5. HEALTH CARE PROVIDERS

In February 2004, seven indicators were proposed by the S&DIWG to measure HIV/AIDS-related stigma and discrimination among health care providers, including three at the facility level and four at the provider level. These indicators, along with the six existing indicators in the USAID Blue Book (2003), were field-tested with 100 health care providers at three health facilities in Tanzania. A combination of univariate and bivariate statistics and factor analyses techniques were used to determine whether these indicators, and the items measured to calculate them, provide valid and reliable measures of the four domains of HIV stigma: (1) fear of "casual" transmission of HIV and refusal of contact with PLHA, (2) shame and blame of PLHA, (3) HIV sero-status disclosure, and (4) actual acts of discrimination (enacted stigma). Table 50 (see the Conclusion section) lists each of the indicators tested and provides the rationale for the recommendations made. Table 53 presents our indicator recommendations and the proposed method for calculating each indicator.

As noted in the introduction, a sample of health care workers, excluding administrative staff, were selected from three levels of health facilities in Dar-es-Salaam, including a dispensary (Kimara), a district hospital (Mwananyamala), and a national hospital (Muhimbili). Section 3.2 provides a more detailed description of these facilities. Table 23 shows the socio-demographic characteristics of the 100 providers interviewed.

Table 23. Background characteristics of health care provider sample

Background characteristics	Percent
Sex	
Female	71.0
Male	29.0
Age	
15–24	1.0
25–34	10.0
35–44	45.0
>44	44.0
Education	
Less than Standard VII/VIII	1.0
Completed Standard VII/VIII	53.0
Form IV	25.0
Form VI	21.0

Table 23. Background characteristics of health care provider sample (continued)

Background characteristics	Percent
Pre-service Training	
Degree/advanced diploma	24.0
Diploma	17.0
Certificate	39.0
Short course/less than 1 year	20.0
Work Designation	
Medical specialist	10.0
General practitioner	8.0
Clinical officer (medical assistant)	11.0
Nurse officer	11.0
Enrolled nurse midwife (trained nurse)	21.0
Nurse assistant	18.0
Health attendant (nurse auxiliary)	15.0
Lab assistant	4.0
Other	20.0
Marital Status	
Married or cohabiting	83.0
Divorced	4.0
Widowed	6.0
Never married	7.0
Religion	
Catholic	36.0
Muslim	32.0
Lutheran	18.0
Anglican	9.0
Tanzania Assemblies of God	0.0
Seventh Day Adventist	1.0
Pentecostal	2.0
Other	2.0

As with the other study populations, there are some important limitations to the health care provider analysis. First, many of the questions posed to the health care providers were experimental and thus developed in the absence of previously tested questions and experience with this study population. Therefore, even if items were developed by experts with knowledge of the context in which health care providers work, it is possible that some of the measures will not work well. Second, some of the questions surrounding fears and attitudes are influenced by social desirability bias. Third, because of the potential work-related exposure to HIV, it can be difficult to disentangle what actions are driven by fear-related stigma (and therefore stigma) as opposed to justified fear that is not stigma (e.g., invasive procedure in high HIV-prevalence settings where gloves are not available). Fourth, the sample size for this population was small, which limited our ability to identify statistical differences by construct validity variables, if they existed, and to validate the indicators recommended. Finally, as with all the data presented in this report, we only tested the indicators in one site in one country—Tanzania—so it is not known if these results are applicable in other settings. Therefore, we recommend further testing of the indicators and items. For example, it would be useful to include the items tested in larger health facility surveys that are being planned for the future.

Methods

Factor analysis was used to assess the reliability of items in the two latent domains (fear of "casual" transmission of HIV/refusal of contact with PLHA, and values—shame and blame) and to create scales where appropriate. For those items in which factor analysis was appropriate, the following steps were taken to test item reliability and refine the scales. Factor analysis was first conducted, using the principal-components factor-extraction method, on the selected set of items to identify factors and factor loadings. Only factor loadings of 0.40 or higher were considered for inclusion on a given factor. Once the number of factors was determined, promax rotation was performed on the factor loadings to ease interpretation. Internal reliability testing was then conducted separately for each factor by calculating Chronbach's Alpha. Based on the results of this testing, items were selected for inclusion on a scale, which was then interpreted and named based on the loadings. For the purposes of this analysis, after the scales of a particular construct were refined, each scale was scored individually and then standardized to ease comparison across scales. For all of the scales created, lower mean scores reflect more stigmatizing responses.

For the latent domains, indicator validation was conducted by examining the relationship of items, indices, or scales with selected socio-demographic and construct validity variables (see Table 31). The observed direction and magnitude of these relationships was then assessed based on existing conceptual knowledge about HIV-related stigma. Statistical tests performed included chi-square tests for categorical items and t-tests and analysis of variance for comparing mean scores across groups. While significance tests were conducted for all relationships examined, only a few significant differences were detected. This is likely due to the small number of health care providers interviewed. In cases in which no significant differences were detected, the trends in percentages or means across groups were examined to assess validity.

Construct validity variables

Education level

Pre-service training

In-depth knowledge of HIV (knows all three of the following):

- The risk of HIV transmission following needle-prick or sharps injuries is small (approximately 1 in 300).
- The risk of HIV transmission following a splash of blood to non-intact skin or mucus membrane is very small (approximately 1 in 1000).
- Standard sterilization procedures are sufficient when sterilizing instruments used on an HIV-positive patient

Personally know a health care worker/colleague who has died of AIDS

Know someone who has personally disclosed his/her HIV status to you

Ever been tested for HIV

Willing to disclose HIV status if found to be positive

Socio-demographic factors

Both conceptual and empirical knowledge suggest that those with more education are less likely to hold stigmatizing attitudes. Therefore, education and pre-service training were used to test construct validity.

HIV knowledge, proximity to PLHA, and HIV-testing experience

Lack of correct knowledge about the routes of HIV transmission is also commonly linked with stigmatizing attitudes. To assess knowledge of HIV among health care providers, a number of indicators were tested, ranging from general knowledge of HIV transmission to very specific questions about the rate of transmission after certain types of exposure typically encountered in medical settings. Bivariate analyses demonstrated that the health care providers interviewed had a high level of general knowledge. Therefore, only those items measuring knowledge related to risk of transmission in medical settings had sufficient variance for this analysis. For validation purposes, a dichotomous indicator for in-depth knowledge was created based on provider responses to the three questions with the most variance (see Table 31). Only those who provided correct responses to all three questions were considered to have in-depth knowledge.

Two of the validation indicators related to proximity to PLHA: (1) *know a health care provider/colleague who died of AIDS* and (2) *personally disclosed to by a PLHA*. It was expected that health care providers reporting greater proximity to PLHA would hold less stigmatizing attitudes. The final validation indicators selected related to HIV testing and disclosure. Providers were asked if they had ever been tested for HIV and if they would disclose their status if found to be HIV-positive.

Findings

The remainder of the section presents the results of the health care provider analysis according to the four stigma domains described in the Introduction section. A table is included at the beginning of each domain, including the existing indicators, the items asked in the questionnaire corresponding to each indicator, and the frequency of those items in the study population. The table is followed by results of the reliability and validity testing conducted for these indicators. Each domain section concludes with recommendations on indicators and measurement.

SECTION 5.1: FEAR OF "CASUAL"[21] TRANSMISSION OF HIV AND REFUSAL OF CONTACT WITH PLHA (INCLUDING WILLINGNESS TO CONDUCT MEDICAL PROCEDURES ON PLHA)

While no existing indicators are recommended in this domain for health care providers, we felt that it is important to understand and measure any fear of HIV transmission providers may feel while caring for PLHA. This kind of fear, driven by poor knowledge of HIV, may be a key underlying factor driving some forms of stigma within the health care setting that can be addressed programmatically. To assess the level and types of fear among health care providers, two types of questions were asked: (1) existing hypothetical scenarios (e.g., *Would you buy fresh vegetables from a HIV-positive shopkeeper*, etc.) that have been used in a number of surveys among community members, and (2) a series of items about specific fears (e.g., the response of health care providers when confronted with various situations, including casual contact with and performance of various medical procedures on PLHA).

