



# Measures to Capture the Quality of HIV Services for Men Who Have Sex with Men and for Transgender People

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## ABBREVIATIONS

LGBT	lesbian, gay, bisexual, and transgender
MER	monitoring, evaluation, and reporting
MSM	men who have sex with men
MSMGF	Global Forum on MSM and HIV
PEPFAR	United States President's Emergency Plan for AIDS Relief
PLHA	people living with HIV/AIDS
PrEP	pre-exposure prophylaxis
SIMS	Site Improvement through Monitoring System
TasP	treatment as prevention
UNGASS	United Nations General Assembly Special Session
USAID	United States Agency for International Development

## INTRODUCTION

Achieving the best possible healthcare is an important priority both for clients and providers of HIV services. High-quality services are necessary to achieve goals for preventing HIV transmission and enhancing longevity for people living with HIV. Moreover, quality drives demand for services. Thus, delivery of efficient, high-quality services would maximize limited resources to combat the epidemic and achieve global targets (see Box 1).

This is especially important for key populations, such as men who have sex with men (MSM) and transgender people, who are at increased risk for HIV and face unique service barriers, because of social marginalization (World Health Organization, 2014).

The goal of achieving quality in service provision is common in HIV programming, but progress in the field has stalled, because of a lack of clarity about how to operationalize quality and measure end roads to success. In our previous report (Andrinopoulos, Do, Wares, & Scholl, 2016, which is available here: <https://www.measureevaluation.org/resources/publications/tr-16-133>), we used findings from a systematic literature review to develop a definition of quality and an analytical framework for the quality of HIV services geared to MSM and transgender people.<sup>1</sup> In this new report, we present existing measures of quality proposed in our previous framework, highlight the current gaps, and suggest future directions. This report—produced by MEASURE Evaluation, a project funded by the United States Agency for International Development (USAID) and the United States President’s Emergency Plan for AIDS Relief (PEPFAR)—is directed to policymakers, program managers, and researchers who collect and use data about quality to design, implement, and evaluate programs along the HIV care continuum for MSM and transgender people.

### Box 1. The 90-90-90 goals

To diagnose 90 percent of all people living with HIV, provide treatment to 90 percent of those diagnosed HIV-positive, and achieve viral suppression among 90 percent of those receiving treatment, by the year 2020 (Joint United Nations Programme on HIV/AIDS, 2014).

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<sup>1</sup> Many of the quality standards presented here apply equally to people who are not members of these populations. We highlight quality standards for MSM and transgender people, because of the wider social marginalization that also influences their care within the health system, their health-seeking behavior, and the absence of appropriate training in the medical curricula for their health needs.

## WHAT IS QUALITY?

In Box 2, we provide a holistic definition of quality based on previous work. The three domains of quality are that services are technically competent, culturally competent, and stigma-free (see Figure 1). Within these domains, services should be evidence-based, ensure continuity of care, provide diverse service types, and be voluntary and confidential. In existing programs and literature, the focus on quality is often directed only at the provider level, with little attention given to the organizational structure and wider health system within which providers work. To bridge this gap, we recommend that quality be operationalized and measured at the organizational and health system levels. Below we present elements of quality that should be considered at all three levels.

### At the Provider Level

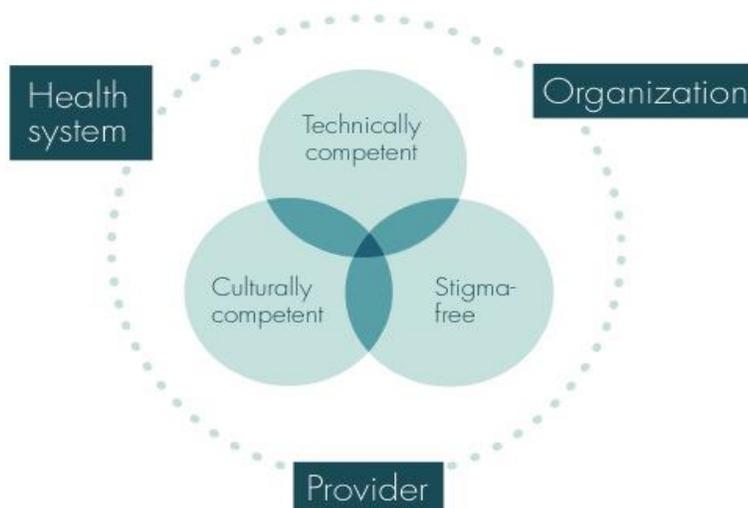
To support high-quality HIV services, providers should:

