



## Interventions to Address HIV-Related Stigma: Literature Summary

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## INTRODUCTION |

HIV-related stigma is prevalent in the US and internationally and presents in different forms including perceptions of stigma, internalized stigma, and experienced or enacted stigma.<sup>1-3</sup> HIV-related stigma has been consistently associated with a myriad of negative outcomes including delayed HIV testing and treatment, poorer medical care and medication adherence, and reduced responsiveness to prevention messages.<sup>1,4-6</sup> High levels of stigma and negative consequences of stigma have been documented in the US South.<sup>7,8</sup> Interventions to reduce HIV-related stigma have been tested and the findings described in peer reviewed journal articles, though there remains a lack of interventions targeting stigma that have been evaluated in the US South. Several literature reviews of the stigma reduction literature (spanning late 1990s-2013) have been published and are summarized in another SASI manuscript (<https://southernaids.files.wordpress.com/2017/08/stigma-systematic-literature-review.pdf>).<sup>1,2,9-12</sup> The following table includes summaries of articles describing interventions to reduce HIV-related stigma that are included in the reviews as well as additional articles identified through a literature search focusing on publications since the most recent stigma review article in 2013 . These articles are organized by category: individual level interventions, health care professional interventions, group-level interventions, and multi-level interventions that address stigma at the individual level as well as group or community level. Please email us if you are aware of a relevant study that we have not included here. Although we have attempted to be very thorough in our review, we feel certain that there are articles we have inadvertently missed; therefore, we could appreciate being notified of any article missed via the website or at [susan.reif@duke.edu](mailto:susan.reif@duke.edu).

## METHODS |

We performed a literature search in PubMed, Web of Science and Google Scholar using a combination of keywords “HIV,” stigma” or “HIV stigma” + “reduce”/”reduction” and/or “intervention”/”program” (concluded February 2017). We primarily focused on US studies but also included international studies that had rigorous research methodology, such as including a control group or utilizing tested stigma measurements, and seemed applicable to a US setting or represented an intervention strategy/target population that was not well covered by other publications. We included studies that were described in the systematic review of stigma reduction literature as well as those identified through the literature search, with a focus on studies published since the most recent literature review in 2013. Studies from the United States were also generally limited to those with documented and sound research methodology (including control group, program evaluation, randomized controlled trials- RCTs). We also attempted to represent different target populations (women, people of color, MSM, teens, healthcare providers, church populations) as much as possible as well as different settings and intervention types (church, online, trainings, hospitals/clinics, media, client homes, health education programs, larger policy, etc.)

## OVERALL IMPRESSIONS/LIMITATIONS OF THE STIGMA INTERVENTION STUDIES |

The literature on stigma interventions compiled in other reviews and in this review identify promising interventions to reduce HIV-related stigma, particularly at the individual or small group level. However, there are critical gaps and limitations in the research literature on stigma interventions that impede the potential value of this information in shaping interventions and policies to effectively address stigma. Limitations include lack of control group in many studies as well as small sample sizes, small or medium effect sizes, lack of long term follow up, and lack of adequate rigor in evaluation methodology or lack of description of evaluation processes altogether, which makes it difficult to ascertain the impact or scope of intervention. In addition, the literature includes few studies concentrated on populations disproportionately affected by HIV including minority MSM and individuals living in the Deep South. No research on stigma interventions for transgender individuals were identified. Further, the interventions generally targeted individuals or small groups, thus more community level intervention research is needed to assure that multi-faceted interventions are available to address stigma.

## Stigma reduction interventions to reduce individual level stigma

Article Citation	Study Purpose	Description of Intervention/Study	Results/Conclusions/Limitations
<p>1) Barroso, J. Relf, M. et al (2014)<sup>13</sup></p> <p>A randomized controlled trial of the efficacy of a stigma reduction intervention for HIV-infected women in the Deep South.</p> <p><i>AIDS Patient Care &amp; STDs</i>  <a href="http://online.liebertpub.com/doi/pdfplus/10.1089/apc.2014.0014">http://online.liebertpub.com/doi/pdfplus/10.1089/apc.2014.0014</a></p>	<p><b>Randomized controlled trial (RCT)</b> to compare self-esteem, coping self-efficacy and internalized stigma in HIV-positive women in the <b>Deep South</b></p>	<p><u>Sample:</u> 99 HIV+ women from clinics, health departments and AIDS Services Organizations from NC who demonstrated high levels of stigma at baseline; 82% African American.</p> <p><u>Intervention:</u> Intervention arm (n=51): received an <b>iPod Touch with the stigma education video</b>, “Someday: Voices of HIV-Positive Women” - featuring five HIV+ women and the ways in which stigma has affected their lives. The women viewed the video at least once a week for 4 weeks. Control arm (n=49): received an iPod Touch with nothing loaded on it.</p> <p><u>Measures:</u> IHSS, a 28-item, multidimensional measure of internalized HIV stigma was used. This measure examines four factors associated with internalized stigma: stereotypes, disclosure concerns, social relationships, and self-acceptance.</p>	<p><u>Results:</u></p> <ul style="list-style-type: none"> <li>- Stigma reduction intervention <b>effective in reducing stigma and enhancing self-esteem and coping self-efficacy</b> over 90 days.</li> <li>-Dose of participation did not have an impact.</li> <li>-Overall effect of participation leveled off after 30 days.</li> </ul> <p><u>Limitations:</u></p> <p>Expensive: cost was \$200 per iPod Touch.</p>
<p>2) Harper GW et al (2014)<sup>14</sup></p> <p>Stigma reduction in adolescents and young adults newly diagnosed with HIV: Findings from the Project ACCEPT intervention</p> <p><i>AIDS Patient Care and STDs</i>  <a href="http://online.liebertpub.com/doi/abs/10.1089/apc.2013.0331">http://online.liebertpub.com/doi/abs/10.1089/apc.2013.0331</a></p>	<p>Group pilot intervention to decrease 4 domains of HIV-related stigma among <b>teens diagnosed with HIV within the past year</b>: personalized stigma, disclosure concerns, negative self-image, and concerns with public attitudes about people with HIV</p>	<p><u>Sample:</u> 50 HIV+ participants (28 male, 22 female); 16-24 year olds from four Adolescent Trials Network sites (Chicago, New York, Miami, and Memphis)</p> <p><u>Intervention:</u> Project ACCEPT (Adolescents Coping, Connecting, Empowering and Protecting Together): <b>Group-based 12-week intervention</b> that included 3 individual sessions, 9 two-hour interactive/gender-specific weekly group sessions. Groups co-facilitated by a counselor and peer.</p> <p><u>Measures:</u> Data on stigma collected at baseline, post-intervention and 3 months post-intervention</p>	<p><u>Results:</u> Post-intervention, group participants had reductions in HIV-related stigma in 3 areas – disclosure, personalized and negative self-image; only negative self-image stigma reduction was maintained at 3 months.</p> <p>Intervention reduced stigma for males across all four dimensions of stigma, with some continuation of effects at the 3-months follow up. Females only showed decreases in personalized stigma post-intervention; effect was not maintained at 3-month follow up.</p> <p><u>Limitations:</u> Small sample size of 50; only used 3-month follow-up period; lack of a comparison group</p>

