11 TRAINING

The HPTN is committed to developing qualified, trained staff to conduct HPTN studies. Training for Clinical Trials Unit (CTU) staff adheres to the standards listed below:

- All key CTU/CRS staff are stated in the Glossary of DAIDS Clinical Research Terms as (individuals who are involved in the design and conduct of NIH funded human subjects' clinical research. This includes all individuals named on the form FDA 1572 or DAIDS Investigator of Record Agreement and any clinical research site personnel who have more than minimal involvement with the conduct of the research (performing study evaluations or procedures or providing intervention) or more than minimal study conduct related contact with study participants or confidential study data record, or specimens). Key personnel must complete Human Subjects Protection (HSP) training (Section 11.1) as well as Good Clinical Practice (GCP) training (Section 11.2). The Principal Investigator (PI) of the CTU grant is responsible for ensuring that the IoR maintains training records onsite and makes these records available to the Clinical Site Monitor, the DAIDS Program Officer and/or other designated DAIDS staff upon request.
- All key personnel involved in clinical trials subject to United States (US) Food and Drug Administration (FDA) regulations must receive training prior to study initiation and every three years (or sooner if required by local institution) thereafter that includes relevant aspects from the following: Electronic Records and Signature (21 CFR Part 11); Investigational New Drug Application (21 CFR Part 312); Protection of Human Subjects (21 CFR Part 50); Financial Disclosure by Clinical Investigators (21 CFR Part 54); Institutional Review Boards (21 CFR Part 56). The IoR is responsible for maintaining complete training records.
- Laboratory related training is required as specified in Section 11.3 and Section 13.
- The HPTN, in accordance with the US Code of Federal Regulations (CFR), requires study-specific site training prior to study initiation (Section 11.4).
- CTUs/CRSs are expected also to provide training for new staff and ongoing training for current staff (Section 11.5).

An overview of mandated training is found in the table below with further details in the following sections.

HPTN Training Requirements			
Training	Required Personnel	Timing/Frequency	Sources for Training
HSP	All key CTU/CRS staff (see above)	Prior to awards being made for clinical research and every three years thereafter (or sooner depending on institutional requirements)	NIH-sponsored HSP training sessions Online training course (CITI or NIAID), Online training programs e.g., online university-based training modules Commercial training programs
GCP and FDA training requirements	All key CTU/CRS staff (refer to DAIDS SOP)	Prior to study initiation and every three years thereafter (or sooner depending on institutional requirements)	NIAID sponsored course on DLP (ACRP) Online training course (CITI) Other online training programs, e.g., online

HPTN Training Requirements			
Training	Required Personnel	Timing/Frequency	Sources for Training
			university-based training modules Commercial training programs
International Air Transportation Association (IATA) training	All staff who transport, ship or receive infectious substances and diagnostic specimens	Prior to handling infectious materials and specimens as part of an HPTN study (certification of staff members required for study specific site activation at the site); regulations reviewed annually and certification every two years thereafter	Several resources listed in Section 11.3
Laboratory Data Management System (LDMS) training	Staff of CTU/CRS laboratories	At time of installation of LDMS and as needed	Frontier Science Technology and Research Foundation (FSTRF) training at Network annual meetings and regional meetings, onsite, or at FSTRF in Amherst, NY or by a officially trained Train-the-Trainer
Good Clinical Laboratory Practice (GCLP)	Laboratory Director, Laboratory Manager/Supervisor and/or quality assurance/quality control (QA/QC) technologists	Prior to involvement in an HPTN study and then as needed	GCLP courses provided by the DAIDS contractor or online Courses available from private training companies. NOTE: these may not cover the appropriate DAIDS related regulations Refresher training is available on the DAIDS learning portal
Study-specific training	Applicable CTU/CRS study staff	Prior to initiation of study and for new staff prior to conducting study-related activities	Leadership and Operations Center (LOC) Clinical Research Manager (CRM), Statistical and Data Management Center (SDMC) Clinical Data Manager (CDM), HPTN Laboratory Center (LC) representative Training materials are typically posted to the HPTN website specific to each study and available to site teams for ongoing training needs

11.1 Human Subjects Protection Training

All key personnel must have current HSP training documentation in place prior to study initiation and every three years thereafter (or sooner depending on institutional requirements), as well as prior to specific study initiation New clinical research site personnel (hired after study initiation) must have current HSP training documentation in place prior to conducting study-related procedures.