- Understand health problems affecting MSM and transgender people and how to treat these problems and their underlying causes.
- Make appropriate referrals and follow-up.
- Use appropriate interpersonal communication techniques to build trust and rapport with clients.
- Provide clients with correct information about HIV prevention, disease course, treatment, and new technologies, where available (such as pre-exposure prophylaxis (PrEP) and treatment as prevention (TasP) in a way that clients understand.
- Ensure client consent for services and maintain confidentiality of client information.
- Provide stigma-free and nonjudgmental services.
- Understand diversity in sexual orientation and gender identity and use correct terminology.
- Be supportive of same-sex spouses of clients, extension of services to partners, and involvement of partners and social support networks in client care.

### Box 2. Quality defined for HIV services among MSM and transgender people

High-quality HIV services for this population are based on scientific evidence about the appropriate package of services. These services are delivered in a culturally and technically competent manner, through efficient and effective linkages across varied service delivery models that ensure continuity of care (facility-based, community-based, public, and private settings) and HIV service types (diagnosis, treatment, retention, and ancillary services supporting these). Quality services are voluntary, confidential, and timely. They are delivered in a stigma-free environment, by providers who are equipped to address HIV and other overlapping health problems and concerns of MSM and transgender people, and who understand the culture, values, and social challenges faced by these populations (Andrinopoulos, et al., 2016).

Figure 1. The three domains of quality in HIV services



## **At the Organizational Level**

To support high-quality HIV services, organizations should:

- Seek and support high-quality providers (with the capacities noted above) through hiring criteria, continuing education, and supervision.
- Provide criteria for taking appropriate health and sexual histories.
- Have systems to facilitate and track referrals to ancillary services when needed, such as for mental health and substance use.
- Have the equipment and resources necessary to address health needs of MSM and transgender people.
- Provide proper intake forms and training of registration and security personnel.
- Have mechanisms in place to ensure the confidentiality of health information.
- Adopt and implement nondiscrimination policies for sexual and gender minorities.
- Adopt policies that are friendly to the spouses and life partners of MSM and transgender people.
- Have single-occupancy or gender-neutral restrooms, educational materials that address MSM and transgender people, and mechanisms to prohibit harassment by other clients in common areas.

## **At the Health System Level**

To support high-quality HIV services, health systems should:

- Ensure efficient and effective referrals and linkages across organizations.
- Develop and support health information systems that accurately capture patient information and make it available over time and across providers to attain quality standards. Quality measures should be promoted as part of the data captured in tracking the HIV services delivered to MSM and transgender populations.
- Ensure diversity in service delivery models. This mix might include HIV services nested within primary healthcare services; stand-alone HIV services; MSM- and transgender-friendly providers in public or private settings; HIV services that link clients to other healthcare needs; and, for transgender clients, comprehensive services that include transitioning coupled with HIV services. The degree of variety needed will depend on the context, the level of stigma and discrimination, and local preferences.
- Recruit and train MSM and transgender people as providers.
- Provide special credentials of HIV service providers, general practitioners, and ancillary healthcare providers who achieve appropriate skills for provision of healthcare services for MSM and transgender people.
- Provide national guidelines for taking health and sexual histories of MSM and transgender people.
- Provide national guidelines, including nondiscrimination policies explicitly for MSM and transgender people.

