic retrieval of results is not available, SMILE will request the results from the site as appropriate.
 - b. Complete a SMILE EQA Survey Event Review. A separate written review will be completed for each survey.
 - c. Update the cumulative EQA Summary. The EQA Summary will include the following:
 - i. Survey Schedule-Log: For each survey, the Schedule-Log will track the date the survey is shipped, when the SMILE EQA Survey Event Review is completed, and when the site returned the investigation report, if required. The Schedule-Log will highlight what analytes, if any, required investigation.
 - ii. Result Summary: Overall historical summary of EQA event performance provided by analyte. Most of the analytes submitted to the EQA Provider are tracked for possible inclusion in future protocols with a distinction made between protocol and non-protocol analytes.
 - d. Post EQA survey event information to the pSMILE website (<http://psmile.org>) for review by the network contacts. This will include:
 - i. Provider EQA Report for survey event.
 - ii. SMILE EQA Survey Event Review.
 - iii. Updated EQA Summary spreadsheet.
 - iv. If required, completed investigation reports received.
 - e. SMILE will compile information regarding EQA evaluations and communicate it to the NSAL approximately once per month:
 - i. SMILE's review of the Provider's EQA Report.
 - ii. Updated EQA Summary spreadsheet.
 - iii. If necessary, a blank investigation report (as requested by the PNL).
 - iv. Provider's EQA report.
 - v. Provider Participant Summary, if requested and available from the provider.
 - vi. SMILE will include all applicable network contacts on reports as requested via email lists maintained by SMILE. Email, SMILE access, and phone calls are all possible means of communication with Network personnel.
 - vii. A network contact may choose to communicate with the NSAL directly. If so, the network contact will copy the other affiliated networks and SMILE.

6. The network contacts will use the PTPT System on the HANC portal to discuss EQA results and instructions to NSAL (e.g. stop or continue testing). (See Appendix A for more details.)
 - a. The PTPT System will communicate EQA failures across the networks.
 - b. The PTPT System will provide a forum for the network contacts to discuss EQA issues and make recommendations, which will be most important for sites serving more than one Network.
 - c. The PNL will compile feedback from the network contacts of each Network served by the site, and will provide a single communication to the NSAL.
 - d. The PTPT System will track resolution of the EQA problem.
 - e. Specific questions or issues should be addressed to the SMILE site representative via email. An updated list of SMILE site representatives is available at <http://psmile.org>.
7. Within 30 days of receiving notice that an investigation is required, the NSAL will complete and submit an investigation report to SMILE and to the appropriate network contact(s):
 - a. SMILE will work with the lab to complete the investigation report and submit the report to the NL for approval or the network may choose to work with the NSAL to complete the investigation report and sign off before submitting it to SMILE.
 - b. A separate investigation report should be completed for each analyte that requires investigation.
8. Communication via email and the PTPT System will be used to decide if further investigative action is required, what action should be taken, who will be assisting, etc. This will allow for all interested parties to be part of the discussion for NSALs serving more than one network.
9. If necessary, cross-Network EQA problems may be discussed by the LFG and/or Laboratory PI/Manager Committee.

Figure 1. Safety Lab Quality Assurance: EQA Monitoring, Data and Communication Flowchart



EQA = External Quality Assurance

LFG = Lab Focus Group

NSAL = Network Site-Affiliated Laboratory

PT = Proficiency Testing

SMILE = [patient] Safety Monitoring and International Laboratory Evaluation