## Stigma reduction interventions to reduce individual level stigma

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<p>3) Rao D et al. (2012)<sup>15</sup></p> <p>Feasibility, acceptability, and preliminary efficacy of the unity workshop: an internalized stigma reduction intervention for African American women living with HIV.</p> <p><i>AIDS Pt Care STDS</i>. 2012;26(10):614-20. <a href="https://www.ncbi.nlm.nih.gov/pubmed/22984780">https://www.ncbi.nlm.nih.gov/pubmed/22984780</a></p>	<p>Evaluated an adaptation of an existing <b>HIV stigma reduction intervention</b>, HIV Stigma Toolkit, developed by the International Center for Research on Women (ICRW), for African American women.</p>	<p><u>Sample</u>: Pilot tested with 24 African American, HIV+ women in WA</p> <p><u>Intervention</u>: Incorporated participatory educational exercises to dispel HIV misinformation, increase awareness of HIV-related stigma and develop skills for addressing stigmatizing situations. Intervention administered in two 4-5 hour sessions.</p> <p><u>Measures</u>: Measured internalized stigma before and immediately after intervention and 1 week post-intervention.</p>	<p><u>Results</u>: <b>Stigma scores decreased</b> from baseline to post-intervention, as well as from baseline to 1 week post-intervention, though effect was weaker in longer time period. Stigma reductions showed a trend for statistical significance.</p> <p>Intervention found to be feasible and acceptable to participants based on open-ended survey questions</p> <p><u>Limitations</u>: Study was not powered to determine efficacy, lacked a control group, short follow-up period of one week.</p>
<p>4) Farber E, et al (2014)<sup>16</sup></p> <p>Perceived stigma reductions following participation in mental health services integrated within community-based HIV primary care.</p> <p><i>AIDS Care</i> <a href="http://www.tandfonline.com/doi/abs/10.1080/09540121.2013.845285">http://www.tandfonline.com/doi/abs/10.1080/09540121.2013.845285</a></p>	<p>Examines <b>short-term perceived stigma</b> outcomes in adults receiving HIV/mental health services</p>	<p><u>Sample/Intervention</u>: 48 adult HIV+ individuals (19 female, 29 male) <b>receiving mental health services</b> co-located at 2 community-based HIV safety net primary care clinics in the <b>Southeastern US</b>.</p> <p><u>Measures</u>: Participants completed self-administered questionnaire at baseline mental health visit and 3 months post-baseline. Examined 3 dimensions of perceived stigma: distancing, blaming and discrimination at baseline and after 3 months of receiving MH treatment.</p>	<p><u>Results</u>: Found <b>significant reductions in self-reported perceived stigma</b> in each of the 3 stigma domains from baseline to 3-month follow-up.</p> <p><u>Limitations</u>: Absence of a control group; small sample size; need randomized controlled trial with larger samples to determine efficacy/effectiveness of MH services in addressing HIV stigma; study design did not allow a way to examine how MH services may decrease perceived HIV stigma; only measured short-term outcomes</p>