The hypothetical scenario questions showed little variability and, as discussed above (in the Community section) suffer from several limitations. Therefore, they are not recommended or dealt with in this section.

New Indicators

To assess specific fears among health care providers, three new indicators and corresponding items were tested. The first indicator assesses fear of transmission and is similar to the one tested among community members (see Section 4.1). However, extra items were added to test fears during various types of contact that might occur with PLHA in the health care setting. The second indicator assesses providers' willingness to conduct non-invasive and invasive procedures on PLHA. The third and final new indicator in this domain measures fear of transmission if gloves are not worn while providing a range of invasive and non-invasive procedures on PLHA. This indicator was included because the inappropriate (e.g., double gloves) or unnecessary use of gloves (e.g., for non-invasive procedures) is a stigmatizing act in health care settings reported by PLHA. At the same time, in many developing country contexts, surgical gloves are not always available for procedures where they are necessary. As social desirability bias would affect any direct question to providers about their own [inappropriate] use of gloves, we attempted to capture this issue by including a set of items on risk in this domain, as well as a question in the enacted stigma domain on observations of other health care providers engaging in this behavior (see Table 35).

[21] By *casual contact* we mean contact that carries no risk of HIV transmission, such as touching a person living with HIV or an object they have handled. This type of contact involves no invasive transfer of body fluids.

Table 24 presents the frequencies of the items tested for each of the three indicators in this domain. The items show acceptable variance, though some of these items work better than others. Given that all of these items measure attitudes and have more than two response categories, factor analysis was conducted to identify the most appropriate items to measure each indicator and to assess their internal reliability. The items on gloves tested in this domain did not work and therefore are not discussed further. However, the item on observation of inappropriate use of gloves is discussed in the enacted stigma section.

Table 24. Fear of casual contact: New indicators, items, and frequencies

New Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)		
1. Percent of people working in institutions/facilities (e.g., managers, health care workers) who fear: (a) providing invasive medical care to patients with HIV/AIDS (b) contact with non-blood bodily fluids of patients with HIV/AIDS (c) casual contact with PLHA	**In response to the following situations, please tell me if you have fear of HIV transmission, have no fear of HIV transmission, or do not know:**	**Have fear**	**Don't Know**	**No Fear**
	Conducting surgery or suturing on a person living with HIV or AIDS	25.0	1.0	74.0
	Removing used needle from a syringe after attending a person with HIV or AIDS	17.0	1.0	82.0
	Taking blood samples from a person with HIV or AIDS	15.0	1.0	84.0
	Giving an injection to a person living with HIV or AIDS	14.0	1.0	85.0
	Dressing the wounds of a person living with HIV or AIDS	13.0	2.0	85.0
	Putting in a drip on someone who is showing signs of AIDS	11.0	1.0	88.0
	Touching the saliva of a person with HIV or AIDS	17.0	0.0	83.0
	Touching the excreta of a person with HIV or AIDS	14.0	2.0	84.0
	Touching the sweat of a person with HIV or AIDS	8.0	1.0	91.0
	Caring for a person living with HIV or AIDS	18.0	1.0	81.0
	Your child plays with a child who has HIV or AIDS	9.0	0.0	91.0
	Sharing eating utensils with a person living with HIV or AIDS	3.0	0.0	97.0

Table 24. Fear of casual contact: New indicators, items, and frequencies (continued)

New Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)			
2. Percent of people working in institutions/facilities (e.g., managers, health care workers) who: (a) are uncomfortable working with and treating PLHA (b) perceive work-related HIV exposure to be high (c) report negative attitudes toward PLHA	**I'm going to read you several statements, and I want you to tell me whether you strongly agree, agree, disagree, or strongly disagree:**	**Strongly agree**	**Agree**	**Disagree**	**Strongly disagree**
	People who are infected with HIV should **not** be treated in the same place as other patients in order to protect other patients from infection.	1.0	1.0	42.0	56.0
	You are comfortable providing health services to clients who are HIV-positive.	31.0	66.0	3.0	0.0
	You are comfortable performing surgical or invasive procedures on clients whose HIV status is unknown.	27.0	49.0	24.0	0.0
	You are comfortable sharing a bathroom with a colleague who is HIV-infected.	29.0	65.0	6.0	0.0
	You are comfortable assisting or being assisted by a colleague who is HIV-infected.	31.0	69.0	0.0	0.0
	You avoid touching clients who you know or suspect have HIV for fear of becoming infected.	2.0	2.0	53.0	43.0
	You are at high risk of becoming infected with HIV working in the health facility.	12.0	41.0	31.0	16.0
	Most HIV-positive health care workers get infected at work.	5.0	29.0	48.0	18.0

Table 24. Fear of casual contact: New indicators, items, and frequencies (continued)

New Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)			
2. Percent of people working in institutions/facilities (e.g., managers, health care workers) who: (a) are uncomfortable working with and treating PLHA (b) perceive work-related HIV exposure to be high (c) report negative attitudes toward PLHA	**I'm going to read you several statements, and I want you to tell me whether you strongly agree, agree, disagree or strongly disagree:**	**Strongly agree**	**Agree**	**Disagree**	**Strongly disagree**
	The most frequent mode of contracting HIV among health care workers is through work-related exposure.	9.0	37.0	38.0	16.0
	It is required to wear latex gloves whenever performing any task related to examining a patient who may be HIV-positive.	5.0	36.0	37.0	22.0
	Health care providers have a right to know HIV status of all patients.	9.0	48.0	27.0	16.0
	People infected with HIV are generally to blame for becoming infected.	1.0	1.0	55.0	43.0
	Clients who are sex workers deserve to receive the same level and quality of care as other clients.	30.0	66.0	4.0	0.0
	Providing health care services to people infected with HIV is a waste of resources since they will soon die.	1.0	1.0	39.0	59.0
	Clients who have sexual relations with people of the same sex deserve to receive the same level and quality of health care as other clients.	26.0	61.0	7.0	6.0

Table 24. Fear of casual contact: New indicators, items, and frequencies (continued)

New Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)			
3. Percent of people working in institutions/facilities (e.g., managers, health care workers) who perceive risk of HIV infection if gloves are not used while performing: (a) non-invasive, potential fluid contact procedures (b) non-invasive, no fluid contact procedures (c) invasive procedures	**Please tell me how you rank the following activities in terms of risk for transmission of HIV if performed without using latex gloves. Is the risk for transmission high, medium, low, or there is no risk at all?**	**High risk**	**Medium risk**	**Low risk**	**No risk at all**
	Giving an injection	12.0	11.0	15.0	62.0
	Taking blood pressure	5.0	1.0	1.0	93.0
	Delivering a baby	99.0	0.0	1.0	0.0
	Listening to the chest	0.0	1.0	0.0	99.0
	Taking temperature	0.0	2.0	0.0	98.0
	Surgery	98.0	0.0	2.0	0.0
	Changing bed pans	31.0	15.0	29.0	25.0
	Changing patient's beddings	20.0	15.0	32.0	33.0
	Wound dressing	72.0	19.0	6.0	3.0
	Taking blood samples	61.0	17.0	5.0	17.0
	Percent of respondents expressing at least one fear	61.7			

Factor analysis and internal reliability of new indicators for fear of HIV transmission and willingness to treat PLHA

Fear of HIV transmission while caring for PLHA

Table 25 presents the results of factor analysis conducted on the fear variables designed to measure fear of HIV transmission during various types of contact and medical procedures with PLHA listed in Table 24. Three factors emerged from this analysis: (1) fear of HIV transmission during invasive medical procedures with potential blood contact, (2) fear of HIV transmission during contact with non-blood bodily fluids, and (3) fear of casual contact with PLHA.