## QUALITY MEASURES

Our previous literature review included 137 documents published from 2000–2015 (Andrinopoulos, et al., 2016). From these documents, we identified 11 instruments that included quantitative measures of quality.<sup>2</sup> Ten measures were at the provider level, one at the health-system level, and none at the organization-level.

At the provider level, measures spanned the three domains of quality—“technically competent,” “culturally competent,” and “stigma-free”—with many measures overlapping these domains. Measures of provider-level quality were mostly from the provider perspective (Abell, Rutledge, McCann, & Padmore, 2007; Banwari, Mistry, Soni, Parikh, & Ghandi, 2015; Hanssman, Morrison, Russian, Shiu-Thornton, & Bowen, 2010; Strong & Folse, 2015). Two measures were from the provider and client perspective (Schneider, Kaplan, Greenfield, Li, & Wilson, 2004; Wilson & Kaplan, 2000), and two were from the client perspective (Bankoff, McCullough, & Pantalone, 2013; Dukers-Muijers, et al., 2012). The one measure at the health-system level captured the perspective of MSM through a global online survey, and measured perceptions of homophobia in their countries (Arreola, Hebert, Makofane, Beck, & Ayala, 2012). Identified measures are also limited, in that most were specific to or tested among MSM, limiting the relevance and applicability to other populations (such as transgender people).

The properties of each measure (such as scale items, subscales, and Cronbach’s alpha<sup>3</sup>) are summarized in Table 1, according to the unit of analysis (provider, organization, or health system). Within each level, measures are ordered by the quality domain captured by most of the items, though many scales overlapped.

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<sup>2</sup> Our original literature review was not conducted to identify measures, but rather to review the literature on quality. Therefore, the measures presented are not an exhaustive list.

<sup>3</sup> Cronbach’s alpha—the most widely used objective measure of reliability, expressed as a number between 0 and 1—is used to measure the internal consistency of a test or scale. Acceptable values are thought to range from 0.70 to 0.95, with a maximum alpha value of 0.90 recommended (Tavakol & Dennick, 2011).

**Table 1. Summary of evaluation tools for measuring quality of HIV services for MSM & transgender people**

Construct (Reference)	Items & Reliability Coefficients
<b>CULTURAL COMPETENCY</b>	
<b>I. Clinical and Cultural Competence in Transgender Health Provision</b>	
<p><b>Hansmann, Morrison, Russian, Shiu-Thornton, &amp; Bowen, 2010</b>            Scale items provided in the publication may be retrieved from  <a href="https://www.ncbi.nlm.nih.gov/pubmed/20303797">https://www.ncbi.nlm.nih.gov/pubmed/20303797</a></p>	<p>The study used a pre- and post-test impact evaluation with one group, and qualitative follow-up interviews with a subsample of respondents. Participants included healthcare or social service providers in the northwest United States who were involved in direct provision of health or social service care or health education, attended the entire community competency training (CCT), and completed both the pre- and post-training surveys (N=55). The CCTs were designed to educate providers about specific strategies to improve the quality of care for transgender people.</p> <p>Authors used the <i>Cultural Competence Self-Assessment Questionnaire (CCSAQ)</i> and the American Association of Medical Colleges' 2005 <i>Tools for Assessing Cultural Competency Trainings</i> as guidelines to develop a <b>16-item scale for clinical and cultural competence in transgender health provision</b>. Cultural competence scores for the total scale were high (pre-training: <math>\alpha = .86</math>; post-training: <math>\alpha = .87</math>). The 4 subscales were:</p> <ol style="list-style-type: none"> <li>1. Knowledge of community (pre-training <math>\alpha = .73</math>; post-training <math>\alpha = .54</math>)</li> <li>2. Service delivery and practice (pre-training <math>\alpha = .45</math>; post-training <math>\alpha = .53</math>)</li> <li>3. Resources and linkages (pre-training <math>\alpha = .68</math>; post-training <math>\alpha = .65</math>)</li> <li>4. Behavior consciousness (pre-training <math>\alpha = .74</math>; post-training <math>\alpha = .79</math>)</li> </ol> <p>All items used a 5-point Likert scale from "excellent" to "poor," with one reverse-scored item.</p>
<b>II. Knowledge about Homosexuality Questionnaire</b>	
<p><b>Banwari, Mistry, Soni, Parikh, &amp; Gandhi, 2015</b>            Scale items provided in the publication may be retrieved from  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943442/#!po=3.12500">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943442/#!po=3.12500</a></p>	<p>A convenience sampling strategy was used to identify eligible respondents for a cross-sectional survey assessing knowledge and attitudes toward homosexuality. Participants were medical students and interns (N=244) in a medical college in India. The <b>Sex Education and Knowledge about Homosexuality Questionnaire (SEKHQ) comprises 32 statements</b> that were developed by compiling statements used in three previous studies. The questions cover factual information about homosexuality and assess participant's knowledge about misconceptions. Example items are "Sexual orientation is usually well-established by adolescence," and "A homosexual person's gender identity does not agree with his/her biological sex," among others. Response were "true," "false," or "don't know." The instrument was previously used in a 2009 Serbian study (Dunjić-Kostić et al., 2012) (<math>\alpha = 0.74</math>). Similarly, the instrument demonstrated high reliability in this 2015 study (<math>\alpha = 0.72</math>).</p>