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<p>5) Miles, MS et al (2003)<sup>17</sup></p> <p>An HIV self-care symptom management intervention for African American mothers</p> <p><i>Nursing Research</i>  <a href="http://www.ncbi.nlm.nih.gov/pubmed/14639081">http://www.ncbi.nlm.nih.gov/pubmed/14639081</a></p>	<p>Examines if a <b>home-based maternal HIV self-care symptom management intervention</b> reduces emotional distress and stigma and improve health among low-income HIV+ African American women caregivers</p>	<p><u>Sample:</u> 109 HIV+ women in <b>Southeastern US</b>: 59 in intervention group and 50 in the control group.</p> <p><u>Intervention:</u> Intervention group received a nurse-delivered program to provide HIV and self-care education and management skills building (6 home visits over 3 months with follow-up phone calls). Control group received usual HIV medical care</p> <p><u>Measures:</u> Surveys at baseline, follow-up (1 month and 6 months post-intervention) collected data on stigma and other psychosocial factors.</p>	<p><u>Results:</u> Intervention group had <b>lower stigma scores and higher physical functioning</b> at 6 months than control group. Intervention group also had a reduction in depression/dejection and tension/anxiety. Health-related quality of life (health distress, energy level) did not improve.</p> <p><u>Limitations:</u> Attrition in both groups, higher among women in intervention group; Lack of an attention-only group (could not determine if it was the attention received or intervention content that influenced results).</p>
<p>6) Rios-Ellis, B et al (2015)<sup>18</sup></p> <p>Evaluation of a community health worker intervention to reduce HIV/AIDS stigma and increase HIV testing among underserved Latinos in the Southwestern U.S.</p> <p><i>Public Health Reports</i>  <a href="http://www.publichealthreports.org/issueopen.cfm?articleID=3387">http://www.publichealthreports.org/issueopen.cfm?articleID=3387</a></p>	<p>Evaluate intervention using <i>promotores</i> (HIV-infected and affected community workers) to <b>reduce HIV stigma and increase willingness to seek HIV testing</b> among Latinos in the Southwestern US (Los Angeles, CA; San Ysidro, CA; and El Paso, TX)</p>	<p><u>Sample Size:</u> 579 individuals (57% female, 43% male).</p> <p><u>Intervention:</u> <i>One 60-90 min interactive group education session held at different community locations over 3 months in 2008.</i></p> <p><u>Measures:</u> Pre and posttests (immediately following the intervention)</p>	<p><u>Results:</u> <b>HIV stigma scores decreased</b> from pretest to posttest and HIV knowledge/perception of HIV risk scores increased significantly from pretest to posttest.</p> <p>Greater decrease in HIV stigma scores and increase in HIV knowledge from pretest to posttest among women. No change in participant willingness to test for HIV in the next 3 months.</p> <p><u>Limitations:</u> No control group; no longer term assessment of intervention effects; limited generalizability: sample included participants who were available to take part in a group session.</p>
<p>7) Christensen JL et al. (2013)<sup>19</sup></p> <p>Reducing shame in a game that predicts HIV risk reduction for young adult men who have sex with men: a randomized trial delivered nationally over the web</p> <p><i>Journal of the International AIDS Society</i>  <a href="http://www.jiasociety.org/index.php/jias/article/view/18716">http://www.jiasociety.org/index.php/jias/article/view/18716</a></p>	<p><b>Online RCT</b> to test effectiveness of a downloadable simulation video game, (SOLVE) to put high-risk YMSM in “affectively charged risky situations” that can be found on first dates/hook-ups. Purpose was to <b>reduce shame</b> among participants and reduce risky behavior over 3 months</p>	<p><u>Sample:</u> 921 HIV-negative, self-identified African American, White or Latino MSM, aged 18-24 years old, living in the U.S. who had UAI with a non-primary partner during 3 months prior to enrollment (control condition, 484; SOLVE treatment condition, 437)</p> <p><u>Intervention:</u> Participants were immersed in a <b>virtual reality</b> with different situations that force choosing risky behaviors or not, at a house party and then a nightclub and get feedback on choices from a virtual “host”</p> <p><u>Measures:</u> Control group completed the same baseline and immediate post-test measures as intervention group, but did not play the game.</p>	<p><u>Results:</u> Intervention participants experienced an immediate mean <b>shame decrease</b> while control participants experienced an increase in shame. <b>Change in shame predicted decrease in unprotected anal intercourse (UAI).</b> Direct effect of the treatment on UAI was not significant.</p> <p><u>Limitations:</u> Hardware/software challenges for participants; less-than-ideal retention rate (69%) at 3 months; unclear if reduction in shame predicts reduction in UAI after 3 months.</p>



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Article Citation	Study Purpose	Description of Intervention/Study	Results/Conclusions/Limitations
<p>8) Echenique, M et al. (2013)<sup>19</sup></p> <p>Impact of a secondary prevention intervention among HIV-positive older women</p> <p><i>AIDS Care</i>  <a href="http://dx.doi.org/10.1080/09540121.2012.712666">http://dx.doi.org/10.1080/09540121.2012.712666</a></p>	<p><b>RCT</b> looked at 6-month outcomes in a study for <b>HIV+ older women</b>, <i>Project ROADMAP, Reeducating Older Adults in Maintaining AIDS Prevention</i> Outcomes included HIV knowledge, perceived stigma and high risk sexual behavior</p>	<p><u>Sample:</u> 106 HIV+ women aged 45 years or older, sexually active in the past year, recruited from a primary care clinic in a large urban medical center (65 intervention; 41 control)</p> <p><u>Intervention:</u> Both randomized groups received an educational brochure on sexual risk reduction. Control group participants received care as usual. Intervention group participants were scheduled for 4 <b>weekly psycho-educational group sessions</b> (2 hours each) designed for older HIV+ adults and covering HIV education, risk reduction, skill building on safer sex negotiation.</p> <p><u>Measures:</u> Outcomes assessed at 6 months.</p>	<p><u>Results:</u> Intervention group more likely to report a <b>reduction in unprotected sex and in perceived stigma</b> at 6 months. Increase in HIV knowledge identified in intervention group.</p> <p><u>Limitations:</u> Sample might not be representative of general older HIV+ population. Intervention did not directly target HIV-related stigma.</p>
<p>9) Abel, E (2007)<sup>20</sup></p> <p>Women with HIV and stigma</p> <p><i>Fam Community Health</i>  <a href="http://www.ncbi.nlm.nih.gov/pubmed/17159623">http://www.ncbi.nlm.nih.gov/pubmed/17159623</a></p>	<p>Pilot experimental study to look at <b>emotional writing disclosure (EWD)</b> intervention for HIV+ women to improve perception of HIV-related stigma compared to women in a control group. EWD is based on the idea that writing about traumatic events helps people make sense of these events and decreases intrusive thoughts (cognitive reorganization)</p>	<p><u>Sample:</u> 44 women of different racial/ethnic backgrounds: 21 women in experimental group; 23 women in control group; most in their 40s and African American.</p> <p><u>Intervention:</u> Women <b>randomly assigned</b> to an experimental group where they wrote about their feelings about having HIV or control group where they wrote about a “neutral topic” for 3 days in a row, 20 mins each day.</p> <p><u>Measures:</u> The women had 6 contacts: survey on stigma perception (week 1); writing on visits 2-4 (week 1); stigma questions at visits 5 (week 6) and 6 (week 12).</p>	<p><u>Results:</u> Intervention group essays had higher percentage of positive emotional words than control group. Experimental group compared with the control group showed greater cognitive reorganization and <b>significantly improved perceived HIV-related stigma scores</b>.</p> <p><u>Limitations:</u> Need more studies with a larger sample and longer follow-up time and a booster session to better assess effects of intervention. Potential for contamination between intervention and control groups.</p>
<p>10) Batey et al. (2016)<sup>21</sup></p> <p>Adaptation and implementation of an intervention to reduce HIV-related stigma among healthcare workers in the United States: Piloting of the FRESH workshop</p> <p><i>AIDS Patient Care and STDs</i>  <a href="https://www.ncbi.nlm.nih.gov/pubmed/27849373">https://www.ncbi.nlm.nih.gov/pubmed/27849373</a></p>	<p>Assess feasibility and acceptability of adaptation of FRESH Workshop (Finding Respect and Ending Stigma around HIV) in the US, <b>healthcare setting workshop with both healthcare workers and people living with HIV PLWH</b> to address HIV stigma.</p>	<p><u>Sample:</u> 17 healthcare workers, 19 PLWH in 2 workshops conducted in Alabama</p> <p><u>Intervention:</u> 1.5 day workshop including both healthcare workers and PLWH designed to sensitize to HIV stigma and <b>develop collaborate strategies to increase HIV awareness and decrease stigma</b>. Topics included HIV knowledge, methods for addressing stigma and coping, among others.</p> <p><u>Measures:</u> Questionnaire completed pre and post-workshop, included open ended questions.</p>	<p><u>Results:</u> Acceptance and review of workshop was positive. <b>Detection of HIV stigma in workplace increased</b> with statistical significance. Observed change in healthcare empowerment among HIV+ participants.</p> <p><u>Limitations:</u> Small sample size; convenience sample</p>