Table 25. Factor loadings: Fear of HIV transmission while caring for PLHA items

			Factor: Fear of HIV transmission…		
			Providing invasive medical care to patients with HIV/AIDS	**Contact with non-blood bodily fluids of patients with HIV/AIDS**	**Casual contact with PLHA**
Variable	***Indicator***	***Rotated factor loading***	1	2	3
	In response to the following situations, please tell me if you have fear of HIV transmission, no fear of HIV transmission, or do not know:				
1	Giving an injection to a person living with HIV or AIDS	0.92276	▪		
2	Caring for a person with HIV or AIDS	0.88657	▪		
3	Dressing the wounds of a person living with HIV or AIDS	0.86225	▪		
4	Conducting surgery or suturing on a person with HIV or AIDS	0.86682	▪		
5	Putting a drip in someone who is showing signs of AIDS	0.74655	▪		
6	Touching the sweat of a person with HIV or AIDS	0.91991		▪	
7	Touching the saliva of a person with HIV or AIDS	0.78777		▪	
8	Touching the excreta of a person with HIV or AIDS	0.43908		▪	
9	Your child play with a child who has HIV or AIDS	0.37426			▪
10	Sharing eating utensils with a person living with HIV or AIDS	0.89274			▪

Table 26 shows the reliability of the items that loaded onto each factor. Five items, explaining 92% of the variance in providers' fear of HIV transmission while providing invasive medical care to PLHA, loaded onto factor one. The second factor contains two items and explains 72% of the variance of provider fears about contact with non-blood bodily fluids. Factor 3 is composed of two items measuring casual contact with PLHA. These items only explain 23% of the variance, suggesting that (a) these items are not good measures of casual contact, or (b) health care providers' fears of casual contact is minimal and therefore not worth measuring, most likely because they have more knowledge about modes of transmission than community members and therefore do not fear casual contact of PLHA. This last factor is therefore not recommended and was dropped from any further analysis.

Table 26. Fear of HIV transmission while caring for PLHA: Internal consistency of items (Cronbach's Alpha)

Factor	N (items)	Coefficient α
1	5	0.9153
2	2	0.7177
3	2	0.2325

After identifying the factors and their corresponding items, we then constructed two indicators to assess the percentage of health care providers who feared one or more item per factor. Each item was recoded into a dichotomous variable (*fear* vs. *no fear*/*don't know*). A sum variable was then created from the group of items and then recoded into a dichotomous variable (*fear none* vs. *fear one or more items*). Table 27 presents the results of this analysis. These percentages concur with the findings from the reliability testing, such that it does not seem appropriate to measure fear of casual transmission among health care providers (data not shown). Therefore, we recommend measuring two indicators: fear of invasive procedures and fear of contact with non-blood bodily fluids.

Table 27. Fear of HIV transmission among health care providers: New indicators, items, and frequencies

New Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)		
1. Percent of people working in institutions/facilities (e.g., managers, health care workers) who fear providing invasive medical care to patients with HIV/AIDS	**Do you agree or disagree with the following statements:**			
	Fear providing invasive medical care	**Have fear**	**Don't know**	**No fear**
	Giving an injection to a person living with HIV or AIDS	14.0	1.0	85.0
	Caring for a person with HIV or AIDS	18.0	1.0	81.0
	Dressing the wounds of a person living with HIV or AIDS	13.0	2.0	85.0
	Conducting surgery or suturing on a person with HIV or AIDS	25.0	1.0	74.0
	Putting a drip in someone who is showing signs of AIDS	11.0	1.0	88.0
	Percentage feared one or more items: 26.0			
2. Percent of people working in institutions/facilities (e.g., managers, health care workers) who fear contact with non-blood bodily fluids of patients with HIV/AIDS	*Fear contact with non-blood bodily fluids*	**Have fear**	**Don't know**	**No fear**
	Touching the sweat of a person with HIV or AIDS	8.0	1.0	91.0
	Touching the saliva of a person with HIV or AIDS	17.0	0.0	83.0
	Percent feared one or more items: 18.0			

Willingness To conduct medical procedures on PLHA

Another important aspect of HIV stigma among health care workers is their willingness to treat PLHA, as this can directly affect the availability and quality of care for PLHA. Sixteen items were tested to measure this construct, of which 10 are included in the proposed scales. One item (*you are at high risk of becoming infected with HIV working in the health facility*) was excluded from the analysis as it loaded poorly (<0.40) on all three factors. Table 28 presents the 15 items left, the factor loadings, and a description of the three factors that emerged from these items. The items are ordered from highest to lowest loading per factor. Three factors were identified: (1) comfort working with and caring for PLHA, (2) perceptions of work-related exposure to HIV, and (3) attitudes toward PLHA.

Table 28. Factor loadings: Willingness to treat PLHA items

			Factor		
			Comfort around PLHA	**Work-related HIV exposure**	**Attitudes toward PLHA**
Variable	***Indicator***	***Rotated factor loadings***	1	2	3
1	Comfortable assisting or being assisted by a colleague who is HIV-infected	0.96250	▪		
2	Comfortable performing surgical or invasive procedure on clients whose HIV status is unknown	0.93416	▪		
3	Comfortable in providing health services to clients who are HIV-positive	0.91354	▪		
4	Comfortable sharing a bathroom with a colleague who is HIV-infected	0.88592	▪		
5	Clients who are sex workers deserve to receive the same level and quality of health care as other clients	0.75194	▪		
6	You avoid touching clients' clothing and belongings known or suspected to have HIV for fear of becoming HIV-infected.	0.63951	▪		
7	It is required to wear latex gloves whenever performing **any** task related to examining a patient who may be HIV-positive.	0.49589	▪		
8	You avoid touching clients known or suspected to have HIV for fear of becoming infected	0.41798	▪		

Table 28. Factor loadings: Willingness to treat PLHA items (continued)

			Factor		
			Comfort around PLHA	**Work-related HIV exposure**	**Attitudes toward PLHA**
Variable	***Indicator***	***Rotated factor loadings***	1	2	3
9	Most frequent mode of contracting HIV among health care workers is through work-related exposure.	0.90487		▪	
10	Most HIV-positive health care workers get infected at work.	0.84205		▪	
11	Health care providers have a right to know HIV status of all patients.	0.57284		▪	
12	Providing health care services to people infected with HIV is a waste of resources since they will die soon anyway.	0.89886			▪
13	People infected with HIV are generally to blame for becoming infected.	0.78908			▪
14	People who are infected with HIV should **not** be treated in the same place as other patients in order to protect other patients from infection.	0.77504			▪
15	Clients who have sexual relations with people of the same sex deserve to receive the same level and quality of care as other clients	0.46191			▪

Table 29 presents the reliability of each scale. The remaining six items explain 94% of the variance in factor 1. In an effort to minimize the number of items in this index, items 5 and 6 in Table 29 were excluded from factor 1, which reduced the reliability to 0.93. As the reliability of the 4-item index is still very high, we recommend the smaller index as an essential measure if questionnaire space and time are limited. However, it would be best to collect all 6 items, as they may behave differently in different study populations and contexts. For those researchers or groups wishing to assess health care providers' willingness to treat PLHA, the 6-item index is recommended. Item 11 in Table 29 was excluded from factor 2, as it decreased the reliability of the items measuring perceptions of work-related exposure. The remaining two items explain 78% of the variance in factor 2. Finally, items 14 and 15 in Table 28 were excluded from the scale, as they decreased reliability of items measuring attitudes toward PLHA. The two items retained on factor 3 explain 84% of the variance.

Table 29. Willingness to treat PLHA: Internal consistency of items (Cronbach's Alpha)

Factor	N (items)	Coefficient α
1	6	0.9370
1	4	0.9293
2	2	0.7823
3	2	0.8441

To assess the performance of these factors in the study population, we assessed the percentage of providers who gave one or more stigmatizing responses to the items for each factor. As both positive and negative statements were asked, sometimes agreement indicated a stigmatizing response, and sometimes disagreement did. Items were recoded such that non-stigmatizing responses were given a value of zero, and stigmatizing responses were given a value of 1. Composite indicators were then created from these items and recoded into dichotomous variables (gave no stigmatizing responses vs. gave one or more stigmatizing responses). Table 30 presents the results of this analysis. Based on the percentage of providers who reported stigmatizing responses for each factor, it appears that only the first two factors provide enough variance to warrant including them in the indicator measure. Very few providers (2.0%) reported stigmatizing attitudes toward PLHA. Overall, positive items do not work well in either community or health care provider populations. This is likely due to social desirability bias.

