STRATEGIES USED BY USG COUNTRY TEAMS FOR DEALING WITH DOUBLE COUNTING OF INDIVIDUALS AND SITES

A REVIEW

MEASURE Evaluation
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Introduction

The Office of the Global AIDS Coordinator (O/GAC) has invested substantially in improving results reporting so that the monitoring and evaluation of the President's Emergency Plan is based on valid and reliable data. Experience to date points to "double counting" as a particularly important data quality problem that can be detrimental to program planning and data-driven decision making. Double counting results in over-reporting (i.e. reporting more services or beneficiaries than were actually provided or served). It occurs when a partner or the program as a whole mistakenly counts an eligible person or event more than once during a reporting period, thereby inadvertently inflating the report of program results. Over-reporting of program results in turn will over-estimate program coverage and achievements, undermining the ability of decision-makers to determine which programs are worth scaling up, where coverage gaps exist, and how best to appropriately target interventions to address those gaps. Consequently, during preparation of the Semi Annual and Annual Program Reports to O/GAC the Emergency Plan USG country teams spend considerable efforts to adjust the reports of Implementing Partners for potential double counting.

Double counting occurs in a variety of forms: when the same individual beneficiary is counted more than once by the same partner, when the same individual is counted for the same service by two or more different partners, or when the same service site is counted by two or more different partners. These types of double counting are discussed in greater detail below. However, there is no central guidance to identify the extent of double counting and/or to standardize adjustment procedures across different country programs.

Purpose of This Review

This review describes approaches that USG SI teams have taken to deal with double counting in reporting under the President's Emergency Plan. Each approach is described in detail, including its strengths and weaknesses and special considerations in its application. Case examples are also provided.

Methodology

MEASURE Evaluation compiled the information for this report between February 2008 and March 2009, by conducting an extensive literature review, surveying country-based USG SI teams, and consulting other experts.

First, we conducted an extensive literature review of double counting of performance indicators faced by other health and non-health programs. We also examined other tools developed by MEASURE Evaluation to determine their applicability for preventing or assessing double counting and held an expert consultation meeting to gather suggestions and input from other specialists.

Next, we attempted to interview SI liaisons in all 31 PEPFAR countries to get the range of solutions to various types of double counting. With the support from the PEPFAR Monitoring & Evaluation Technical Work Group, USAID and HHS/CDC, in-country offices were contacted by email, notifying them about the upcoming survey and requesting their participation. We sent a questionnaire to the country SI liaisons and followed up with a phone interview to obtain additional information and clarity on the answers given to the questionnaire. In all, we collected information from 15 PEPFAR countries, representing all regions and a variety of PEPFAR programs. Eight of the 15 countries involved in the study were PEPFAR focus countries.

Findings from Literature Review

We conducted an extensive review of online publications and discussions about double counting, data inflation, or over-reporting of other health and non-health programs. We consulted several M&E Web sites and searched their databases for any references to our search terms. We found only limited information on this topic. Some of the materials described methods which were inappropriate for the PEPFAR service delivery context (e.g., statistical methods used for analyzing scientific data) or described approaches which were already in use, for example the unique identifier approach.

We also reviewed MEASURE Evaluation activities to identify tools which USG teams may have used or could potentially use for dealing with double counting. Two activities were especially informative: the Coverage-Plus study conducted in Asia, and the Data Quality Assessment tool, which is described in a later section.

Coverage-Plus study: The Coverage-Plus study was conducted between 2005-2006 by local research organizations with support from MEASURE Evaluation and the Population Council. It was designed to assess the availability and use of at least a minimum package of HIV prevention services for most-at-risk populations in the Mekong region (China, Laos, Myanmar and Thailand). The study attempted to identify all organizations providing services targeted to female sex workers, men who have sex with men, and/or injecting drug users. Project record keeping systems were reviewed and staff interviewed, and interviews were conducted with representative samples of persons who had received services from those organizations.[1]

Many project managers surveyed reported that they simply summed contacts in order to obtain client numbers. However, the client survey found that the median number of contacts with the program ranged from two to eight contacts in the last year, depending on population and site. VCT users made on median one to two contacts in the last year for most sites. Thus, simply summing contacts over the reporting period was likely to result in over-estimates of number of clients served. Other managers attempted to adjust the number of contacts, but had limited justification for the adjustment factor used.