Many universities and research institutions provide training which, when documented, fulfills this requirement. The Association of Clinical Research Professionals (ACRP) also provides a course though the DLP which meets the requirement.

11.2 Good Clinical Practice Training

All key personnel must have current GCP training documentation in place that meets International Conference on Harmonisation (ICH) E6 standards prior to study initiation and every three years thereafter (or sooner depending on institutional requirements). New clinical research site personnel (hired after study initiation) must have current GCP training documentation in place prior to conducting study-related procedures. The NIAID DLP offers GCP training modules.

Training of all HPTN site study staff is encouraged and facilitated through the provision of onsite GCP training to the extent possible. To meet immediate or broader needs for GCP training for site study staff, CTUs may seek additional sources for continuing GCP training. Local universities or research centers may offer GCP training opportunities. CTU staff members are encouraged to seek courses that provide certification of participation.

11.3 Laboratory Related Training

To ensure quality research and safeguard study participants, DAIDS requires that all HPTN studies be conducted in accordance with GCLP. The LC also requires that applicable laboratory personnel receive GCLP training prior to conducting study-related procedures and every three years thereafter or as designated. Training of all HPTN key laboratory staff is facilitated through the provision of regional GCLP training as well as through an online training program.

All HPTN studies rely heavily on the capacity of CTU laboratories to handle, process, and ship participant specimens. The work of qualified and trained laboratory staff at the research sites is essential. The HPTN requires the following training for laboratory personnel:

Laboratory Data Management System

The LDMS is the laboratory software installed at each of the CTUs to assist with specimen management, storage, and shipping. LDMS training is provided at FSTRF or at each CTU research site when a system is placed at the site.

Opportunities for refresher training are provided. At the request of the LC, FSTRF may provide refresher training on the LDMS at annual meetings, regional meetings, and protocol trainings or through web-based focused trainings. The LC staff members are typically available at these training sessions to provide information related to the HPTN and also to answer questions from site representatives. FSTRF staff will follow-up with site representatives after these training sessions to ensure that they are aware of the need to share the information with other site staff. FSTRF will also hold trainings at their headquarters in Amherst, New York.

The LC staff members (who have passed the train-the-trainer sessions) will also provide study-specific LDMS training onsite during the study-specific training, if feasible, as well as during routine site visits. International QA/QC coordinators are also a resource for handling refresher training. SDMC staff monitor the specimen management and storage modules. If problems or trends are noted that indicate more training is needed at a site, *ad hoc* training will be arranged. CTUs/CRSs,

at their expense, may also request additional training if needed, for example, when new laboratory personnel are hired.

International Air Transport Association

IATA regulates the safe transportation of dangerous goods by air in accordance with the legal requirements of the International Civil Aviation Organization (see Section 13.7.2 for further details). The HPTN, in accordance with IATA requirements, requires training and certification for all HPTN members involved with the handling, transporting (by air and ground), and receiving and shipping of infectious substances and diagnostic samples. Certification of all site staff members, who transport and/or ship dangerous goods, is required prior to study activation at a site.

Site personnel should review the IATA regulations annually as well as complete required training in hazardous materials (HAZMAT) regulations as they pertain to IATA shipping regulations.

