Module 1: Principles of Viral Load Monitoring

Time: 60 minutes

Session Objectives
By the end of this session, participants will be able to:
- Understand the dynamics of viral load during the course of HIV infection
- Understand how viral load affects risk for transmission and progression of HIV
- Explain how viral load responds to antiretroviral therapy
- Identify treatment failure using viral load
- Describe schedule of viral load testing

Session Overview

- Understanding Viral Load
- Viral Load and HIV Infection
  - Disease Progression
  - Disease Transmission
- Viral Load Measurement and Reporting
- Viral Load Response to ART
- Treatment Failure
  - Criteria
  - Routine and Targeted Viral Load Monitoring
- Schedule of Viral Load Monitoring

Materials Needed
- Slides
- Adult Counseling Flipchart

45 minute Lecture
Trainer will:
- Explain the concept of viral load
- Describe how viral load relates to HIV infection, including:
  - How viral load changes according to disease progression
  - How viral load affects disease transmission
- Discuss how to measure viral load and interpret results
- Describe how viral load responds to ART
- Explain the definition of treatment failure, including:
- Describe the criteria used for treatment failure
- Explain the difference between routine and targeted viral load monitoring
  - Introduce data that supports adherence counseling improving suppression of viral load and importance of enhanced adherence counseling.
  - Discuss the schedule of viral load monitoring for children and adolescents, pregnant or breastfeeding women, and adults.
  - Discuss the role of CD4 count testing.

### 10 minute Activity
**Activity: Knowledge Assessment**
Facilitator will conduct a 3-question knowledge assessment with the participants.

### 5 minute Wrap-up
Key points to emphasize in summary:
- Viral load predicts progression of disease in an individual, and onward transmission of HIV to sex partners or from mother to baby
- In most individuals, viral load will drop to below levels detectable by viral load blood tests after 6 months of ART
- Viral load testing is the preferred method for detecting treatment failure for ART patients and should be checked after 6 months on ART
- Viral load <1000 copies/ml indicates acceptable response to ART
- Virologic treatment failure: persistent (2 or more VL test results >1,000 with the initial test being performed >6 months on ART and the 2nd test performed after adherence counseling and a minimum of 3 months of good adherence)

### Methodologies
1. Lecture
2. Activity: Knowledge Assessment

### Advance Preparation for Trainers
- Trainer must update slides 26, 27, and 28 with the schedule for routine viral load monitoring according to their country’s national guidelines.