Therefore, we recommend measuring two indicators: *uncomfortable working with and treating PLHA* and *perceive work-related HIV exposure to be high*.

Table 30. Willingness to provide medical care to PLHA: New indicators, items, and frequencies

New Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)			
3. Percent of people working in institutions/facilities (e.g., managers, health care workers) who are uncomfortable working with and treating PLHA	**Do you agree or disagree with the following statements:**				
	Comfort working with and treating PLHA	**Strongly agree**	**Agree**	**Disagree**	**Strongly disagree**
	Comfortable assisting or being assisted by a colleague who is HIV- infected	31.0	69.0	0.0	0.0
	Comfortable performing surgical or invasive procedure on clients whose HIV status is unknown	27.0	49.0	24.0	0.0
	Comfortable to providing health services to clients who are HIV-positive	31.0	66.0	3.0	0.0
	Comfortable sharing a bathroom with a colleague who is HIV-infected	29.0	65.0	6.0	0.0
	Clients who are sex workers deserve to receive the same level and quality of health care as other clients	30.0	66.0	4.0	0.0
	You avoid touching clothing and belongings of clients known or suspected to have HIV for fear of becoming HIV-infected.	2.0	2.0	53.0	43.0
	Percent reporting one or more stigmatizing responses: 28.0				
4. Percent of people working in institutions/facilities (e.g., managers, health care workers) who perceive work-related HIV exposure to be high	*High work-related HIV exposure*				
	Most frequent mode of contracting HIV among health care workers is through work-related exposure.	9.0	37.0	38.0	16.0
	Most HIV-positive health care workers get infected at work.	5.0	29.0	48.0	18.0
	Percent reporting one or more stigmatizing responses: 53.0				

Construct validity

After reliability testing was completed and the factors were refined, scales were created for each factor with a mean of 10 and a standard deviation of 1 to allow for comparison between scales with different numbers of items. Construct validity was then assessed by comparing the mean score of each factor by the selected socio-demographic and construct validity variables. The results of this analysis are presented in Appendix B. For all indices presented, a lower mean score indicates a more stigmatizing response.

Overall, the relationship between the construct variable of knowledge and education and the sub-scales of fear-related stigma and willingness to treat were in the expected direction. Health care providers with incorrect in-depth knowledge of HIV transmission held more stigmatizing attitudes, while health care providers with in-depth knowledge were more willing to treat PLHA and less likely to fear non-invasive procedures with potential fluid contact.

It was expected that health care providers reporting greater proximity to PLHA would hold less stigmatizing attitudes. Interestingly, the opposite relationship was observed across most of the fear indicators tested. It is possible that proximity to PLHA affects health care providers differently than community members in general. For example, knowing a colleague who has died of AIDS could lead to heightened fear of work-related HIV exposure, which could in turn influence negative attitudes toward PLHA. This hypothesis is supported by the fact that most of the stigma indicators performed consistently across the proximity variables.

The proximity and HIV testing validation indicators performed contrary to what was expected for two indictors in particular: (1) fear of HIV transmission while caring for PLHA; and (2) willingness to conduct medical procedures on PLHA. This suggests that either proximity to PLHA and testing behavior influence health care providers differently than community members, or these indicators do not accurately measure the stigma constructs intended. It is our belief that the former is the case, as both indicators behaved as expected with regard to in-depth knowledge and willingness to disclose if HIV-positive. As mentioned previously, one explanation could be that knowing colleagues and patients with HIV increases anxiety about work-related exposure. This hypothesis is supported by the fact that perceptions of work-related exposure were high among health care providers, with 53% agreeing that they are at high risk of becoming infected with HIV at work and 47% reporting having been exposed at work. The relationship between HIV testing and stigmatizing attitudes could also be explained by a heightened fear of work-related exposure. For example, a health care provider who has tested HIV negative may be more worried about being exposed to PLHA than a provider who does not know his/her status.

Based on this analysis, we believe that the factors and items recommended are accurately capturing the constructs intended for this domain of stigma. However, it would be prudent to conduct further testing of these items with a larger sample of health care providers.

Recommendations for measuring fear of casual transmission of HIV by health care providers

1. We do not recommend using the existing general questions (e.g., *willingness to buy food from a PLHA*) that have been asked in population surveys for health care providers as they perform poorly and suffer from other limitations (see the Community section).

2. We do not recommend the indicator on risk of performing various tasks without gloves, as it did not perform well.

3. We do recommend that four of the new indicators be collected: two at the Essential level and two at the Expanded level (for those wishing for a more comprehensive understanding of health care provider fears that drive stigma).

Essential-level indicators

- Percent of people in institutions/facilities (e.g., managers, health care workers) who are uncomfortable working with and treating PLHA
- Percent of people in institutions/facilities (e.g., managers, health care workers) who perceive work-related HIV exposure to be high

Expanded-level indicators

- Percent of people working in institutions/facilities (e.g., managers, health care workers) who fear providing invasive medical care to patients with HIV/AIDS
- Percent of people working in institutions/facilities (e.g., managers, health care workers) who fear contact with non-blood bodily fluids of patients with HIV/AIDS

The summary tables in the Conclusion section provide a listing of all the indicators, rationale for recommendations, a list of items used to collect the appropriate data, and suggestions for aggregation of those items into an indicator.

SECTION 5.2: VALUES, SHAME, BLAME

When measuring HIV stigma among health care providers, it is also important to assess the shame and blame they feel toward people living with HIV and AIDS, as this is a main cause of stigma and discrimination. Table 31 lists the existing indicators (the same as those for the population sample) and corresponding items for measurement. The existing items to measure the shame and blame domain are the same as those tested among the community sample and are not specifically related to health care providers. Table 31 shows the frequency of each item tested. Based on the variances observed, it is clear that some of these items worked better than others at capturing provider attitudes.

Table 31. Values, shame, and blame: Existing indicators, items, and frequencies

Existing Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)		
1. Percent of people who judge or blame persons living with HIV/AIDS for their illness (Blue Book & S&DIWG) 2. Percent of people who would feel shame if they associated with a person living with HIV/AIDS	**Do you agree or disagree with the following statements:**	**Agree**	**Neutral**	**Disagree**
	People who publicly disclose they have HIV/AIDS exhibit behavior that others should copy.	83.0	6.0	11.0
	It is the women prostitutes who spread HIV.	23.0	3.0	74.0
	People with HIV/AIDS deserve sympathy.	98.0	0.0	2.0
	HIV/AIDS is punishment for bad behavior.	9.0	4.0	87.0
	People with HIV/AIDS should be ashamed of themselves.	8.0	2.0	90.0
	I would attend a social event with someone known to have HIV/AIDS.	98.0	0.0	2.0
	People with HIV/AIDS should be treated the same as people without HIV/AIDS.	100.0	0.0	0.0
	I would be ashamed if someone in my family had HIV/AIDS.	9.0	3.0	88.0
	People with HIV should be allowed to fully participate in social events.	100.0	0.0	0.0
	People with HIV/AIDS are promiscuous.	4.0	0.0	96.0
	I would invite a person with HIV/AIDS to a social event.	98.0	0.0	2.0
	HIV is a punishment from God.	14.0	12.0	74.0
	I would feel ashamed if I were infected with HIV.	18.0	8.0	74.0
	Promiscuous men are the ones who spread HIV in our community.	31.0	4.0	65.0

Table 31. Values, shame and blame: Existing indicators, items and frequencies (continued)