Each CTU is responsible for training the pertinent staff members on IATA shipping regulations and is required to have a current IATA manual onsite. CTUs are required to provide documentation of IATA certification of personnel upon request by the LC or a DAIDS contractor. The site's Primary Network Laboratory (PNL) is responsible for assuring that the laboratory has a current IATA Dangerous Goods Manual and appropriate training materials. Refer to the links below for IATA training resources:

http://iata.org/index.htm

http://www.saftpak.com

http://fedex.com/us/services/options/express/dangerousgoods/seminars.html?link=4

http://www.dhl-usa.com/solutions/express.asp?nav=dhlExp

http://www.dot.gov/

http://www.usps.com

Biohazard and Containment Training

Clinical and laboratory personnel are expected to complete annual clinical safety training including training on blood borne pathogens and infection control. It is the responsibility of the CTU to provide the training to all clinical and laboratory staff using information and materials provided by their institutions as well as DAIDS contractors and cross-network training groups.

Other Requirements for Laboratory Personnel

Laboratory personnel are also expected to participate and complete training as specified in this section for CTU site personnel. For key laboratory personnel, this includes HSP training, GCP training, GCLP training, and study-specific training.

11.4 Study-Specific Training

The IoR is responsible for ensuring that site study staff members are adequately trained to serve their designated site and study-specific functions. The LOC, SDMC, LC and other protocol team members collaborate with the site IoR and other designated study staff to fulfill this responsibility in preparation for initiation of new HPTN studies by conducting study-specific training. The format of study-specific training depends on experience of site staff and complexity of the study. Training may be conducted onsite, via webinar or by teleconference at each participating study site. Alternatively, all or parts of study-specific training may be conducted at a central location with staff from all study sites in attendance, or regional trainings may be conducted with staff from the countries of that region in attendance.

The objectives of study-specific training are to:

- Ensure that study staff members are informed of how the study will be conducted on a daily basis, in accordance with the protocol and GCP guidelines
- Ensure standardization of study implementation across sites, so that data can be combined for analysis

During study-specific training, site staff members and the LOC/SDMC/LC training team examine and discuss in detail the study protocol, regulatory requirements, procedural requirements, and data collection specifications. Broad responsibilities for planning for and conducting study-specific training are shown in the table below. Documentation of all study staff training must be maintained in each site's Essential Documents files.

Responsibilities for HPTN Study-Specific Training	
Task	**Lead Group/Individual**
Scheduling training	LOC CRM, LC representative(s), SDMC CDM, site investigator
Arranging logistics	LOC CRM, SDMC CDM, LC representative(s), designated site staff member When possible OCSO will arrange for Clinical Monitors to attend
Developing the agenda	LOC CRM, SDMC CDM, LC representative(s), protocol chair(s) and relevant site investigator(s) and site staff members
Compiling, producing, and providing training materials	LOC CRM, SDMC CDM, LC representative(s), site investigator and designated staff
Arranging for translation of study and training materials and activities, as needed	Site investigator and designated site staff
Arranging for standardized clinical training (if applicable)	LOC CRM with protocol chair(s) and relevant site investigator(s)
Conducting training	LOC CRM, LOC Community, SDMC CDM, LC representative(s) or designee, protocol chair(s), and/ or relevant site investigator(s), designated site study staff members, and others as appropriate such as clinical experts
Documenting attendance and participation of site/protocol staff	Designated site staff
Maintaining ongoing training documentation	Site IoR or other protocol team members as applicable

11.4.1 Scheduling Study-Specific Site Training

The responsibility for scheduling of study-specific training should be shared between LOC, SDMC, LC, Protocol Chair(s) and IoR or designee at each site. Training is conducted as closely as possible to the actual study start date at each site and should be within 30 days of protocol site activation (if this window is exceeded, contact the responsible DAIDS Medical Officer for guidance on potential re-training requirements). Study specific site activation requirements should be met (or be close to completion) prior to conducting training of a site (see the table in Section 11.4.2).