## Individual/Group level intervention for health care professionals

Article Citation	Study Purpose	Description of Intervention/Study	Results/Conclusions/Limitations
<p>11) Varas-Díaz, N, et al (2015)<sup>22</sup></p> <p>The role of emotions in the reduction of HIV/AIDS stigma among physicians in training</p> <p><i>AIDS Care</i>  <a href="http://dx.doi.org/10.1080/09540121.2015.1090537">http://dx.doi.org/10.1080/09540121.2015.1090537</a></p>	<p><b>RCT</b> to reduce HIV/AIDS stigma among <b>Latino/Spanish-speaking healthcare providers (HCPs)</b> in training in Puerto Rico</p>	<p><u>Sample:</u> 507 second-year medical students at the 4 largest medical schools in Puerto Rico</p> <p><u>Intervention:</u> Groups of 20 randomized into intervention or control group. Control group received HIV epidemiology workshop and intervention group received intervention called “SPACES,” a 9-hour workshop divided into 3 sessions: 1) education about stigma and its consequences 2) role of negative emotions in promoting HIV stigma attitudes and 3) skills for interactions with PLWH without stigma</p> <p><u>Measures:</u> HIV stigma, emotions associated with HIV, HIV knowledge at baseline, after workshop, 6 and 12 months post-intervention.</p>	<p><u>Results:</u> <i>Intervention group</i> had significantly <b>lower mean levels of stigma</b> at follow-up compared to control. Experiencing more positive emotions rather than negative towards PLWH acted as a mediator in the relationship between intervention participation and stigma. Information about HIV/AIDS had no influence on stigma reduction.</p> <p><u>Limitations:</u> Self-selection bias, as medical students volunteered in limited free time.</p>
<p>12) Li, L et al (2013)<sup>23</sup></p> <p>Reducing HIV-related stigma in health care settings: A randomized controlled trial in China</p> <p><i>American Journal of Public Health</i>  <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3556241/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3556241/</a></p>	<p><b>RCT in hospitals in China</b> called “White Coat, Warm Heart” to decrease healthcare providers’ stigmatizing attitudes/behaviors and increase comfort when working with PLWH in primary care settings</p>	<p><u>Sample:</u> 44 service providers randomly selected from each of 40 participating hospitals in 2 provinces in China. Hospitals were randomized to intervention or control group.</p> <p><b>Recruited and trained 20-25 popular opinion leaders (POLs) from each intervention hospital site to educate and change stigmatizing attitudes/behavior in intervention hospitals</b></p> <p><u>Intervention:</u> Health facilitators implemented the intervention of training POLs; POLs attended 4 group sessions and 3 refresher training sessions over the course of the project to spread behavior change messages. No POLs were identified/trained for the control group hospitals.</p> <p><u>Measures:</u> Surveys done at baseline, 6, and 12 months.</p>	<p><u>Results:</u> <b>Reductions in prejudicial attitude toward PLWH and avoidance intent</b> from baseline to 6-months and at 12 months significantly greater in intervention group. More prejudicial attitude associated with a provider with no prior contacts with PLWH, province, and a greater number of HIV-positive individuals receiving care at the hospital where the provider was located. <b>Greater institutional support</b> was also found in the intervention group at follow-up.</p> <p><u>Limitations:</u> Implemented in 2 provinces – generalizability to other areas is limited</p>