Some managers calculated the number of individuals served by attempting to distinguish between new and repeat clients (only "new" clients were counted in the tally of individuals served). The accuracy of this classification depended on how the service was delivered. Recording clients worked best when services were delivered at fixed sites such as VCT clinics or drop-in centers using patient medical records or membership cards. Monitoring the number of clients served was most difficult where services were provided through community outreach. Some organizations asked clients whether or not they had had a previous outreach contact, with mixed success.

A second challenge detected in the client interviews was that some clients received the same service (i.e. VCT, community outreach) from more than one organization in the same reporting period. For example, in one site more than half of the users of one drop-in center had also used another drop-in center, and one-in-five VCT users had received VCT services from more than one organization. This is not an issue with provision of services—many services should, in fact, be delivered repeatedly to the same client. The reporting issue arises if overlap between USG implementing partners is not considered; summing the number of clients who have received a particular service across partners will overestimate the total number of clients served.

Data Quality Assessment: Data quality assessments are designed to verify the quality of a program or organization's reported data and assess the underlying data management and reporting systems for standard program-level output indicators. Two versions of the tool have been developed: the Data Quality Assessment (DQA) tool, designed for use by external audit teams, and the Routine Data Quality Assessment Tool (RDQA), a simplified version of the DQA, designed for programs to audit themselves. Both include a procedure to track counts of

[1] Ruth Bessinger, personal communication, March 3, 2008. Also, *The availability and use of a minimum package of HIV-prevention Services: Injection Drug Users & Men Who Have Sex with Men*, Mahidol University, Bangkok, Thailand, April 2007 (http://www.ipsr.mahidol.ac.th/ipsr/Contents/Books/FullText/2007/CoveragePlus-EN.pdf).

people served back to the original client records and cross-check the numbers against other data sources. If more people are reported than have records in the files, the indicator is considered to be over-reported; if there are more records in the files than are reported, the indicator is considered to be under-reported. Double counting the same beneficiary is one possible cause of over-reporting; data entry errors are another.[2] Strategy #4 later in this report provides additional information on using data quality assessments to address double counting.

Types of Double Counting

The PEPFAR Data Quality Assurance Tool lists four types of double counting, three of which are discussed below.[3] They include within-partner double counting of individuals (Type I), between-partner double counting of individuals (Type II), and double counting of sites (Type III).

Type I: Within-Partner Double Counting of Individuals

One partner at one site provides the same service (training, treatment, care, etc.) multiple times to the same individual within a single reporting period and counts the individual multiple times in the report for that period.

Example 1: An implementing partner provides palliative care services to HIV-positive individuals. In its report, the partner counts the number of palliative care visits made to the site during the reporting period instead of the number of unique individuals who received palliative care services during this period. Since the same individual may visit the same site more than once during the reporting period, the partner may over-report (double count) the number of individuals served.

Example 2: A prevention program employs several peer educators to provide counseling to sex workers. Each peer educator maintains her own monthly report. Several sex workers receive counseling from multiple peer educators within the same program and during the same reporting period. When the monthly reports submitted by the peer educators are added up those sex workers who received counseling from more than one peer educator are double counted, thereby inflating the number of sex workers who received peer education.

Type II: Between-Partner Double Counting of Individuals

Two or more implementing partners provide the same service (prevention, treatment, care, etc.) to the same individual either at the same site or at different sites within one reporting period and both partners include that individual in their count of number of clients served.