11.4.2 Site Preparation for Training

In addition to completion of requirements for scheduling study training, site study staff will carry out other activities to prepare staff for study training and, ultimately, the conduct of the study. Under the supervision of the IoR or other designated staff member(s), the site staff should:

- Hire staff (if needed)
- Designate site study staff team and assess local training needs
- Provide orientation and background training locally, as needed, including:
  - Local staffing and organizational plan (including roles and responsibilities)
  - Local site operations
  - Local role-specific training and certification
  - Other local requirements

Complete "mock visits" using study implementation materials, ideally in clinic and laboratory facilities that will be used for the study

Review and become thoroughly familiar with the study protocol, informed consent documents, case report forms (CRFs), training materials, other study implementation materials (i.e. Study Specific Procedures {SSP}or other Manuals), and site Standard Operating Procedures (SOPs)

Review and become familiar with the study-specific specimen management plan and the "chain of custody" for study samples

Discuss and develop SOPs (as needed) and other local study implementation materials

Identify questions, issues, and problems requiring training team input

Guidelines for Scheduling HPTN Study-Specific Training (based on Study Site Activation Requirements)	
To be completed prior to scheduling study-specific training:	
1	Current Federal Wide Assurance number in place for the study site institution(s)
2	Completion of US FDA 30-day review period/safe to proceed notice (if applicable)
3	Local regulatory authority approval of the study protocol (if applicable)
4	Signed Clinical Trials Agreement (CTA) (if applicable)
5	Hiring of adequate staff prior to training (as determined by the site/protocol team)
6	Documentation of current HSP training for all key site personnel
7	Documentation of current GCP training by all key site personnel
8	Pharmacy Establishment Plan and approval from DAIDS Pharmaceutical Affairs Branch (PAB) (if applicable) • Well-developed draft SOP for product management and accountability • Pharmacist training as deemed required by PAB and team • Draft plan or SOP for specific requirements for particular study agent • Draft plan for regimens and administration • Draft product prescriptions
9	All import approvals for study products (if applicable)
10	All export approvals for study products (if applicable)
11	• SDMC confirmation of adequate preparation for training based on the following: • Any required data management certification (e.g. Medidata) • Well-developed draft SOP for data management, including data QA/QC procedures (final version required before activation, a well-developed draft must be available before training) • Well-developed draft SOP for randomization, if applicable • Availability of SDMC-provided electronic data management system or required data management materials onsite, well-developed draft translated versions, if required

Guidelines for Scheduling HPTN Study-Specific Training (based on Study Site Activation Requirements)	
12	LC confirmation of adequate local laboratory readiness based on the following: • Draft specimen management plan and draft chain of custody of study samples (final versions required prior to activation) • Well-developed QC/QA procedures • Protocol-specified test validation • Well-developed protocol-specified SOPs (final versions required before activation) • Local laboratory backup arrangements • LDMS set-up and internet connectivity to FSTRF • IATA specimen shipping certification, if applicable • GCLP training for appropriate laboratory staff • Clinical Laboratory Improvement Amendments (CLIA) accreditation for US laboratories/ clinics, or Proficiency in performing protocol-required tests for global laboratories
13	Clinical Site Monitor study initiation visit (if applicable; OCSO makes the determination)
14	Draft SOPs for the following: • Communication with responsible Institutional Review Board/Ethics Committee (IRB/EC) • Source documentation • Obtaining informed consent from potential study participants • Participant eligibility determination • Participant safety monitoring and Adverse Event (AE)/Serious Adverse Event (SAE) reporting/ Suspected Unexpected Serious Adverse Reaction (SUSAR) (if applicable) • Participant accrual plan (SOP or plan) • Participant retention plan (SOP or plan) • Communication with affiliated sub-sites, if applicable • Regulatory Inspection (if applicable) *Note: Final versions of these SOPs are required for site activation. Well-developed draft SOPs (as determined by the LOC CRM) must be in place prior to study-specific training. Finalization may occur shortly after study-specific training.*
15	Other documents and approvals as needed (site- and study-specific) including site-specific SOPs
16	Study staff signature sheet, roster, and delegation of duties *Must be reasonably complete; finalization may occur shortly after study-specific training.*