Existing Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)			
3. Percent of people who have positive attitudes toward the rights of people living with HIV/AIDS (S&DIWG)	**Society reacts and behaves in various ways toward PLHA or people suspected of having HIV. Please state whether you find the following reactions/behaviors reasonable or not:**	**Reasonable**	**Not sure**	**Unreasonable**	**Depends**
	Divorce or leave a husband or partner because he has HIV	0.0	0.0	100.0	0.0
	Assigning separate hospital ward to PLHA	18.0	0.0	82.0	0.0
	Because of drug shortage, first priority given to non-HIV-infected patients	2.0	0.0	98.0	0.0
	No longer inviting a PLHA to social events, like weddings	0.0	0.0	100.0	0.0
	Limiting people's participation in community activities because of their HIV status	0.0	0.0	100.0	0.0
	Not allowing a child to play with a child having HIV or AIDS	6.0	0.0	94.0	0.0
	In a household, assigning specific utensils for a PLHA	0.0	0.0	100.0	0.0
	Avoiding eating with a PLHA	0.0	0.0	100.0	0.0
	Avoiding using something touched by a PLHA	0.0	0.0	100.0	0.0
	Refusing to share a toilet with a PLHA	0.0	0.0	100.0	0.0
	Divorcing/leaving a spouse/partner because he/she has HIV or AIDS	0.0	0.0	100.0	0.0
	Refusing to rent a room to a person with HIV and AIDS	0.0	0.0	100.0	0.0

Factor analysis and internal reliability

To determine the internal reliability of these items and create appropriate indices to measure this domain, factor analysis was conducted on these items. As many of items had no variance, they were not included in the factor analysis. Table 32 presents the results of the factor analysis conducted for the shame and blame items. Three factors were identified: (1) Judgment of PLHA, (2) attitudes about blame, and (3) attitudes about shame .

Table 32. Factor loadings: Shame and blame items

			Factor		
			Judgment of PLHA	**Attitudes about blame**	**Attitudes about shame**
Variable	***Indicator***	***Rotated factor loadings***	1	2	3
1	HIV/AIDS is a punishment for bad behavior	-0.88155	▪		
2	People with HIV/AIDS should be ashamed of themselves	-0.67127	▪		
3	HIV is a punishment from God	-0.62516	▪		
4	It is the women prostitutes that spread HIV	0.86272		▪	
5	Promiscuous men are the ones who spread HIV in our community	0.83475		▪	
6	I would be ashamed if someone in my family had HIV/AIDS	0.81970			▪
7	I would feel ashamed if I were infected with HIV	0.77509			▪

Internal Reliability

Table 33 shows the internal reliability of the items that loaded on these factors. The first factor contains three items, which explains 59% of the variance of judgment toward PLHA. The coefficient α of the second factor is higher, indicating that the two items explain 70% of the variance of the blame construct. The third factor has two items that explain 61% of the variance of the aspect of shame. Because α of 0.60 or higher is generally considered satisfactory, further testing of the items is warranted and could enhance reliability.

Table 33. Shame and blame: Internal consistency of items (Cronbach's Alpha)

Factor	N (items)	Coefficient α
1	3	0.5882
2	2	0.6980
3	2	0.6072

To assess how well the three indicators worked among the health care providers in the study, the percentage of providers agreeing with one or more of the negative statements for each factor were calculated after dichotomous, composite variables were created. Table 34 presents the findings of this analysis.

Based on the results of the factor analysis described above and the performance of the three indicators in the study population, we recommend that only seven of the original questions be asked to assess the three components of values: judgment, blame, and shame among health care providers that emerged. However, it must be noted that, while the reliability reported for each of these components is acceptable, it is still relatively low. Therefore, additional items should be tested to improve the reliability and validity of this domain among health care providers. For example, it might be beneficial to ask specific questions about provider attitudes toward PLHA in health facilities (e.g., *PLHA attending health facilities should be ashamed of themselves*; *It's a waste of my time to provide care to PLHA in health facilities*, etc.).

Table 34. Values, shame, and blame: New indicators, items, and frequencies

New Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)		
4. Percent of people working in institutions/facilities (e.g., managers, health care workers) who report judgment of PLHA	**Do you agree or disagree with the following statements:**	**Agree**	**Neutral**	**Disagree**
	Judgment			
	HIV is punishment for bad behavior.	9.0	4.0	87.0
	People with HIV/AIDS should be ashamed of themselves.	8.0	2.0	90.0
	HIV is a punishment from God.	14.0	12.0	74.0
	Percentage agreed with one or more negative statements		**21.0**	
5. Percent of people working in institutions/facilities (e.g., managers, health care workers) who report negative attitudes of blame toward PLHA	*Blame*			
	Promiscuous men are the ones who spread HIV in our community.	31.0	4.0	65.0
	It is the women prostitutes who spread HIV.	23.0	3.0	74.0
	Percentage agreed with one or more negative statements		**36.0**	
6. Percent of people working in institutions/facilities (e.g., managers, health care workers) who report negative attitudes of shame toward PLHA	*Shame*			
	I would feel ashamed if I were infected with HIV.	18.0	8.0	74.0
	I would be ashamed if someone in my family were infected with HIV.	9.0	3.0	88.0
	Percentage agreed with one or more negative statements		**21.0**	

Construct validity

The scales designed to measure morally based stigmatizing attitudes, such as shame and blame toward PLHA, behaved as expected across most of the validation indicators. Providers who had been personally disclosed to were less likely to report judgment of PLHA. Likewise, providers who were willing to disclose their sero-status, if HIV-positive, were less likely to report judgment of PLHA. Alternatively, providers who knew a colleague who had died of AIDS were more likely to blame PLHA for contracting HIV. This finding could be explained as a defense mechanism, such that health care providers are more likely to blame their infected colleagues to lessen their own fears of work-related exposure. This hypothesis is supported by the fact that providers' perception of work-related exposure was high (e.g., 66% agreed that *most HIV-positive health care workers get infected at work*; 53% agreed that they *are at high risk of becoming infected with HIV working in the health facility*; and 46% agreed that *the most frequent mode of contracting HIV among health care workers is through work-related exposure*).

Recommendations for measuring values, shame, and blame in health care providers

While the items tested did not perform as well as we would like, both reliability and construct validity testing suggest they will yield reliable and valid measures of this domain. Therefore, we recommend that:

1. The three new indicators are included at the Essential level of measurement for this domain among health care providers.

   Essential-level indicators

   - Percent of people working in institutions/facilities (e.g., managers, health care workers) who report judgment of PLHA
   - Percent of people working in institutions/facilities (e.g., managers, health care workers) who report negative attitudes of blame toward PLHA
   - Percent of people working in institutions/facilities (e.g., managers, health care workers) who report negative attitudes of shame toward PLHA

2. The new indicators should replace the two existing indicators regarding the percent of people who judge, blame, or shame PLHA.
3. As the indicator and items proposed to measure positive attitudes toward PLHA did not yield any variance, we do not recommend collecting this measure.

The summary tables in the Conclusion section provide a listing of all the indicators, rationale for recommendations, a list of items used to collect the appropriate data, and suggestions for aggregation of those items into an indicator.

SECTION 5.3: ENACTED STIGMA (DISCRIMINATION)

Although no indicators were specifically recommended by the S&DIWG to measure enacted stigma among health care providers, we felt that providers are in a unique position to provide information on the forms of discrimination common in health facilities. While we might expect some degree of under-reporting, due to social desirability bias, this type of measure should still

provide important information. As such, we asked providers about the discrimination against HIV-positive patients they witnessed or observed in their facilities. Respondents were asked a series of questions about specific types of discrimination witnessed in the past 12 months, including: neglect, unnecessary referral, testing and disclosure without consent, verbal abuse, and differential treatment. Table 35 shows the frequency of these events. It is evident that the frequency of these events varies greatly, ranging from 1% to 43%. To develop a measure that appropriately captures the different types of stigma experienced by PLHA in health care facilities, the experiences were grouped into five categories (see Table 35), based on the similarity of the scenarios posed. Among providers who witnessed enacted stigma, the most common form was differential treatment/forced testing (53%). Overall, 59% of providers reported witnessing at least one form of discrimination toward an HIV-positive patient in the past year. Clearly, it is essential that we ask providers about the types of enacted stigma witnessed in their health care facilities.