Example 1: Partner A pays for staff salaries at an ARV treatment site. Partner B provides quality assurance assistance at the same site. At the end of the period, both partners report all individuals treated at the clinic as "number of individuals receiving ART." If the USG/SI team is not aware that the individuals counted as receiving ART from partner A are the same individuals counted as having received ART from partner B, the individual clients will be counted twice in the reporting period as receiving ART.

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[2] Double counting is also possible even if the indicator is under-reported, if the number of people counted more than once is less than the number of people who were not counted at all.

[3] Data Quality Assurance Tool for Program-Level Indicators, January 2007, USAID. We do not discuss Double Counting Type IV (overlap of upstream and downstream support) because PEPFAR 2009-2013 will no longer collect data on "upstream" or "indirect" targets or results.

Example 2: One reporting partner provides AB prevention outreach messages at site #1 on the East side of the city. Another reporting partner provides AB prevention outreach messages at site #2 on the West side of the city. Individual X visits the East side site #1 in January and participates in an outreach session. The same individual X visits the West side site #2 in February and participates in an outreach session.

In their reports of the "total number of individuals reached through community outreach that promotes HIV/AIDS prevention through abstinence and/or being faithful," both the East side and the West side sites count individual X. When East side and West side sites are combined, individual X is counted twice for receiving community outreach that promotes HIV/AIDS prevention through AB in the same reporting period.

Type III: Double Counting of Sites

Different partners provide different supplies and/or services to the same organization within one reporting period and each partner counts the organization as one of its service points.

Example 1: Partner A provides M&E training to providers at the Crossroads Blood Safety Site. Partner B provides blood safety equipment to the Crossroads Blood Safety Site. When reporting on the "number of service outlets carrying out blood safety activities" both partner A and partner B count the Crossroads Blood Safety Site.

Unless the USG/SI team knows that each partner has reported the same blood safety site, the site is double counted and thus the number of blood safety sites is inflated.

Findings from Field Interviews

There was a general consensus among USG/SI teams that most double counting occurs in the program areas of Orphans and Vulnerable Children (OVC), Palliative Care, TB, and Prevention Services. While almost all of those we interviewed admitted that double counting was a concern, they also explained that they were equally or more concerned with other data quality issues such as attribution of program results to USG interventions or the quality of national-level data when multiple donors report on the same indicators to the national program.

In the next section we describe several strategies used by USG SI country teams to reduce or correct double counting of individuals and sites. Most teams used a combination of approaches to address double counting issues.

1. Separating Partners Geographically and/or Programmatically

All countries surveyed reported that they separated implementing partners geographically and/or programmatically to maximize program coverage and reduce duplication of effort. This strategy has the added benefit of minimizing double counting of individuals and sites between partners. For example, Partner A provides clinical care to HIV-positive adults in Region X while Partner B provides similar care to HIV-positives in Region Y. Alternatively, Partner A provides clinical care to HIV-positive adults in Region X while Partner B provides food and other nutrition services in the same region.

Separating implementing partners *geographically* will reduce Type III (double counting of sites) but it will not completely eliminate Type II (double counting of individuals between programs). Some beneficiaries may move between geographic areas and receive services from more than one partner, thereby being double counted during aggregation. Separating partners *programmatically* will eliminate Double Counting Type II because partners providing different services report on different indicators.

National governments often adopt a geographic focus as well and assign different donors to different regions of the country. The decision to assign different implementing partners to different geographic or program areas should be based on programmatic or epidemiological grounds rather than to reduce double counting or other data issues.