Guidelines for Scheduling HPTN Study-Specific Training (based on Study Site Activation Requirements)	
17	Complete protocol registration package including: • US and in-country IRB/EC approvals of protocol and approved informed consent forms (local language and back-translation, where applicable) • Signed FDA Form 1572 or DAIDS Investigator of Record Agreement • Current (signed within 2 years) Curriculum vitae of the IoR
18	SSP manual or draft SSP manual for use as a reference during training emailed to the site. *Note: Each section of the SSP must be well-developed for this training version.*
19	Resolution of action items identified during Clinical Site Monitor's site initiation visit *Note: Acknowledgment from DAIDS of resolution of any significant action items identified during the Clinical Site Monitor's site initiation visit.*

Expectations of site study staff prior to study-specific training include:

- Work with LOC CRM/SDMC CDM/LC to plan training and finalize agenda
- Work with LOC CRM to identify and meet translation and interpreter needs
- Work with SDMC CDM to identify data management systems to be used for the protocol and key staff responsible for implementation
- Arrange access to training rooms and any required equipment
- Arrange staff backup for staff who will attend training sessions

11.4.3 Implementation of Study-Specific Training

Onsite training conducted with representatives of the LOC, SDMC, and/or LC (and other team members such as the Protocol Chair(s) as necessary) as trainers is the standard for pre-study training. However, other alternatives (i.e., teleconferencing, video conferencing, regional training, or working closely with the site staff to present the training) are possible in cases where circumstances (limited resources, travel difficulty, or experienced local staff) make onsite presence impractical. Regardless of the training strategies employed, the Protocol Chair(s), LOC, SDMC, and LC are responsible for providing the agenda (developed with input from study staff at the site) and supporting training materials. A sample study-specific training agenda is provided in this section.

Ideally, all site staff members who have been delegated duties or responsibilities for a study will take part in study-specific training. This includes the IoR, the study coordinator, clinical staff (physicians, clinicians, and nurses), counseling staff, pharmacy staff, laboratory staff, data management staff, participant recruitment and retention (outreach) staff, community education staff, and administrative staff who will be involved in conducting the study. The site QA/QC coordinators also should take part.

Sample Agenda for HPTN Study-Specific Training		
Session/Module Topic	**Suggested Presenter/Facilitator**	**Expected Site Staff Attendance (minimum)**
General welcome and introduction	Protocol Chair(s) and/or Site Principal Investigator (PI) or IoR or designee	All staff
Introduction of training attendees	All	All staff
Overview of training agenda and materials	Site designee, LOC	All staff
Previous research and scientific rationale for study	Site PI/IoR	All staff
Protocol overview, group question & answer, rationale for study retention targets (optional)	Protocol Chair, site PI/IoR, LOC	All staff
Data collection overview/introduction to data collection instruments and tools, IoR CRF signoff, data query management, randomization procedures, and study reports	SDMC	Relevant staff and supervisors
Study documentation requirements, study-specific GCP/quality management issues and plans	LOC, site QA/QC coordinator	All staff
Visit-specific review of study procedures and data collection	LOC, SDMC, site designee	All staff
Interviewing and behavioral data collection strategies	Behavioral scientist associated with protocol team or site	Relevant staff and supervisors
Laboratory procedure review including specimen management plan and chain of custody	LC and site laboratory designee	IoR, the study coordinator, clinical staff, laboratory staff
Clinical procedure review	Protocol chair, site PI, LOC or designee (i.e., clinical expert)	IoR, the study coordinator, clinical staff (physicians, clinicians, nurses)
Investigational product management and accountability	DAIDS Protocol pharmacist	Relevant staff and supervisors
Documenting and reporting AEs/SAEs	LOC, SDMC	All staff
Study-specific and/or local counseling procedures	LOC, protocol team or site designee	All staff
Participant accrual and retention plans	Site designee, LOC	All staff