Construction of index

We conducted additional analyses to minimize the number of items needed to measure the five categories of enacted stigma listed in Table 35. We followed the same procedure used to minimize the enacted stigma indices in the general population and among PLHA. For example, we observed the effect of dropping items with the lowest frequency from the five categories on the overall percentage of providers witnessing one or more types of enacted stigma. We then determined the minimum items necessary to arrive close to the percentage of those reporting stigma with the original 15-item scale (59.0%). Table 36 presents the results of this analysis.

As these items measure witnessed enacted stigma as opposed to personally experienced enacted stigma, we did not examine differences by gender. In addition, the majority of health care providers surveyed were women. The analysis was carried out as follows: During the first round of minimization, the item with the lowest frequency in each category was dropped. This led to a 10-item scale that resulted in the same prevalence of enacted stigma witnessed as the 15-item scale (59.0%). In the next round of minimization, the two items with the lowest frequency in each category were dropped. For categories with only two items to begin with, we included the remaining item in the overall scale. The resulting 7-item scale decreased the prevalence of enacted stigma observed by 1 percentage point (58.0%). In the next minimization exercise, only one item with the highest frequency was retained for each category. With this 5-item index, the prevalence of enacted stigma witnessed dropped to 56.0%.

Table 35. Forms of stigma and their items

Indicators	Modified Forms of Stigma	Item	Percent (n=100)	Percent who saw or observed at least one item per group
1. Percent of people working in institutions/facilities (e.g., managers, health care workers) who personally know patients who were [*fill in type of discrimination*] because they were known or suspected to have HIV/AIDS (a) neglected (b) treated differently (c) denied care (d) verbally abused (e) tested for HIV/sero-status disclosed without consent	1. Neglect	Because of HIV/AIDS, a client having to wait longer to be attended to because a provider did not want to treat them	3.0	8.0
		Not having bed pans or bed clothes changed as needed/as often for patients with HIV compared to other patients	2.0	
		Receiving less care/attention than other patients	7.0	
	2. Differential treatment/ forced to test	Requiring some clients to be tested for HIV before care was given	8.0	53.0
		Requiring some clients to be tested for HIV before scheduling surgery	30.0	
		Using latex gloves for performing non-invasive exams on clients suspected of having HIV	22.0	
		Extra precautions being taken in the sterilization of instruments used on HIV-positive patients	43.0	
	3. Denied care/ unnecessary referral	A client being denied treatment because they were known or suspected to have HIV	1.0	15.0
		A client being unnecessarily referred on to another provider or another facility because the provider did not want to treat him/her	5.0	
		Because a patient is HIV-positive, a senior health care provider pushed the client to a junior provider	11.0	
		Because a patient is HIV-positive, a junior health care provider pushed the client to a senior health care provider	4.0	
	4. HIV testing & disclosure without consent	Testing a client for HIV without their consent	19.0	21.0
		Disclosing a client's HIV status to their family without the client's consent	8.0	

Table 35. Forms of stigma and their items (continued)

Indicators	Modified Forms of Stigma	Item	Percent (n=100)	Percent who saw or observed at least one item per group
	5. Verbal abuse/gossip	Health care providers gossiping about a client's HIV status	16.0	18.0
		Scolding or blaming of a client for having HIV infection	6.0	
Percent reporting at least one form of stigma across all areas			**59.0**	

Table 36. Performance of Witnessed Enacted Stigma Indices

Number of items in index	Item(s) included in scale/Items dropped	Percent who saw or observed one or more types of enacted stigma in the last year
15	1. Because of HIV/AIDS, a client having to wait longer to be attended to because a provider did not want to treat him/her 2. Not having bed pans or bed clothes changed as needed/as often for patients with HIV compared to other patients 3. Receiving less care/attention than other patients 4. Requiring some clients to be tested for HIV before care was given 5. Requiring some clients to be tested for HIV before scheduling surgery 6. Using latex gloves for performing non-invasive exams on clients suspected of having HIV 7. Extra precautions being taken in the sterilization of instruments used on HIV positive patients 8. A client being denied treatment because they were known or suspected to have HIV 9. A client being unnecessarily referred on to another provider or another facility because the provider did not want to treat him/her 10. Because a patient is HIV-positive, a senior health care provider pushed the client to a junior health care provider 11. Because a patient is HIV-positive, a junior health care provider pushed the client to a senior health care provider 12. Testing a client for HIV without their consent 13. Disclosing a client's HIV status to their family without the client's consent 14. Health care providers gossiping about a client's HIV status 15. Scolding or blaming of a client for having HIV infection	59.0
10	Drop: 1. Not having bed pans or bed clothes changed as needed/as often for patients with HIV compared to other patients 2. Requiring some clients to be tested for HIV before care was given 3. A client being denied treatment because they were known or suspected to have HIV 4. Disclosing a client's HIV status to their family without the client's consent 5. Scolding or blaming of a client for having HIV infection	59.0

Table 36. Performance of Witnessed Enacted Stigma Indices (continued)

Number of items in index	Item(s) included in scale/Items dropped	Percent who saw or observed one or more types of enacted stigma in the last year
7	Drop: 1. Because of HIV/AIDS, a client having to wait longer to be attended to because a provider did not want to treat him/her 2. Using latex gloves for performing non-invasive exams on clients suspected of having HIV 3. Because a patient is HIV-positive, a junior health care provider pushed the client to a senior health care provider	58.0
5	Drop: 1. Requiring some clients to be tested for HIV before scheduling surgery 2. A client being unnecessarily referred on to another provider or another facility because the provider did not want to treat him/her	56.0
7 (kept 3 differential treatment items, and 1 of all other items)	1. Receiving less care/attention than other patients 2. Extra precautions being taken in the sterilization of instruments used on HIV-positive patients 3. Requiring some clients to be tested for HIV before scheduling surgery 4. Using latex gloves for perform non-invasive exams on clients suspected of having HIV 5. Because a patient is HIV-positive, a senior health care provider pushed the client to a junior health care provider 6. Testing a client for HIV without their consent 7. Health care providers gossiping about a client's HIV status	59.0
6 (kept 2 differential treatment items, and 1 of all other items)	1. Receiving less care/attention than other patients 2. Extra precautions being taken in the sterilization of instruments used on HIV-positive patients 3. Requiring some clients to be tested for HIV before scheduling surgery 4. Because a patient is HIV-positive, a senior health care provider pushed the client to a junior health care provider 5. Testing a client for HIV without their consent 6. Health care providers gossiping about a client's HIV status	58.0

Given that the most common form of enacted stigma witnessed was differential treatment/ unnecessary referral (see Table 35), we decided to conduct initial analyses to see what would happen if we kept more than one item for this category. We first created a 7-item index,

including the 3 items in the differential treatment category with the highest frequencies and the individual item with the highest frequency for all other categories. As suspected, the 7-item scale performed identically to the 15-item scale, achieving 59.0% prevalence of enacted stigma witnessed. For the final 6-item scale tested, we kept the two items with the highest frequency in the differential treatment category and the individual item with the highest frequency for all other categories. This scale resulted in a 1% drop in prevalence of enacted stigma witnessed (58.0%). Therefore, we recommend that the 7-item scale (with 3 items measuring differential treatment) be adopted to measure this domain among health care providers.

Recommendations

Based on the analysis of items tested to measure enacted stigma among PLHA in health facilities, we recommend that:

1. A new indicator measuring overall observed prevalence of enacted stigma witnessed in the past 12 months be adopted at the Essential level. To measure the overall observed prevalence, we recommend that the 7-item index, including 3 items from the differential treatment category, be measured among health care providers.
2. In addition, to the overall index, it would also be beneficial to report the levels of the specific types of discrimination witnessed, for programmatic purposes (e.g., *neglected*, *treated differently*, *denied care*, *verbally abused*, *tested for HIV/sero-status*, *disclosed without consent*).
3. We also recommend that, when feasible, follow-on questions be added after each of the enacted stigma items to ascertain the frequency of occurrence of the various types of stigma identified.
4. In addition, it would be good to know if the provider did anything after witnessing the specific type of stigma, and if so, what he/she did.