## Individual/Group level intervention for health care professionals

Article Citation	Study Purpose	Description of Intervention/Study	Results/Conclusions/Limitations
<p>13) Oanh et al, (2008)</p> <p>Improving hospital-based quality of care in Vietnam by reducing HIV-related stigma and discrimination</p> <p><i>Population Council</i>  <a href="https://www.icrw.org/wp-content/uploads/2016/10/Improving-hospital-based-quality-of-care-in-Vietnam-by-reducing-HIV-related-stigma-and-discrimination.pdf">https://www.icrw.org/wp-content/uploads/2016/10/Improving-hospital-based-quality-of-care-in-Vietnam-by-reducing-HIV-related-stigma-and-discrimination.pdf</a></p>	<p>Evaluated a <b>multi-faceted intervention</b> to reduce HIV-related stigma and discrimination in 4 hospitals in Vietnam</p>	<p><u>Sample:</u> 4 hospitals in two provinces in Vietnam. Total sample size of 1592.</p> <p><u>Intervention:</u> In all hospitals, intervention included HIV stigma-related components: establishment of a hospital steering committee, staff training, hospital policy development, supplies to facilitate the practice of universal precautions and educational materials</p> <p>Two intervention arms: <i>Arm 1</i> - staff from 2 hospitals received a half-day training on HIV/AIDS and a full day on universal precautions. <i>Arm 2:</i> Staff from the other 2 hospitals received the same training, but also <b>received training on social stigma co-facilitated by people living with HIV</b>.</p> <p><u>Measures:</u> Participants completed surveys at baseline and end of intervention</p>	<p><u>Results:</u> At baseline, high levels of fear-based and value-based stigma reported. Discriminatory behaviors and hospital practices also common at baseline, and associated with fear-based stigma. Arm 1 and Arm 2 interventions successful in reducing fear- and value-based stigma. Both interventions successful in reducing various discriminatory behaviors and hospital practices. Impact of Arm 2 intervention greater than Arm 1 intervention.</p> <p><u>Limitations:</u> cross-sectional data collection – data not matched from baseline to follow-up by participant;</p>
<p>14) Geibel et al. (2017)<sup>24</sup></p> <p>Stigma reduction training improves healthcare provider attitudes toward, and experiences of young marginalized people in Bangladesh</p> <p><i>Journal of Adolescent Health</i>  <a href="http://www.jahonline.org/article/S1054-139X(16)30375-5/fulltext">http://www.jahonline.org/article/S1054-139X(16)30375-5/fulltext</a></p>	<p>Evaluation of a <b>stigma reduction training program for healthcare providers</b> in Bangladesh</p>	<p><u>Sample:</u> 300 health care providers in Bangladesh participated in the stigma reduction training. Survey of 637 of their clients ages 15-24 assessed satisfaction with provider services.</p> <p><u>Intervention:</u> <b>2-day HIV and sexual and reproductive health and rights training</b> (including a 90-minute session on stigma issues) and 1 day training 6 months later. Training topics included exercises assessing their own stigma experiences, talking about sex, gender norms, trans and MSM terminology and competency.</p> <p><u>Measures:</u> Baseline provider survey measuring stigmatizing attitudes towards young people and another survey after 6 months. Client satisfaction surveys after provider interactions after baseline and 6-month provider education and assessment</p>	<p><u>Results:</u> Report of working in a facility with provisions against discrimination of PLWH and perceived consequences of violating such provisions increased. Statistically significant <b>decreases in provider agreement that PLWH should be ashamed of themselves</b> and that sexually active young people and MSM engage in “immoral behavior.”</p> <p><b>Young clients reported improvement in overall satisfaction with services</b> after the stigma trainings</p> <p>Increased disclosure of sexual activity among clients also reported.</p> <p><u>Limitations:</u> Lack of comparison group, conducted mostly among female providers in one large NGO.</p>



## Stigma interventions for groups/community

Article Citation	Study Purpose	Description of Intervention/Study	Results/Conclusions/Limitations
<p>15) Deroose KP et al (2016)<sup>25</sup></p> <p>Effects of a pilot church-based intervention to reduce HIV stigma and promote HIV testing among African Americans and Latinos</p> <p><i>AIDS &amp; Behavior</i>  <a href="http://link.springer.com/article/10.1007%2Fs10461-015-1280-y">http://link.springer.com/article/10.1007%2Fs10461-015-1280-y</a></p>	<p>Examines preliminary outcomes of a <b>multi-dimensional faith-based intervention</b> (Facilitating Awareness to Increase Testing for HIV - FAITH) including reducing HIV stigma in African American and Latino churches in LA</p>	<p><u>Sample:</u> 4 churches were matched by race-ethnicity, denomination and size - two medium-sized African American Baptist churches, and two small Latino Pentecostal churches. One of each pair received the intervention and the other served as a control. A large Latino Catholic church also received the intervention. 1,235 participants were reached by the intervention.</p> <p><u>Intervention:</u> <b>Collaboration between faith community and local health departments to address stigma.</b> Key components included Education, Peer Leader Workshops, HIV Sermons, and Congregation-based HIV Testing</p> <p><u>Measures:</u> Church members surveyed at baseline and after intervention (6-month follow-up)</p>	<p><u>Results:</u> <b>No difference or change in stigma</b> or mistrust between intervention and control churches Within individual churches, significant decrease in stigma and mistrust for the Latino Catholic and Pentecostal intervention churches. No change in stigma for the 2 African American Baptist churches.</p> <p>For HIV testing, both Latino Pentecostal and African American Baptist intervention churches <b>had higher rates of testing</b> than their paired control churches.</p> <p><u>Limitations:</u> Small number of churches enrolled meant limited statistical power (effects were small); differences between pairs at baseline, especially among African American churches, could have impacted results.</p>
<p>16) Cahill, S et al (2012)<sup>26</sup></p> <p>Community-based HIV prevention interventions that combat anti-gay stigma for men who have sex with men and for transgender women</p> <p><i>Journal of Public Health Policy</i>  <a href="http://www.hivlawandpolicy.org/resources/community-based-hiv-prevention-interventions-combat-anti-gay-stigma-men-who-have-sex-men">http://www.hivlawandpolicy.org/resources/community-based-hiv-prevention-interventions-combat-anti-gay-stigma-men-who-have-sex-men</a></p>	<p><b>Reviews literature</b> on community level interventions (CLI) that address stigma</p>	<p>Article outlined some <b>successful CLIs that address stigma</b> including school-based interventions to reduce anti-gay stigma and social isolation and social marketing campaigns to increase family acceptance of LGBT, and broaden society support for MSM of color.</p>	<p>School-based Interventions: <b>Gay Straight Alliances (GSAs)</b> are the most widely-used school-based stigma intervention, are usually student-run and offer LGBT students/allies counseling, support and “safe spaces.” Various studies have shown increased safety at GSA schools and decreased risky HIV behavior.</p> <p>Family Acceptance Through Social Marketing: Some successful interventions address <b>family stigma</b> including a social marketing campaign by Gay Men’s Health Crisis in NYC (included a video that showed a black father supporting his gay son). Need outcome evaluation of these types of programs.</p> <p>Transgender Women and HIV: Increasing number of interventions to address <b>stigma in trans women</b> although most lack rigorous evaluation. For example, Gay Men’s Health Crisis created a media campaign in NYC to expand trans women’s access to public accommodations using educational campaigns.</p>