Sample Agenda for HPTN Study-Specific Training		
Session/Module Topic	**Suggested Presenter/Facilitator**	**Expected Site Staff Attendance (minimum)**
Study visit scheduling and visit windows	SDMC	All staff
Unblinding (if applicable)	LOC, SDMC	All staff
Other relevant site plans and procedures	Site designee	TBD
Mock study visit exercise	All	All staff
Final gathering to resolve outstanding questions/issues, presentation of certificates	All	All staff
Optional Sessions		
Network overview/update	LOC	All staff
Role of Community Advisory Board (CAB)/site community involvement plan	Site community program coordinator, CAB representative	All staff
Research ethics/human subjects protection	LOC, Site PI/IoR or designee	All staff

During training, site study staff are expected to:

- Present training modules as agreed upon with the training team
- Present local plans, SOPs, requirements, etc.
- Attend all required training sessions
  - All site study staff are invited and encouraged to attend all sessions/modules
  - All site study staff are expected to attend sessions designated for "all staff"
  - Site study staff members must attend relevant role-specific sessions

    Note: Failure of study staff to attend required training sessions typically will delay site-specific study activation, as additional training will be required before study activation can be approved. Therefore, every effort should be made to avoid absences from required sessions.
- Fully engage in the training; ask questions; identify issues requiring additional clarification; identify best site-specific study implementation plans, materials, and tools.

11.5 Continuing Study Training

LOC, SDMC, and LC staff will make all study-specific training materials available to the sites in hard copy and/or by posting them on the study-specific website and/or study collaboration portal to be used to train study staff hired after the initial training.

It is the responsibility of the CTU/CRS/IoR to ensure and document that new staff members are adequately trained and prepared to serve their study roles. LOC, SDMC, and LC staff members do not routinely travel to sites to train newly hired staff following the initial onsite study training.

However, LOC, SDMC, and LC staff will make every effort to be available to answer questions and provide technical assistance to new study staff members. The LOC, LC, and SDMC will be available to participate in one or more training sessions via teleconference, if requested by the site. If a new study coordinator or lead study clinician joins a site after the initial study-specific training, LOC, SDMC, and LC staff may consider making a site visit to assess study implementation soon after the new staff member begins work on a study.

Once a study is underway, LOC, SDMC and LC staff issue study-related communications, answers to frequently asked questions, and other similar documents to guide study implementation at each site (see Section 12.4). Study staff will file such documents with other study implementation materials (e.g., in the SSP Manual) as well as add such materials to the training packet. Study sites are responsible for establishing SOPs for alerting staff to the release of these documents, providing training on all study documents (including updates), as needed, and incorporating their content into day-to-day study operations. All issued content from the LOC, SDMC and the LC will be posted on the website (specific to that study) or study-specific web collaboration portals.

When it is necessary, LOC, SDMC, and LC staff, as applicable, will provide study-specific "refresher" training to site staff in the context of routine site visits and/or other HPTN meetings (e.g., annual meeting) or on regular team calls. Methods such as videotapes of previous training sessions, or teleconference and/or web-based training may also be options for continuing training.

11.6 Research Ethics Training for Community Representatives

The FHI 360 Research Ethics Training Curriculum for Community Representatives was designed to educate community representatives about their roles and responsibilities and inform community representatives, members of research teams, CABs, and research ethics committees, about the general principles of research ethics. It also reviews the need for ethics committees, their importance, and the roles and responsibilities of community representatives in the research process. The curriculum includes easy-to-use materials, such as slides, case studies, activities, facilitator notes, as well as an ethics training certificate.

Community education staff, community advisors and partners are encouraged to complete this training.