Case Example 1: Implementing Partner Management in South Africa

In their questionnaire, USG/South Africa noted that "lack of [inter-partner] coordination is a major cause of double counting or redundancy." To improve coordination, South Africa recently implemented geographic partner management. Under the old system, USG staff were assigned to individual partners and managed activities everywhere the partner worked. Under the new system, USG staff are assigned to a specific geographic area (province/district) and manage all partners and program areas working in that area. USG/South Africa believes that "this shift should lead to a more precise coordination of partner activities 'on the ground.'"[4]

Strategy	**Geographic/Programmatic Separation of Partners**
Type(s) of double counting	Type II and III
Strengths	▪ Easy to implement ▪ No additional resources required
Limitations/challenges	▪ Double Counting Type II remains a risk ▪ Geographic/programmatic separation may not be sound strategically

2. Unique Identifiers for Individuals

The most reliable approach to avoid double counting of individuals is to assign clients or program beneficiaries with a unique identification number. This approach can be employed with either paper-based or computer-based monitoring systems. Unique identification of individuals offers several benefits to programs and clients. It allows a program to monitor the number of clients served instead of the number of client contacts, to evaluate patient outcomes, and to make management decisions. For clients, presenting an identification number rather than giving their name provides a measure of confidentiality so that they can access services without fear of discrimination or fear of disclosure to family, friends, and community members.

Tracking individuals by a unique identifier does pose logistical and data collection and processing demands on the service provider. In practice, unique identifiers function best when the program uses electronic records and when services are offered at fixed sites such as ART clinics, VCT sites, or drop-in centers which provide ongoing client services or referrals and maintain individual client records. It is more difficult to assign unique identifiers to clients in community outreach programs that do not necessarily involve ongoing services to the same individuals.

[4] From completed questionnaire.

Furthermore, unique identifiers assigned by the implementing partner do not guard against Type II (double counting individuals between programs) and require clients receiving different services from different partners to maintain multiple identification records. In theory, it would be possible for all partners to adopt a common identifier for their clients, but it could be difficult to put this into practice unless an external system such as national identity numbers are used (which poses other privacy issues).

The case examples featured below describe two novel approaches for creating unique identifiers for program beneficiaries to reduce double counting of individuals within the program and between partners.

Case Example 2: Working with Hidden Populations in Asia

The USAID-funded Drug Demand Reduction Program (DDRP) in Central Asia (2002-2007) served injection drug users, sex workers, and men who have sex with men. Because multiple partners provided services, a common client code was needed that programs could easily assign and clients could easily remember, while at the same time protecting client confidentiality. The following Unique Identifier Code (UIC) system was adopted:

- First two letters of mother's first name
- First two letters of father's first name
- Gender (single letter M/F or number 1/2)
- Year of birth (last two digits)

A statistical exercise determined that the likelihood that two or more individuals would wind up with the same code was less than 2%. However, in cultures using patronymic naming systems and/or polygamous marriages, the likelihood of duplicates rose. A social research organization was called in to design a proxy code for these individuals. The UIC system was eventually adopted by all DDRP partners and sub-grantees in Kyrgyzstan, Tajikistan, and Uzbekistan, including more than 40 NGOs.[5]

[5] More information on this approach can be found in "Unique Identifier Code: USAID-Funded Drug Demand Reduction Program in Uzbekistan, Tajikistan, and the Ferghana Valley Region of Kyrgyzstan," 2007, by the Alliance for Open Society International. The publication can be found on the web at http://www.aidsprojects.com/uploads/File/UIC_Eng(1).pdf

Case Example 3: OVC programs in Ethiopia

In Ethiopia, OVC programs are implemented by international NGOs, who in turn manage local NGOs, who direct CBOs who provide the actual services. A four-part coding system is designed as follows:

Part 1: International NGO (one digit)
Part 2: Local NGO (two digits)
Part 3: CBO (three digits)
Part 4: Child ID number (assigned consecutively)

For example, ID Code of 1 02 001 45 means the 45th child registered by CBO 1 under the local NGO 2 partner of International NGO 1 (Save the Children/USA).

Partners also keep beneficiary names and crosscheck their records to reduce Double Counting Type II (between partners).