## Stigma interventions for groups/community

Article Citation	Study Purpose	Description of Intervention/Study	Results/Conclusions/Limitations
<p>17) Apinundecha et al (2007)<sup>27</sup></p> <p>A community participation intervention to reduce HIV/AIDS stigma, Nakhon Ratchasima province, northeast Thailand</p> <p><i>AIDS Care</i>  <a href="https://www.ncbi.nlm.nih.gov/pubmed/18058400">https://www.ncbi.nlm.nih.gov/pubmed/18058400</a></p>	<p>A multi-phase process was used to create an intervention to <b>increase HIV knowledge and reduce HIV-related stigma in a village in Thailand</b></p>	<p><u>Sample:</u> Two of six villages included in initial HIV stigma community surveys were randomly selected as intervention and control group. A <b>community participatory process</b> was undertaken to develop and implement the HIV stigma reduction intervention.</p> <p><u>Intervention:</u> Interventions included 1) <b>Youth volunteers</b> were taught about HIV and stigma and how to disseminate HIV information in their community, 2) PLWH met with community members after a sermon regarding HIV to build understanding and empathy, and 3) Youth volunteers renovated a corner of the local library to include information about HIV</p> <p><u>Measures:</u> Pre- and post-test surveys conducted to evaluate levels of HIV/AIDS knowledge and stigma in among community members in study villages (n=32 intervention; n=34 control) before and after the stigma intervention</p>	<p><u>Results:</u> Initial surveys revealed significant HIV/AIDS- related stigma in the surveyed villages. Controlling for initial levels of HIV/AIDS knowledge and stigma, the intervention had a <b>significant effect on HIV/ AIDS knowledge scores</b> (p &lt;0.01) <b>and HIV/stigma scores</b> (p&lt;0.01) compared to control village.</p> <p>Participatory observation by the researchers on villagers' perceptions and behavior were consistent with the quantitative results. Qualitative data showed changes in fear and understanding of PLWH as well as increased interaction between PLWH and other villagers.</p> <p><u>Limitations:</u> expense of project; length of development process; small sample size</p>
<p>18) Yang et al (2004)<sup>28</sup></p> <p>HIV/AIDS-related discrimination in Shanxi rural areas of China</p> <p><i>Biomedical and environmental sciences</i>  <a href="https://www.ncbi.nlm.nih.gov/pubmed/?term=HIV%2FAIDS-related+discrimination+in+Shanxi+rural+areas+of+China">https://www.ncbi.nlm.nih.gov/pubmed/?term=HIV%2FAIDS-related+discrimination+in+Shanxi+rural+areas+of+China</a></p>	<p>A community based stigma/discrimination reduction intervention piloted in two counties in <b>rural China</b></p>	<p><u>Sample:</u> One of the study communities had been affected by HIV, primarily through blood donation while the other was demographically similar but had no known cases of HIV.</p> <p><u>Intervention:</u> Established an <b>activity center for people living with HIV/AIDS</b>; developed training and information materials about HIV; providing care, support and condoms to PLWH</p> <p><u>Measures:</u> Interviews and focus groups with 33 participants (including PLWH, their family members, community leaders, medical care professionals, teachers and villagers). Structured questionnaire administered to 18-65 years old villagers both pre- (n=417) and post-intervention (n=400) activities.</p>	<p><u>Results:</u> High levels of baseline stigma and instances of discrimination were noted in both counties including fear of testing due to community stigma; lack of disclosure also high among PLWH.</p> <p>Statistically significant <b>increases in HIV-related knowledge post-intervention and decreases in negative attitudes toward PLWH</b>. Knowledge regarding the effectiveness of condoms in preventing HIV significantly increased post intervention and there was a slight increase in recent use of condoms.</p> <p><u>Limitations:</u> small sample of PLWH</p>

## Stigma interventions for groups/community

Article Citation	Study Purpose	Description of Intervention/Study	Results/Conclusions/Limitations
<p>19) Adam et al (2011)<sup>29</sup></p> <p><u>hivstigma.com</u>, an innovative web-supported stigma reduction intervention for gay and bisexual men</p> <p><i>Health Education Research</i>  <a href="https://www.ncbi.nlm.nih.gov/pubmed/21242322">https://www.ncbi.nlm.nih.gov/pubmed/21242322</a></p>	<p>Evaluates a <b>web based intervention</b> to decrease HIV-related stigma and promote wellness, testing and support among gay men</p>	<p><u>Sample:</u> 8 bloggers moderated discussions about stigma over 5 months on a popular gay website. An initial survey was completed by 1,942 participants via the website and 1,791 completed post-intervention survey.</p> <p><u>Intervention:</u> Developed through a community-based process. The <u>hivstigma.com</u> campaign, based on the question, ‘If you were rejected every time you disclosed, would you?’ Social marketing campaign invited men to a website where the implications of HIV stigma could be addressed in a <b>web-based public forum</b>. Objectives included raising awareness of HIV stigma among HIV-negative men and reducing stigmatizing practices toward HIV-positive men.</p> <p><u>Measures:</u> Pre-intervention and post intervention survey regarding stigma-related attitudes, beliefs and behaviors, risk practices</p>	<p><u>Results:</u> There were 20,844 unique visitors to the site averaging more than 5 min each; 4,384 visitors returned more than 10 times.</p> <p>Survey results identified a statistically significant increase among those aware of the intervention in <b>reduction of stigma-related attitudes and behaviors</b> and in recognition that HIV-positive gay men face stigma in the gay community and that stigma reduces the likelihood of HIV disclosure.</p> <p><u>Limitations:</u> The participants in the survey were not all the same at baseline and follow-up therefore opening the potential for factors other than the intervention to explain the change in attitudes. In addition, no long-term effects were measured.</p>
<p>20) Jain et al. (2013)<sup>30</sup></p> <p>Community-based interventions that work to reduce HIV stigma and discrimination: results of an evaluation study in Thailand</p> <p><i>Journal of the International AIDS Society</i>  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3833104/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3833104/</a></p>	<p>Evaluated the outcomes associated with year-long project to address HIV stigma and discrimination within 11 communities in Thailand</p>	<p><u>Sample:</u> 11 study communities were included in the study. A sampling frame of households was developed in each community, and households were selected using systematic random sampling.</p> <p><u>Intervention:</u> <b>Addressed HIV stigma and discrimination with activities such as HIV education campaigns and “Funfairs,” (combination of education and entertainment)</b></p> <p><u>Measures:</u> Surveys conducted at baseline (n=560) and end of the project (n=560) regarding HIV knowledge and stigma domains: fear of HIV infection through daily activity, shame associated with having HIV and blame towards PLWH.</p>	<p><u>Results:</u> Statistically significant <b>increases found in HIV transmission knowledge</b>; statistically significant <b>declines in fear of HIV infection</b> and shame associated with having HIV were detected from baseline to post-intervention.</p> <p>Respondents exposed to three specific intervention activities were less likely to exhibit stigma for the dimensions of fear compared to respondents exposed 0-1 interventions; Knowing someone with HIV was associated with low fear and shame, and females were less likely to possess attitudes of shame compared to males.</p> <p><u>Limitations:</u> lack of control group, did not control for correlation among respondents in the same household.</p>