Provider Level

	Construct (Reference)	Items & Reliability Coefficients
	<b>CULTURAL COMPETENCY (CONTINUED)</b>	
	<b>III. Knowledge, Attitudes, and Experiences with Lesbian, Gay, Bisexual, and Transgender (LGBT) Clients</b>	
	<p><b>Kelley, Chou, Dibble &amp; Robertson, 2008</b></p> <p>Scale items provided in the publication may be retrieved from  <a href="http://www.ncbi.nlm.nih.gov/pubmed/18615300">http://www.ncbi.nlm.nih.gov/pubmed/18615300</a></p>	<p>This study tested the influence of a 2-hour curriculum for medical students to increase knowledge of LGBT health issues, acceptance of LGBT people as a client population, and awareness of the important role providers play in mitigating health disparities and advocating for LGBT clients. Seventy-five students completed a survey before and after the intervention. Authors developed a <b>16-item scale to measure knowledge, attitudes, and experiences related to LGBT clients</b> in the following three domains:</p> <ol style="list-style-type: none"> <li>1. Knowledge of LGBT health issues and access barriers (5 items)</li> <li>2. Attitudes toward LGBT clients and providing services to them (6 items)</li> <li>3. Experiences with LGBT people (5 items)</li> </ol> <p>All items used a 5-point response scale from "strongly agree" to "strongly disagree."</p>
Provider Level	<b>TECHNICAL COMPETENCY</b>	
	<b>I. The Physician-Patient Interaction/ Communication Skills</b>	
	<p><b>Wilson &amp; Kaplan, 2000</b></p> <p>Scale items provided in the publication may be retrieved from  <a href="http://journals.lww.com/jaids/Abstract/2000/12150/Brief_Reports.5.aspx">http://journals.lww.com/jaids/Abstract/2000/12150/Brief_Reports.5.aspx</a></p>	<p>This scale was validated with HIV-positive clients enrolled in the Boston-Area Nutrition for Healthy Living cohort study. Participants were HIV-positive clients (N = 264) throughout eastern Massachusetts, USA, and the primary physicians involved in their HIV care (N=69). About half (52%) of the HIV-positive clients noted same-sex contact as their primary risk factor for HIV. Further, one-fourth (25%) of physicians self-identified as gay, lesbian, or bisexual. Authors developed a <b>9-item scale with 2 subscales to measure the physician-client interaction:</b></p> <ol style="list-style-type: none"> <li>1. General communication (5 items; <math>\alpha = .93</math>)</li> <li>2. HIV-specific communication (4 items; <math>\alpha = .92</math>)</li> </ol> <p>All items used a 5-point response scale, from "excellent" to "poor."</p>
<p><b>Schneider, Kaplan, Greenfield, Li, &amp; Wilson, 2004</b></p> <p>Scale items provided in the publication may be retrieved from  <a href="https://www.ncbi.nlm.nih.gov/pubmed/15566438">https://www.ncbi.nlm.nih.gov/pubmed/15566438</a></p>	<p>A large and diverse cross-sectional sample of HIV-positive people (N=620) and their providers (N=22: 20 physicians and 2 nurse practitioners) was selected from more than 11 different sites in a metropolitan area of Boston, Massachusetts, USA. More than half (57% ) of participants reported same-sex contact as their primary HIV risk factor. Authors used a <b>30-item scale to assess 7 distinct dimensions of the physician-client relationship likely to improve adherence with antiretroviral therapy</b>, as follows:</p> <ol style="list-style-type: none"> <li>1. General communication (5 items; <math>\alpha = .93</math>)</li> <li>2. Provision of HIV-specific information (4 items; <math>\alpha = .93</math>)</li> <li>3. Egalitarian/participatory decision-making style (7 items; <math>\alpha = .86</math>)</li> <li>4. Overall satisfaction with care (4 items; <math>\alpha = .92</math>)</li> <li>5. Willingness to recommend the physician to others (2 items; <math>\alpha = .81</math>)</li> <li>6. Trust in the physician (5 items; <math>\alpha = .71</math>)</li> <li>7. Quality adherence dialogue (3 items; <math>\alpha = .93</math>)</li> </ol> <p>All items used a 5-point response scale, from "excellent" to "poor".</p>	