Electronic Health Records (EHR) rely on unique identifiers. First developed for treatment programs, EHR systems merge information from multiple service points such as outpatient consultation, laboratory, pharmacy, etc. They can increase provider efficiency, reduce costs, and promote standardization of care. At the same time, safeguards must be in place to protect privacy and client confidentiality and to back up records, update software, and synchronize results. EHR can be further enhanced by providing clients with smart cards containing their identification number for automated sign-in and even back-up of their clinical records.

Case Example 4: International Quality Solutions (IQSolutions)

IQSolutions, designed by the PEPFAR AIDSRelief program, is a set of software tools for patient care, clinic management, and site reporting. The applications create client records or can be linked to any other electronic system that uses unique client identifiers; they generate information which can be used by clinicians to track client treatment, schedule appointments, and follow up on problems; as well as to generate reports for donors and governments and for facility management. AIDSRelief has installed IQSolutions tools in seven countries in Africa and the Caribbean, including over 100 facilities in Africa.[6]

[6] http://www.futuresgroup.com/software/iq-solutions/

Case Example 5: Using electronic health cards in Zambia

In Zambia, HHS/CDC has been collaborating with the Zambian government to create an electronic medical records system called SmartCare. Clients carry electronic cards and clinical records are updated directly in the computerized system. The system supports all aspects of HIV treatment, produces PEPFAR reports, and allows de-identified data sets to be merged at the district, province, and national levels. SmartCare has been deployed to more than 200 clinics in all parts of the country for almost 250,000 registered patients.[7]

Strategy	Unique Identifiers for Individuals
Type(s) of double counting	Type I Type II (if a common code is agreed to by all partners)
Strengths	▪ Prevents double counting of individuals at source ▪ Contributes to quality of care ▪ Works with both paper-based and electronic-based monitoring systems
Limitations/Challenges	▪ Privacy and confidentiality concerns ▪ Works best for facility-based services

3. Unique Facility Identifiers

Indicators which involve counts of facilities are vulnerable to Double Counting Type III (double counting of sites). Only two essential indicators in the Next Generation Indicator Guide use routine program data to measure the performance at the facility level. There are another five recommended (level 3) facility indicators based on routine program data, as shown in Table 1. The remaining facility-level indicators are based on intermittent or special surveys, such as the Service Provision Assessment or Service Availability Mapping, which are not vulnerable to double counting errors.

[7] http://www.dimagi.com/content/smartcare.html

Table 1. PEFPAR Facility-level Indicators Based on Routine Program Data

Essential/Reported to HQ	
H1.1.D	Number of testing facilities (laboratories) with capacity to perform clinical laboratory tests
H1.2.D	Percent of testing facilities (laboratories) that are accredited according to national or international standards
Recommended	
P5.3.D	Number of locations providing MC surgery as part of the minimum package of MC for HIV prevention services within the reporting period
P8.4.D	Number of targeted condom service outlets
P10.1.D	Number of enterprises implementing an HIV/AIDS workplace program, providing at least one of the four critical components
C2.7.N	Percent of ART sites that have pain management programs
T1.5.D	Number of health facilities that offer ART

Most public (i.e. government) health facilities are already uniquely identified at the national level by the national program. Non-government and private facilities and pharmacies that are registered with the government may also have government-issued identification numbers. Whenever possible, USG teams should use existing unique national level site naming conventions for record-keeping and reporting. If there is not an established national unique naming convention for health facilities, then the USG should advocate for the development and use of national Unique Facility Identifiers (UFI). In addition, some types of "non-traditional" facilities, such as condom outlets and workplaces, may fall outside national registers and require their own unique identifiers.

Several factors need to be considered when developing Unique Facility Identifiers. First, it is important that a standard definition of the term "facility" is used, preferably that distinguishes between various types and sub-types. Common examples of facility types are hospitals, clinics, health posts, community health centers, and physician offices. Second, a common standard or structure for numbering the facilities should be followed throughout the country (not strictly required to avoid double counting, but useful for data analysis). Third, procedures for maintaining and updating the numbering system must be put in place as facilities merge, close, or as administrative divisions change.[8]

[8] See "Facility Identifiers, a candidate for standards?" by the Canadian Institute for Health Information, March 1998.