The summary tables in the Conclusion section provide a listing of all the indicators, rationale for recommendation, a list of items used to collect the appropriate data, and suggestions for aggregation of those items into an indicator.

SECTION 5.4: DISCLOSURE OF POSITIVE HIV SERO-STATUS

Personal attitudes and behaviors surrounding disclosure of HIV-positive sero-status can provide important information about personal perceptions of HIV stigma. As such, a number of questions were included in the health care provider questionnaire, including hypothetical questions about personal willingness to disclose and questions about personal HIV testing behavior and subsequent disclosure. In addition to the existing indicator for this domain, three new indicators were tested.

Existing indicator

Table 37 presents the frequency of the items tested to measure the existing indicator for this domain. Among health care providers, as in the population sample, there was little variance in response to the hypothetical question about willingness to disclose if found to be HIV-positive.

Among those who would not disclose, common reasons included: fear of shame, fear of gossip, and fear of losing care and support.

Table 37. Disclosure: Existing indicator, items, and frequencies

Existing Indicator (Source)	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)		
1. Percent of people working in institutions/facilities (e.g., manager, health care workers) who fear disclosing their HIV status because of negative reactions (Blue Book)	**If you personally found out that you were HIV-positive, would you tell anyone?**	**Yes**	**No**	**Don't know**
		88.0	11.0	1.0

New indicators

Asking about actual testing and disclosure was more informative than the hypothetical questions (see Table 38). Of those tested, 20% did not tell anyone their results. However, we do not know if their result was positive or negative. It could be that those who did not disclose were predominantly HIV-negative or vice versa. It is interesting to note the much higher rate of testing in the health care provider sample relative to the population sample. This could be attributed to a number of factors, in particular easier access to testing and more knowledge about treatment options, as well as access to them.

As in the population sample, a series of questions were asked about whether or not a person should keep their HIV-positive sero-status a secret. The answers to these provided some interesting information and worked better (in the expected direction) with health care providers than among the general population. Several of the reasons given that people should keep their status secret suggest an assumption that disclosure will lead to some form of discrimination. For example, in response to the question about whether a family member's status should be kept secret or not, all of the reasons given for keeping it a secret were related to stigma (e.g., the family member will be blamed, isolated, neglected, etc.) Alternatively, the most common reasons given for sharing one's HIV status were positive (e.g., family member will be able to receive care and support and seek counseling.) However, 25% of providers said PLHA should share their status so they don't infect more people. One potential explanation for this could be that health care providers may be more aware of the benefits of disclosing a HIV-positive sero-status (e.g., care and treatment options such as antiretroviral drugs, prevention of mother-to-child transmission, etc.) than those in the general population. They also may feel that these benefits outweigh the potential stigma and discrimination that PLHA may be exposed to following disclosure. To ensure that a statement that a family member's HIV status should remain a secret represents the fear or perception of stigma, we recommend that this question always be followed by a *why* question.

The final new indicator tested how health care providers typically learn about a patient's HIV-positive sero-status. Respondents were first asked, in general, about how they learn about PLHA in their community. Subsequent questions included specific ones about the providers' work colleagues and patients. It should be noted that, for all of these questions, general rumors/ gossip was the most common source reported. For the question pertaining to learning patients' HIV status, however, 44% reported learning from the infected person themselves. Also of interest is the fact that reports of self-disclosure (being told by an infected person about his/her HIV-positive status) are higher among health care providers than among the general population. One explanation for this could be that PLHA may feel more comfortable disclosing their HIV-positive status to health care providers, given the perceived trust a client has in his/her health care provider. The PLHA may also recognize that being open about his/her sero-status may improve the care and treatment he/she receives, or help ensure that appropriate care is given. Another alternative is that PLHA assume that their health care provider already suspects he/she is HIV-positive, given signs and symptoms. However, the fact that 44% of providers reported self-disclosure among PLHA who were not showing visible signs and symptoms seems to negate this hypothesis.

It was not possible to conduct test–re-test or inter-item reliability for the disclosure items, as none of the questions were repeated. In addition, as most of the questions asked about concrete events, it was not necessary to test the construct validity. However, we do observe a general reliability based on the consistent responses across the different measures.

Table 38. Disclosure: New indicators, items, and frequencies

New Indicators	Questions in survey corresponding to indicator(s)		Percent (n=100 if not stated)			
1. Percent of people who disclose their HIV status (added)	**Have you ever gone for an HIV test?**		**Yes**	**No**	**Don't know**	
			63.0	37.0	0.0	
	Did you tell anyone the results of your test?		**n=63**			
			Yes	**No**		
			81.0	19.1		
			n=51			
	Who did you tell?	**Family member**	**Other relative**	**Partner**	**Friend**	**Work colleague**
		19.6	3.9	74.5	17.7	13.3
2. Percent of people who think a person should be able to keep their HIV status private (added)	**If a person learns that he/she is HIV positive but not showing signs/symptoms, should this information remain this person's secret or should this information be available to the community?**		**Personal secret**	**Family secret**	**Community**	**Don't know**
			35.0	26.0	35.0	4.0
	If kept personal secret, why?		**n=35**			
	Personal/private issue		77.1			
	Person would be treated differently		31.4			
	Person would be isolated/neglect or avoided		25.7			
	If let other people know, why?		**n=35**			
	So person cannot infect others		82.9			
	So person can get care and support from the community		74.3			
	So person can encourage others to do the same		31.4			

Table 38. Disclosure: New indicators, items and frequencies (continued)

New Indicators	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)			
3. Percent of people who would want a family member's HIV-positive status to be kept secret (added)	**If a member of your family contracted HIV/AIDS, would you want it to remain a secret?**	**Personal secret**	**Family secret**	**Be open**	**Don't know**
		31.0	29.0	36.0	4.0
	If kept a family secret, why?	**n=29**			
	Family member would be…				
	Blamed	17.2			
	Have difficulty finding care and support	6.9			
	Isolated/neglected/avoided	34.5			
	Verbally abused	13.8			
	Not allowed in public places	27.6			
	People would avoid entire family	17.2			
	People would blame entire family	10.3			
	People would stop interacting with entire family	13.8			
	If would let other people know, why?	**n=36**			
	Family member would be able to receive care and support	88.9			
	Family member would be able to seek counseling	75.0			
	So person doesn't infect others	25.0			
	If a member of your family has HIV, but is not showing any symptoms/signs of AIDS, would you counsel/advise them to be open about their HIV status in the community?	**Yes**	**No**	**Depends**	**Other**
		66.0	29.0	4.0	1.0

Table 38. Disclosure: New indicators, items and frequencies (continued)

New Indicators	Questions in survey corresponding to indicator(s)				Percent (n=100 if not stated)			
4. Percent of people working in institutions/facilities (e.g., managers, health care workers) who learned about a patient's status through unofficial channels during the past year	**In a health facility, how does someone's HIV status become known to other people?**	**Infected person**	**General rumors/ gossip**	**Person's family**	**Facility/health care worker where person tested**		**Other**	
		19.0	46.0	6.0	27.0		3.0	
	Is there anyone you know in the health facility who has HIV but has yet to show signs and symptoms of AIDS?				**Yes**		**No**	
					23.0		77.0	
	How did you know that he/she has HIV infection?				**n=23**			
		Infected person	**General rumors/ gossip**	**Person's family**	**Community member**	**Health care provider where person tested**	**Read from hospital file**	**Other**
		43.5	47.8	13.0	26.1	21.7	17.4	21.7
	Do you know of a health worker colleague who has died of AIDS?				**Yes**		**No**	
					51.0		49.0	
	Which of the following have been ways through which you learned that the person died of AIDS?				**n=51**			
		Deceased told me before died	**General rumors/ gossip**	**Person's family**	**Community member**	**Announced at funeral**	**Person had obvious signs and symptoms**	
		19.6	49.0	9.8	19.6	3.9	94.1	
	Do you know of a health worker colleague who has HIV or AIDS?				**Yes**	**No**	**Don't know**	
					26.0	71.0	3.0	

Table 38. Disclosure: New indicators, items and frequencies (continued)

New Indicators	Questions in survey corresponding to indicator(s)				Percent (n=100 if not stated)	
4. Percent of people working in institutions/facilities (e.g., managers, health care workers) who learned about a patient's status through unofficial channels during the past year	**How did you know has HIV or AIDS?**				**n=26**	
		Infected person	**General rumors/ gossip**	**Person's family**	**Someone else**	**Other**
		46.2	53.9	11.5	26.9	26.9

Recommendations

1. As in the community and PLHA samples, findings indicated that neither a general indicator on willingness to disclose nor a more concrete one on actual disclosure provided much information. Therefore, we do not recommend such a general indicator.