Construct (Reference)	Items & Reliability Coefficients
<b>TECHNICAL COMPETENCY (CONTINUED)</b>	
<p><b>Bankoff, McCullough, &amp; Pantalone, 2013</b></p> <p>Scale items provided in the publication may be retrieved from  <a href="https://www.ncbi.nlm.nih.gov/pubmed/23449678">https://www.ncbi.nlm.nih.gov/pubmed/23449678</a></p>	<p>A purposive sampling strategy was used to recruit a cross-sectional convenience sample of HIV-positive men who self-identified as gay, bisexual, or MSM (N=171) from 2 university-affiliated public, urban, outpatient HIV/AIDS clinics in Seattle, Washington, USA. Authors used an established 9-item self-report scale that was originally validated with HIV-positive clients (Wilson &amp; Kaplan, 2000), to develop <b>3 subscales examining aspects of the client-provider relationships</b> (from the client's perspective):</p> <ol style="list-style-type: none"> <li>1. Quality of information offered by the provider (3 items; <math>\alpha = .90</math>)</li> <li>2. Provider's interactional style (2 items; <math>\alpha = .91</math>)</li> <li>3. Provider's ability to conduct a screening of the client's psychosocial status (4 items; <math>\alpha = .92</math>)</li> </ol> <p>All items were rated using a 5-point response scale, from "excellent" to "poor."</p>
<p><b>Dukers-Muijers, et al., 2012</b></p> <p>Scale items provided in the publication may be retrieved from  <a href="http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-12-1118">http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-12-1118</a>.</p>	<p>The study used a 1-group pre- and post-test design and health impact assessment framework to evaluate the effects of a policy change regarding integration of public sexual health and hospital-based care at an HIV center in the southern region of the Netherlands. Participants included heterosexual individuals and MSM (N=254), who completed a self-administered questionnaire regarding pre-test sexual healthcare needs. Authors developed an <b>extended version of the validated QUOTE-HIV instrument (Hekkink, et al., 2003), which comprised 17 HIV items and 3 sexually transmitted infection (STI) items to assess quality of care from the client perspective</b>. No Cronbach's alphas were provided in this study. In the original study conducted by Hekkink, et al., Cronbach's alpha was 0.80. The top-ranking items in importance were privacy regarding STI outcomes and that information was provided in an understandable language. Other items asked clients to report their perceptions of provider expertise on STIs, if the provider facilitated an opportunity for STI screening, if the provider took them seriously, cooperation with other providers, sufficient time for consultation, and openness to conversation on sexual health.</p>
<b>II. Knowledge</b>	
<p><b>Strong &amp; Folse, 2015</b></p> <p>Scale items provided in the publication may be retrieved from  <a href="https://doi.org/10.3928/01484834-20141224-07">https://doi.org/10.3928/01484834-20141224-07</a></p>	<p>A pre- and post-test study design was used in a convenience sample of nursing students (N=58) from an undergraduate university in the midwestern United States to evaluate the effects of an educational intervention. Knowledge level and attitudes regarding LGBT client care were assessed using modified survey tools, including a <b>15-item "true" or "false" LGBT Knowledge Questionnaire</b> (<math>\alpha = 0.54</math>), which included 2 items taken from the <i>Knowledge about Homosexuality Questionnaire</i> (Harris, et al, 1995) and 13 items developed by the study research team, following a review of literature.</p>