## Stigma interventions for groups/community

Article Citation	Study Purpose	Description of Intervention/Study	Results/Conclusions/Limitations
<p>21) Go et al. (2017)<sup>7,31</sup></p> <p>Increased survival among HIV-Infected PWID receiving a multi-level HIV risk and stigma reduction intervention: Results from a randomized controlled trial</p> <p><i>JAIDS</i>  <a href="http://journals.lww.com/jaids/Abstract/2017/02010/Increased_Survival_Among_HIV_Infected_PWID.9.aspx">http://journals.lww.com/jaids/Abstract/2017/02010/Increased_Survival_Among_HIV_Infected_PWID.9.aspx</a></p>	<p>Implemented a multi-level 4 arm <b>RCT</b> aimed at stigma reduction among HIV-positive <b>injecting drug users</b> in 32 Vietnam communities with outcome goals of adherence and decreased mortality</p>	<p><u>Sample:</u> <b>4 arm RCT:</b> 1) standard of care; 2) <b>community level stigma reduction</b>; 3) <b>individual level</b> post-test counseling and support groups; 4) <b>both community and individual intervention.</b></p> <p><u>Intervention:</u> Individual level intervention included additional post-test counseling sessions and group sessions to address education needs, coping with stigma, social support, and disclosure. Community arm included community education to individuals and groups with community video screenings</p> <p><u>Measures:</u> Measures included interviews, blood samples to determine HIV progression and examination by a physician at baseline (443 participants), 6, 12, 18 and 24 months. Also assessed medication adherence.</p>	<p><u>Results:</u> Mortality was 23% over 2 years, 73% of which were HIV-related. There was a statistically significant <b>difference in mortality between arms</b>, as those receiving the community and individual level intervention had lower mortality at 24 months than the other groups. For those receiving both individual and community level intervention and not on ART at the beginning of the study with low CD4 count, declines in mortality were significant. The individuals receiving both interventions also had significantly <b>higher uptake of antiretroviral therapy</b> at follow-up.</p> <p><u>Limitations:</u> Could not control for self-reporting bias; 44% missed at least one follow up appointment; incarceration rate high over course of study (23%)</p>
<p>22) Kerr et al (2015)</p> <p>The effects of a mass media HIV-risk reduction strategy on HIV-related stigma and knowledge among African American adolescents</p> <p><i>AIDS Patient Care and STDs</i>  <a href="http://online.liebertpub.com/doi/10.1089/apc.2014.0207">http://online.liebertpub.com/doi/10.1089/apc.2014.0207</a></p>	<p><b>RCT</b> to examine effects of <b>risk reduction intervention and media intervention</b> on HIV risk and stigma among African American teens in cities in GA, NY, RI and SC.</p>	<p><u>Sample:</u> 1,613 African American adolescents, ages 14–17 years</p> <p><u>Intervention:</u> Participants randomized to participate either in the sexual-risk reduction [Focus on Youth (FOY)] or general health curriculum [Promoting Health Among Teens (PHAT)].</p> <p>The FOY Intervention had previously shown a reduction in HIV risks among African American teens. Two cities (1 in Northeast and 1 in the Southeast) also received a <b>culturally-tailored media intervention</b> (TV and radio) that promoted reduction in HIV-risk reduction behaviors.</p> <p><u>Measures:</u> Assessed HIV knowledge and stigma at baseline, 3, 6 and 12 months.</p>	<p><u>Results:</u> Participants in <b>media cities demonstrated lower stigma</b> at 3 months (<math>p&lt;0.10</math>). The effects had diminished at 6-month follow-up.</p> <p>FOY group also in a media city had lower 3-month (<math>p&lt;0.05</math>) and 12-month (<math>p&lt;0.10</math>) stigma scores than non-media FOY participants. FOY media group had lower stigma than PHAT media group after baseline for all intervals after baseline.</p> <p><u>Limitations:</u> Sample of African American teens so may not be generalizable to other populations; self-reported data - could be impacted by motivational biases.</p>