Case Example 6: Integrated Service Mapping in Tanzania

For the last few years, MEASURE Evaluation has produced maps for USAID/Tanzania to show where PEPFAR-supported service outlets are located and their volume of services. The maps are based on results reported by Implementing Partners at the semi-annual and annual reviews, as entered into the USG database. At the Mission's request, each PEPFAR program area (e.g., ART, PMTCT, VCT) was presented on a separate map.

In June 2009, MEASURE Evaluation drafted an integrated map that merges all PEPFAR program areas and facilities. The map shows not only where facilities are located, but also which facilities offer multiple PEPFAR-supported services. In compiling the data for the integrated map, it was found that 36% of the sites had been listed under two or more different names in the databases for different program areas. This does not affect results reported separately by program area, but it does pose a problem for future reporting of integrated health system results.

MEASURE Evaluation recommended that the SI team coordinate with the Tanzania *Mapping Task Force,* which has been charged with developing a complete geo-coded list of all health facilities in country, and assign unique identifiers for PEPFAR-supported sites to be used by all IPs and for all program areas. This will eliminate double counting of facilities offering multiple services supported by PEPFAR. It was also recommended that MEASURE Evaluation retrospectively recode the facilities in the USG database.

Strategy	**Unique Facility Identifiers (UFI)**
Type(s) of double counting	Type III
Strengths	▪ Facilitates data analysis and use ▪ Enables comparison between sites over time
Limitations/Challenges	▪ Requires consistent application across jurisdictions ▪ Common standard for classifying and identifying health facilities must be available ▪ Constant and standardized maintenance/updating of numbering scheme

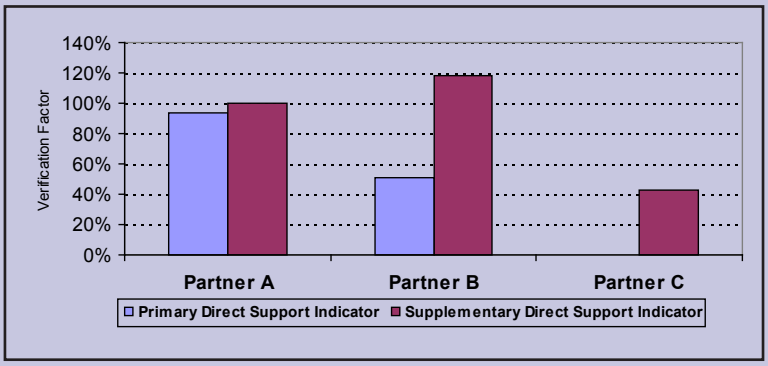
4. Using Data Quality Assessments

Data Quality Assessments verify the quality of reported indicators at selected sites and assess the data management system used to collect, manage, and report quality data. While the tool cannot precisely quantify double counting, a few countries have used the "trace and verify" protocol to assess the reported figures from the implementing partners before they are reported to Washington. The country usually uses an outside auditor who conducts site visits to the local implementers and verifies the numbers reported to the Mission. Reporting performance is represented as the ratio of verified number to the number reported. A verification factor of above 100% (more verified cases than reported) implies under-reporting by the organization, while that below 100% (more reported cases than verified) means over-reporting. Not all of the over-reporting may be due to double counting of individuals, however. Some may be due to data entry error, errors in aggregation, or technical problems. Once under- or over-reporting has been documented, further steps can be taken to trace the root cause and then correction. The case example that follows describes how RDQA was implemented in Tanzania, findings, and what corrective actions should be implemented.