	Construct (Reference)	Items & Reliability Coefficients
<b>Provider Level</b>	<b>STIGMA-FREE</b>	
	<b>I. HIV/AIDS Provider Stigma</b>	
	<b>Abell, Rutledge, McCann, &amp; Padmore, 2007</b>  Scale items not provided in publication.	Convenience and purposive sampling methods were used to identify eligible participants in the eastern Caribbean (Barbados, Grenada, Trinidad, and Tobago) to respond to a survey exploring attitudes and projected behaviors toward people living with HIV/AIDS (PLHA). Participants primarily included sports coaches, and health and social service providers across the region (N=90). Items were adapted from the <b>HIV/AIDS and stigma questionnaire</b> (Herek, 1999) and used to identify the following 6 constructs:  <ol style="list-style-type: none"> <li>1. Warmth: feeling favorably toward HIV-positive or HIV-affected people, such as children, adults, MSM, injecting drug users, and caregivers (<math>\alpha = .85</math>)</li> <li>2. Comfort: ease in interacting with PLHA in school, at work, shopping, and sharing tableware (<math>\alpha = .78</math>)</li> <li>3. Distancing: minimizing contact or association with PLHA (<math>\alpha = .86</math>)</li> <li>4. Condemnation: judging or wishing to control PLHA (<math>\alpha = .77</math>)</li> <li>5. Transmission myth: HIV acquisition by sharing glasses, using public toilets, or being coughed or sneezed on (<math>\alpha = .72</math>)</li> <li>6. Counsel: perceived ability to effectively educate and support others regarding prevention, testing, and treatment (<math>\alpha = .93</math>)</li> </ol> Items for the warmth subscale were ranked using response ranges from 0 (least warmth) to 100 (most warmth). All other subscales were ranked using a 7-item response scale from 1 (least) to 7 (most).
	<b>II. Attitudes toward Homosexuals Questionnaire (AHQ)</b>	
	<b>Banwari, Mistry, Soni, Parikh, &amp; Gandhi, 2015</b>  Scale items provided in the publication may be retrieved from  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943442/#!po=3.12500">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943442/#!po=3.12500</a>	A convenience sampling strategy was used to identify eligible respondents for a cross-sectional survey assessing knowledge and attitudes toward homosexuality. Participants were medical students and interns (N=244) in a medical college in India. The <b>Attitudes towards Homosexuals Questionnaire (AHQ) comprises 20 statements</b> , which were developed via compilation of statements used in three previous studies. Example items are, "Homosexuality is merely a different kind of lifestyle that should not be condemned" and "If a man has homosexual feelings, he should try to do everything he can to overcome them," among others. While the AHQ instrument was not validated prior to use, it was previously used in a 2009 Serbian study (Dunjić-Kostić, et al., 2012) ( $\alpha = 0.92$ ). The instrument was similarly found to have a high Cronbach's alpha in this 2015 study ( $\alpha = 0.810$ ). All items were rated using a 5-point Likert response scale, from 1 "strongly agree" to 5 "strongly disagree."
<b>Strong &amp; Folsie, 2015</b>  Scale items provided in the publication at:  <a href="https://doi.org/10.3928/01484834-20141224-07">https://doi.org/10.3928/01484834-20141224-07</a>	A pre- and post-test study design was used in a convenience sample of nursing students (N=58) from an undergraduate university in the midwestern United States to evaluate the effects of an educational intervention. Knowledge level and attitudes regarding LGBT client care were assessed using modified survey tools, including the following: <ul style="list-style-type: none"> <li>• <b>Modified Attitudes towards Lesbians and Gay Men Scale, expanded to include bisexual- and transgender-specific items</b> (<math>\alpha = .95</math>)</li> <li>• <b>6-item Likert-Style LGBT Healthcare Scale</b>, (<math>\alpha = .54</math>), which allows for written elaboration by participants</li> </ul>	

