

## **Triangulation: Concept Brief**

The purpose of this document is to provide an overview of triangulation, a description of the triangulation process in-country and an estimation of timeline and resource needs.

### **Triangulation as a Tool for Data Use & Capacity-Building**

Triangulation is a shorthand term for synthesis and integrated analysis of data from multiple sources for program decision-making. It is a powerful tool that can be used to demonstrate program impact; identify areas for improvement; direct new programs and enhance existing programs; and help direct policy changes. Triangulation can strengthen the understanding of complex health issues and provide support for making evidence-based public health decisions.

Broadly, triangulation has been used in the field of HIV/AIDS to map surveillance data onto programmatic data in order to document the location of the epidemic in a country in relation to distribution of programs and services, including care, treatment and prevention. Triangulation methods have been used on an international scale in Africa and Asia, in a review that mapped interventions and resources within the context of various types of epidemics as a way of demonstrating needed shifts in resource allocations for interventions and to link evidence-based interventions to epidemic type (Wilson, 2006). In addition, triangulation methods were used to map surveillance data with prevention data in Indonesia, to identify the match between the distribution of prevention services and trends in the epidemic to support evidence-based decision-making (Pisani, 2003).

Recently, CDC, UCSF, WHO & UNAIDS collaborated with Botswana and Malawi to broaden the focus of triangulation to include a strong in-country capacity-building focus and process, with the following components:

- formation of an in-country task force to guide the identification of priority evaluation questions within the country context of existing strategic information activities, systems & priorities
- twinning of UCSF data analysts with in-country data analysts to work side-by-side to synthesize and analyze data, building in-country capacity for future data synthesis and use work
- a large stakeholder meeting with strategic information and program and policy experts to disseminate findings, discuss use of findings, and identify gaps for future data synthesis work

The goal of this approach is twofold: to conduct data triangulation to answer key questions driven by country needs; and to build the long-term in-country capacity for use of data from multiple sources, to provide an evidentiary basis for program and policy decision-making.

## Triangulation Process

The triangulation process, as outlined below, is best planned over a 4-6 month period; the approach can be tailored according to country context and needs:

- ***Planning for Triangulation***
  - **Roles:**
    - Led by National AIDS Commission (NAC) and Ministry of Health (MOH) point persons, in collaboration with representatives from key government and agency stakeholder groups
    - Facilitated by UCSF team, comprised of principal investigator (PI), project director (PD), data analysts & administrator
  - **Process:**
    - Assemble task force to guide triangulation process in country
    - Identify country point people for implementation
    - Convene stakeholder meeting, including representatives from governmental and non-governmental agencies working in SI, program, and policy, to identify and prioritize key questions based on country context
    - Ensure questions are answerable/actionable
    - Identify data sources and gather additional background information
    - Refine evaluation questions as needed
    - Draft and submit internal review board documents
- ***Conducting Triangulation:***
  - **Roles:**
    - Implemented by in-country data analysts twinned with UCSF data analysts, under guidance and direction of the task force and with guidance from the UCSF PI & PD
  - **Process**
    - Gather data/reports
    - Make observations from individual data sets
    - Note trends across data sets & develop hypotheses to answer key questions
    - Check hypotheses and identify additional data to be captured
      - Note evidence that supports/refutes
      - Identify and gather more data, as needed
      - Select most promising hypotheses

- Summarize findings & draw conclusions
  - Draft report
- ***Communicating Triangulation:***
  - **Roles:**
    - Facilitated by in-country data analysis team and the UCSF team, under the direction of the task force
  - **Process:**
    - Re-convene large stakeholder meeting, including representatives from governmental and non-governmental agencies working in SI, program, and policy
    - Present results and recommendations
    - Identify opportunities for data use related to programming of services, policy making & sharing of findings with implementing partners
    - Outline next steps based on findings
    - Ensure ongoing support

### **Resource Requirements**

The resource requirements to conduct triangulation vary considerably in country context. The following are resource needs to consider:

- ***Staffing (percentage time for 4-6 months):***
  - ◆ In-country project coordinator
  - ◆ In-country data analysts
  - ◆ Support staff
  - ◆ External consultants
- ***Travel & Accommodations / Per Diem***
  - ◆ In-country for participants to attend stakeholder & task force meetings
  - ◆ External consultants
- ***Venues (stakeholders meeting / dissemination)***
  - ◆ In-country travel for participants
  - ◆ Accommodations / Per Diem
  - ◆ Report production/ dissemination