2. However, if it is contextually possible to ask, use of an indicator on personal disclosure that asks about specific aspects of disclosure (e.g., *How many people did you disclose to? To whom did you disclose? How long did you wait between finding out your results and disclosing to someone?*) is recommended at the Expanded level. However, these specific questions are sensitive and should be asked with care (e.g., be sure to precede each question with "I don't want to know your status …").

3. Based on the analysis of indicators and items to measure disclosure, we recommend that only one of the new indicators—percent of people working in institutions/facilities (e.g., managers, health care workers) who have personally learned about a patient's HIV status through unofficial channels (e.g., gossip) in the past year—be included at the Essential level.

4. However, because the other new indicators tested provided interesting information on the views and actions of health care providers, we are recommending that they (the ones relating to whether PLHA's status should be kept secret) be collected for those wishing to have a more in-depth understanding of this domain. However, these must be followed by a *why* question to ensure that the indicator can be interpreted as indicating stigma.

SECTION 5.5: AWARENESS OF LAWS AND POLICIES TO PROTECT PLHA FROM STIGMA AND DISCRIMINATION

In addition to assessing the four domains of stigma among health care providers, it is also important to assess both the existence and awareness of policies and laws within health care institutions to protect the rights of PLHA and prevent discrimination. It is also important to measure provider willingness to report discrimination toward PLHA. Two existing indicators and one new indicator were tested among our study population to assess this area (see Tables 39 and 40). In addition to these indicators, the Blue Book recommends two indicators at the national level related to policies and discrimination within health care settings. As the scope of this project did not allow for an assessment of all health care institutions nationally, we do not report on these but do recommend that such assessments be collected.

Existing Indicators

The items asked to measure the existing indicators had good variance among the health care provider population. It is evident that many of the providers are not aware of either national policies and laws or facility-level policies. Of those who reported being aware of policies at their health facility (15 people), 40% stated that these policies were not enforced. It is clear that awareness of anti-discrimination policies needs to be increased among health care providers, so that health facilities can enforce these policies. It will be important to measure these items over time to see if providers' awareness increases. Therefore, it is recommended that both of these indicators and their corresponding items continue to be asked among health care provider

populations. It is not necessary to ask whether withholding services from PLHA is a violation of the client's human rights, as almost all of the providers interviewed stated that it was.

New indicator

In addition to assessing providers' awareness of laws and policies, it is also important to measure willingness to report discrimination if witnessed. Anti-discrimination policies will only be useful if health care providers are willing to report discrimination. In this analysis, only 30% of the 60 providers who reported witnessing some form of discrimination against PLHA in their health facility were willing to report it to a higher authority. Clearly, we need to measure such willingness over time, as we would expect an increase. However, we recommend testing additional questions to assess provider willingness to better understand their responses. In addition, only those providers who reported hearing or witnessing one of the types of enacted stigma mentioned were asked this question. It is possible that providers may not have perceived some of the items we asked about to be types of stigma and therefore may not have deemed it necessary to report them to a higher authority.

Reliability

It was not possible to assess test–re-test reliability for the knowledge of laws and policies indicators, because none of the questions were repeated in the questionnaire. In addition, as the existing indicators and items ask about concrete events, it was not necessary to assess construct validity.

Construct validity

However, the new indicator recommended asked about provider willingness. We were therefore able to assess the construct validity of this item by comparing it with the selected socio-demographic and construct validity variables. Given the small number of providers who responded to this question (n=60), only one significant difference in willingness was identified. Health care providers who were unwilling to report discrimination against PLHA were significantly more likely to have incorrect in-depth knowledge. As this finding concurs with our hypothesized relationship between in-depth knowledge and stigma, it appears that this item is accurately measuring the intended construct. Although not significantly different, the direction of a number of other relationships was as expected. For example, those who knew a colleague who died of AIDS and those who had been tested for HIV reported higher willingness to report discrimination.

Table 39. Anti-discrimination laws and policies: Existing indicators, items, and frequencies

Existing Indicators (Source)	Questions in survey corresponding to indicator(s)	Percent (n=100 if not stated)		
1. Percent of people working in institutions/facilities (e.g., managers, health care workers) who are aware of policies guaranteeing access/rights to PLHA (S&DIWG)	**Do you know of any national policies against HIV/AIDS stigma and discrimination in Tanzania?**	**Yes**	**No**	
		31.0	69.0	
	Do you know of any laws against HIV/AIDS discrimination that exist in Tanzania?	**Yes**	**No**	
		23.0	77.0	
	Are you aware of any policies to protect PLHA at your health facility?	**Yes**	**No**	
		16.0	84.0	
2. Number or percent of institutions/facilities enforcing policies guaranteeing access/rights and providing recourse (S&DIWG)	**Are these policies enforced?**	**n=15**		
		Yes	**No**	**Don't know**
		53.3	40.0	6.7
	Is withholding health services from a client suspected or known to be HIV-positive a violation of the client's human rights?	**Yes**	**No**	
		98.0	2.0	

Table 40. Anti-discrimination laws and policies: New indicator, items, and frequencies

New Indicator	Questions in survey corresponding to indicator(s)	Percent (n=60)	
1. Percent of people working in institutions or facilities (e.g. managers, health care workers) willing to report discrimination against PLHA	**If you ever saw any of the above happening to a client because he/she has HIV/AIDS, would you be willing to report to higher authority?**	**Yes**	**No**
		30.0	70.0

Recommendations

Based on the results of the analysis of the indicators and items tested to measure awareness of anti-discrimination laws and policies, we recommend that all of the indicators tested be included in the Essential set of indicators to assess this domain.

Essential-level Indicators

- Percent of people in institutions/facilities (e.g., managers, health care workers) who are aware of policies guaranteeing access/rights to PLHA
- Percent of people in institutions or facilities (e.g. managers, health care workers) willing to report discrimination against PLHA

6. PEOPLE LIVING WITH HIV/AIDS

Sample

As previously mentioned, the PLHA questionnaire was administered to a purposively selected sample of 218 people (103 women and 115 men) known to have HIV and living in/around Dar-es-Salaam district (see Table 41). Because respondents were invited to participate through counseling centers or organizations providing other services for PLHA, this sample is not likely to be completely representative of PLHA living in Dar-es-Salaam district. In addition, all participants have tested and know their HIV-positive status, which is also not representative of people living in a high-prevalence setting but with low testing rates. This is also a principally urban sample of PLHA, so respondents' experiences with stigma may differ markedly from those of PLHA in rural areas.

Table 41. Background characteristics of PLHA sample

	Female (n=103)	Male (n=115)	Total (n=218)
Age			
15–24	7.8%	14.8%	11.5%
25–34	22.3%	30.4%	26.6%
35–44	52.4%	33.9%	42.7%
>44	17.5%	20.9%	19.3%
Education			
No formal education	8.7%	2.6%	5.5%
Primary (Standard 1–7)	62.1%	67.0%	64.7%
Post-primary/Form 4	28.2%	21.7%	24.8%
University/Form 5–6	1.0%	8.7%	5.0%