1. Stangl AL, Lloyd JK, Brady LM, Holland CE, Baral S. A systematic review of interventions to reduce HIV-related stigma and discrimination from 2002 to 2013: how far have we come? *Journal of the International AIDS Society*. 2013;16(3 Suppl 2):18734.
2. Sengupta S, Banks B, Jonas D, Miles MS, Smith GC. HIV interventions to reduce HIV/AIDS stigma: a systematic review. *AIDS and behavior*. 2011;15(6):1075-1087.
3. Misir P. Structuration Theory: A Conceptual Framework for HIV/AIDS Stigma. *Journal of the International Association of Providers of AIDS Care*. 2015;14(4):328-334.
4. Katz IT, Ryu AE, Onuegbu AG, et al. Impact of HIV-related stigma on treatment adherence: systematic review and meta-synthesis. *Journal of the International AIDS Society*. 2013;16(3 Suppl 2):18640.
5. Whetten K, Reif S, et al. Trauma, mental health, distrust, and stigma among HIV-positive persons: Implications for effective care. *Psychosomatic Medicine*. 2008;70:531-538.
6. Rueda S, Mitra S, Chen S, et al. Examining the association between HIV-related stigma and health outcomes in people living with HIV/AIDS: a series of meta-analyses. *BMJ Open*. 2016;6(7).
7. Kerr JC, Valois RF, DiClemente RJ, et al. The effects of a mass media HIV-risk reduction strategy on HIV-related stigma and knowledge among African American adolescents. *AIDS Patient Care STDS*. 2015;29(3):150-156.
8. Reif S, Sullivan K, Wilson E, Berger M. HIV/AIDS Care and Prevention Infrastructure in the US Deep South. 2016; <https://southernaids.files.wordpress.com/2016/03/hiv-aids-care-and-prevention-infrastructure-in-the-u-s-deep-south1.pdf>.
9. Brown L, Macintyre K, Trujillo L. Interventions to reduce HIV/AIDS stigma: what have we learned? *AIDS education and prevention : official publication of the International Society for AIDS Education*. 2003;15(1):49-69.
10. Mahajan AP, Sayles JN, Patel VA, et al. Stigma in the HIV/AIDS epidemic: a review of the literature and recommendations for the way forward. *AIDS (London, England)*. 2008;22 Suppl 2:S67-79.
11. Nyblade L, Stangl A, Weiss E, Ashburn K. Combating HIV stigma in health care settings: what works? *Journal of the International AIDS Society*. 2009;12:15.
12. Loutfy M, Tharao W, Logie C, et al. Systematic review of stigma reducing interventions for African/Black diasporic women. *Journal of the International AIDS Society*. 2015;18:19835.
13. Barroso J, Relf MV, Williams MS, et al. A randomized controlled trial of the efficacy of a stigma reduction intervention for HIV-infected women in the Deep South. *AIDS patient care and STDs*. 2014;28(9):489-498.
14. Harper GW, Lemos D, Hosek SG. Stigma reduction in adolescents and young adults newly diagnosed with HIV: findings from the Project ACCEPT intervention. *AIDS patient care and STDs*. 2014;28(10):543-554.
15. Rao D, Desmond M, Andrasik M, et al. Feasibility, acceptability, and preliminary efficacy of the unity workshop: an internalized stigma reduction intervention for African American women living with HIV. *AIDS Patient Care STDS*. 2012;26(10):614-620.
16. Farber EW, Shahane AA, Brown JL, Campos PE. Perceived stigma reductions following participation in mental health services integrated within community-based HIV primary care. *AIDS Care*. 2014;26(6):750-753.
17. Miles MS, Holditch-Davis D, Eron J, Black BP, Pedersen C, Harris DA. An HIV self-care symptom management intervention for African American mothers. *Nurs Res*. 2003;52(6):350-360.
18. Rios-Ellis B, Becker D, Espinoza L, et al. Evaluation of a Community Health Worker Intervention to Reduce HIV/AIDS Stigma and Increase HIV Testing Among Underserved Latinos in the Southwestern U.S. *Public Health Rep*. 2015;130(5):458-467.
19. Christensen JL, Miller LC, Appleby PR, et al. Reducing shame in a game that predicts HIV risk reduction for young adult MSM: a randomized trial delivered nationally over the Web. *J Int AIDS Soc*. 2013;16(3 Suppl 2):18716.
20. Abel E. Women with HIV and stigma. *Fam Community Health*. 2007;30(1 Suppl):S104-106.
21. Batey DS, Whitfield S, Mulla M, et al. Adaptation and Implementation of an Intervention to Reduce HIV-Related Stigma Among Healthcare Workers in the United States: Piloting of the FRESH Workshop. *AIDS Patient Care STDS*. 2016;30(11):519-527.
22. Varas-Diaz N, Neilands TB, Rodriguez-Madera SL, Padilla M. The role of emotions in the reduction of HIV/AIDS stigma among physicians in training. *AIDS Care*. 2016;28(3):376-383.



23. Lieb S, Prejean J, Thompson D, et al. HIV Prevalence Rates Among Men Who Have Sex with Men in the Southern United States: Population-based Estimates by Race/Ethnicity. *AIDS and Behavior*. 2009;15:596-606.
24. Geibel S, Hossain SM, Pulerwitz J, et al. Stigma Reduction Training Improves Healthcare Provider Attitudes Toward, and Experiences of, Young Marginalized People in Bangladesh. *J Adolesc Health*. 2017;60(2S2):S35-S44.
25. Deroose KP, Griffin BA, Kanouse DE, et al. Effects of a Pilot Church-Based Intervention to Reduce HIV Stigma and Promote HIV Testing Among African Americans and Latinos. *AIDS Behav*. 2016;20(8):1692-1705.
26. Cahill S, Valadez R, Ibarrola S. Community-based HIV prevention interventions that combat anti-gay stigma for men who have sex with men and for transgender women. *Journal of public health policy*. 2013;34(1):69-81.
27. Apinundecha C, Laohasiriwong W, Cameron MP, Lim S. A community participation intervention to reduce HIV/AIDS stigma, Nakhon Ratchasima province, northeast Thailand. *AIDS Care*. 2007;19(9):1157-1165.
28. Yang Y, Zhang KL. HIV/AIDS-related discrimination in Shanxi rural areas of China. *Biomed Environ Sci*. 2004;17(4):410-417.
29. Adam BD, Murray J, Ross S, Oliver J, Lincoln SG, Rynard V. hivstigma.com, an innovative web-supported stigma reduction intervention for gay and bisexual men. *Health Educ Res*. 2011;26(5):795-807.
30. Jain A, Nuankaew R, Mongkhonwiboolphol N, et al. Community-based interventions that work to reduce HIV stigma and discrimination: results of an evaluation study in Thailand. *J Int AIDS Soc*. 2013;16(3 Suppl 2):18711.
31. Go VF, Frangakis C, Le Minh N, et al. Increased Survival Among HIV-Infected PWID Receiving a Multi-Level HIV Risk and Stigma Reduction Intervention: Results From a Randomized Controlled Trial. *J Acquir Immune Defic Syndr*. 2017;74(2):166-174.