Construct (Reference)	Items & Reliability Coefficients
<b>STIGMA-FREE (CONTINUED)</b>	
<b>III. Perceived Stigma/External Homophobia</b>	
<p data-bbox="128 370 159 613" style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Health Systems Level</b></p> <p data-bbox="184 427 506 483"><b>Arreola, Hebert, Makofane, Beck, &amp; Ayala, 2012</b></p> <p data-bbox="184 500 573 613">May be retrieved from <a href="http://msmgf.org/wp-content/uploads/2015/09/GMHR_2012.pdf">http://msmgf.org/wp-content/uploads/2015/09/GMHR_2012.pdf</a></p>	<p data-bbox="604 370 1997 573">In this study, the Global Forum on MSM and HIV (MSMGF) created a global online survey to assess 12 key domains of evidence-informed HIV prevention services for MSM. Key topic areas were evaluated using scales or indices to measure perceptions of external and internalized homophobia, access and exposure to HIV prevention activities, and knowledge and attitudes about new and emerging technologies. Survey measures were newly developed and adapted from a review of reports from public health and nongovernmental agencies. The survey was pilot-tested among the target population prior to global survey implementation (in English, Spanish, French, Russian, and Chinese). Survey participants were MSM and their healthcare providers (N=5,066).</p> <ul data-bbox="653 589 2028 678" style="list-style-type: none"> <li>• Authors developed a <b>5-item scale to assess perceptions of homophobia in-country</b>. Overall internal consistency reliability was 0.86; with very strong reliability also demonstrated across different languages (<math>\alpha</math>'s ranging from 0.82 – 0.90).</li> </ul> <p data-bbox="604 695 1801 719">All items used a 4-point Likert scale, with responses ranging from "strongly agree" to "strongly disagree."</p>

## Limitations of Cited Studies

We found the following limitations to the available measures of quality that have been summarized:

- Several studies used small, cross-sectional, nonrandom samples of convenience, potentially increasing the likelihood of bias while also limiting generalizability to other populations and settings.
- As for scale properties, not all Cronbach's alpha scores included in Table 1 exceed the minimum acceptable level of 0.70, potentially undermining the reliability of the scale for measuring the identified construct.
- Given the multidimensional nature of quality, it is likely that the scale items reported do not comprehensively assess all theoretical aspects of the identified construct.
- Construct validity estimates would have provided additional weight, particularly for the broader application of scale items across multiple settings; unfortunately, these estimates were not always reported in the available literature.
- Given that participants across studies were of diverse memberships and regions, cross-cultural validation is still needed to ensure relevance to different global settings, target populations (such as MSM and transgender people), and provider groups (physicians, nurses, and medical students).