Case Example 7: RDQA in Tanzania

USAID/Tanzania directed MEASURE Evaluation to conduct Data Quality Assessments with 10 IPs and selected sub-grantees for the reporting period October 1, 2007 – March 31, 2008. This included reviewing log books, registers and other source documents to verify reported numbers and cross-checking them for consistency. For example, the number of clients recorded in the facility's register was compared with pharmacy records. The number reported for a selected indicator was re-counted from supporting documents.

Discrepancies were found in almost all case reviews, especially for two OVC indicators: number served by an OVC program, primary support; and number served by an OVC program, supplementary support. Both IPs providing primary direct support had over-reported the number of OVC recipients. One of three IPs providing supplementary direct support drastically over-reported number of OVC served.



The assessment report concluded that "*… double or more counting of individuals served as a possible risk to accuracy, especially when OVC and HBC indicators were considered. It was apparent that 'number of visits' were counted instead of 'number of individuals'.*"[9] The report also recommended steps to strengthen data management, including developing and/or revising tracking tools. MEASURE Evaluation provides training and mentoring for the implementing partners who participated in the RDQA. A reduced version of the RDQA is repeated to measure improvement in the specific areas targeted for capacity-building.

[9] Highlights of Routine Data Quality Assessments in Tanzania among HIV Implementing Partners, July 2008 (DRAFT REPORT).

Strategy	Data Quality Assessment
Type(s) of double counting	Type I
Strengths	▪ Has been field-tested and applied widely[10] ▪ Can be self-administered or externally facilitated ▪ Identifies areas in the IP's M&E system in need of strengthening ▪ Adopted by other donors (e.g. Global Fund) ▪ Identifies data quality issues such as over-reporting
Limitations/challenges	▪ Double counting may not be the sole or main cause of over-reporting ▪ Time and resources are needed: If externally administered, resources are needed for external auditors. If self-administered, may tax internal capacity of weak M&E systems.

5. Sharing Data Sets

Several countries encourage IPs to review their client registers jointly to identify clients or beneficiaries who were served by both partners. The partners then discuss how they will correct the data before reporting the numbers to the USG/SI team. There are two potential problems with this method: First, exchanging names of clients raises concerns about privacy and confidentiality. Second, adjusting the partners' reports will understate the achievements of at least one of the partners. Instead, the USG/SI team should adjust the aggregated numbers *after* both partners have reported their information.

Strategy	Sharing Data Sets
Type(s) of double counting	Type II
Strengths	▪ Adjusts double counting before aggregation
Limitations/challenges	▪ Cumbersome, especially if large data sets are compared ▪ Privacy and confidentially concerns ▪ Partners' true achievements may be understated

6. Estimating Degree of Overlap in Program Coverage

Some geographic and programmatic overlap among partners is probably inevitable. To plan for new activities and adjust for overlaps, the USG team in Cambodia organizes an annual retreat for its implementing partners. Partner service areas are mapped and overlaps in coverage are identified and corrected.[11] The process consists of three steps (listed on the following page).

[10] Pilot tested in Vietnam and applied in Kenya, Tanzania, Côte d'Ivoire, Nigeria, Mozambique, Rwanda, Haiti, and South Africa.

[11] See Appendix 9 of the Indicator Reference Guide, July 2004.

Step 1: Mapping implementing partners to identify overlap in program coverage

Workshop participants use Matrix A to identify the areas where they are working, the population groups they are targeting, and the interventions they are providing. Note that the geographic focus is the district and not the community or a GPS location.

Matrix A: Who works where and in what program area									
	Prevention			**Care & Support**				**Treatment**	
Geographic Focus	PMTCT	AB	Other Prevention (OP)	Basic Health Care	TB/HIV	OVC	C&T	ARV	Notes
District A									
District B									

Step 2: Estimate degree of overlap between partners

Partners working in the same districts jointly estimate the degree of overlap. Some programs have systems in place which collect information on the services their clients receive from other sites. Most programs, however, can only make a best guess.