## MEASURES AVAILABLE FROM GLOBAL AND PROGRAMMATIC REPORTING

In addition to the instruments identified through the literature review, we searched indicators and tools used by global health agencies and donors to track the HIV epidemic and programmatic response. These include the United Nations General Assembly Special Session (UNGASS) indicators (UNGASS, 2008), the PEPFAR Monitoring, Evaluation, and Reporting (MER) indicators (PEPFAR, 2017), and the Site Improvement through Monitoring System (SIMS) tools that USAID and PEPFAR use internally to evaluate performance. These instruments offer a rapid analysis of the national landscape related to HIV service provision that is comparable across organizations and country programs. While the UNGASS<sup>4</sup> and MER indicators collect information about key populations in general, and the reach of programs for key populations groups, they do not capture nuanced information that would facilitate the assessment of quality standards as proposed in the quality analytical framework.

### Box 3. SIMS assessment

The SIMS tool evaluates the quality of service delivery or program oversight to identify performance issues that may impact patient outcomes or the integrity of reporting for monitoring, evaluation, and reporting (MER) targets or disaggregates. Low final scores (reds and yellows) from these core essential elements (CEEs) highlight potential issues with service delivery, site performance or oversight, and/or documentation of patient results.

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<sup>4</sup> Five of the UNGASS indicators (2,8,9,14, and 38) are relevant to key populations for HIV; they provide information on disease burden and behaviors among MSM. Although these indicators do not inform on the quality of services provided, collection of data for one or more of these indicators is a reflection of country-level attention to the needs, risks, and vulnerabilities of MSM and is therefore indicative of the need and/or willingness to target health systems reformation towards more care that is stigma-free and technically and culturally competent.

In contrast, the SIMS tools (specifically the facility tool, the above-site-level tool, and the community tool) include standards and questions that cover most elements of quality proposed in the three domains (technically competent, culturally competent, and stigma-free) at the organization and health-system levels. Many of these standards are found within the specific module of the tools addressing specific key populations. At the organizational level, the SIMS facility tool includes standards and related questions to document the following:

- Confidentiality of health information
- Nondiscrimination policies
- Availability of lubricants and condoms
- Referral services
- A treatment plan that includes mental health and social needs
- One staff member trained in the needs of key populations served by the facility
- Activities to reduce stigma and discrimination

However, the following proposed elements of quality are not measured by the facility tool:

- Continuing education and supportive supervision for MSM and transgender-friendly providers
- Appropriate intake forms
- Training of registration and security personnel
- Policies friendly to the life partners of MSM and transgender people
- Availability of gender-neutral bathrooms
- Educational material for MSM and transgender people
- Mechanisms to prohibit harassment in common areas

At the health system-level, the above-site-level and community-level tools include standards and related questions to measure the following:

- Referrals and linkages across services
- Availability of service delivery models that meet the needs of clients
- The existence of nondiscrimination policies

However, the following proposed elements of quality are not measured by the above-site-level and community-level tools:

- Health information systems linking patient information across providers
- Promotion of quality measures in the tracking of HIV service reach
- Policies to support recruitment of MSM and transgender people as service providers
- Availability of special credentialing for MSM and transgender-friendly providers
- Availability of national guidelines for recording appropriate sexual and health history for MSM and transgender people

## FUTURE DIRECTIONS

The availability of measures and tools to document the quality of HIV services for MSM and transgender people is increasing, as demonstrated by the varied rigorous approaches presented in this report. However, the resources and approaches used tend to differ based on the lens of each investigator, which provides an incomplete picture of quality at any one time. For example, researchers conducting special studies tend to focus on the provider level, likely because this unit of analysis is easier to measure descriptively and to use for intervention studies. In contrast, global indicators tend to focus on the macro (health systems) and mezzo (facilities) the levels of analysis as they track program implementation; however, these units of analysis lack nuanced measures of quality and information about providers. Although all providers have individual agency and responsibility to provide high-quality care, they are also products of the training institutions, professional associations, organizations, and health systems in which they work. Bringing together information from across these three levels for a holistic approach to quality analysis would help to target intervention points appropriately.

Future research should focus on cross-cultural assessment of a provider-level instrument to measure quality. Forums for sharing information from the SIMS assessment tool should also be considered, because this tool was the most comprehensive instrument identified for measuring quality at the level of organizations and health systems.

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