Step 3: Adjust reported numbers

The information collected from steps 1 and 2 is then used by the USG/SI team to adjust the numbers reported by the implementing partners during aggregation exercises. Matrix B is used for this purpose.

Matrix B: Adjusting for overlap in program coverage					
	Implementing Partners				
PEPFAR Indicator	Org1	Org2	Org3	Total	Potential overlap

Strategy	**Mapping Partners**
Type(s) of double counting	Type I , II, and III
Strengths	▪ Relatively easy to implement ▪ Contributes to strategic planning
Limitations/challenges	▪ Estimates of overlap are based on subjective information, not empirically-based

7. Adjusting Client Visits by Intensity of Service Use

Programs that do not keep individual client records have difficulty counting the number of individuals served. However, they may be able to derive an adjustment factor to turn number of visits into number of clients reached. What is needed are surveys asking clients how many visits to or contacts from the program they made or received during the last year. An example of this approach is the 2005-2006 Coverage-Plus survey in Asia described previously. The median number of contacts per client in the previous year was calculated, by population and site. For example, VCT users made on median 1-2 contacts per site. Therefore, the number of VCT services provided was divided by 1.5 (median visits per client) to estimate of number of individuals served.

Implementing this approach requires conducting periodic surveys with enough clients, randomly or representatively selected to ensure that the findings can be generalized to the client population.

Strategy	**Adjusting Client Visits by Intensity of Service Use**
Type(s) of double counting	Type I
Strengths	▪ Can be used for programs which are unable to track individuals ▪ Adjustments to the data are based on empirical evidence
Limitations/challenges	▪ Requires periodic surveys to maintain accurate adjustment factors, as use of services may change over time ▪ Survey should have adequate sample size and rigorous design ▪ Time and resources to complete the survey

Conclusion

Double counting is not unique to HIV and AIDS programs and often transcends data quality issues to include both the way indicators are defined and reports aggregated. Type I double counting—where an implementing partner records the same service to the same individual in the same reporting period as two individuals served—is clearly a data quality issue. Type I double counting is best addressed through improved record keeping, strengthened management information systems, and periodic data audits.

Type II and type III double counting—where the same individual or site is counted by two or more implementing partners in the same reporting period—is not a data quality issue at the partner level. They occur when the USG SI team attempts to derive national or sub-national coverage indicators by aggregating/rolling up reports from the various implementing partners. Each partner's report is legitimate (assuming no type I errors, each partner is indeed serving that number of individual beneficiaries or sites); any double counting occurs as a result of the aggregation of partners' reports.

There is a further definitional issue that arises when a single individual needs multiple services (for example, a person on ART who also needs home-based care and prevention for positives counseling; or a pre-school age child made vulnerable by HIV who needs both psychosocial and nutritional support) or when a single service provider needs training in multiple subject areas. Clients should get all the services they need. When such an individual receives different services in the same reporting period, he/she is *supposed* to be counted multiple times. Moreover, even if he/she receives multiple services, there is still no way of ascertaining from service statistics whether all the needed services have been given.

Even in the best of cases, there is no unequivocal statistical procedure for estimating program coverage from simple service statistics. USG SI teams should aspire to assisting partners to generate the highest possible quality data for both their own program management/program improvement as well as reporting to national authorities and donors, enhancing inter-partner communication and information sharing to improve coordination and reduce service gaps, and supporting routine low-cost external coverage surveys to assess how well the needs of beneficiaries and service providers are being met.

In summary, double-counting cannot be eliminated but it can be minimized. Strong planning and information management systems are the best defense against double counting. Strategic planning, coordination among host country, USG and implementing partners, strong MIS and mapping infrastructure, diversifying the types of data that are relied on and triangulating these (e.g., health facility assessments, client surveys, etc.) can contribute to a better understanding of how services are provided and the true coverage of the services. They also serve as a backdrop against which the data routinely collected for PEPFAR can be assessed.