

# THE DRISTI TRIAL (DRIVE AGAINST STIGMA)

## Evidence-Based Structural Intervention

### INTERVENTION DESCRIPTION

#### Goal of Intervention

- Reduce stigmatizing attitudes towards persons with HIV (PWH)

#### Intended Population

- Nursing students and hospital ward staff

#### Brief Description

*The DriSti (DRive against STigma) Trial* is an HIV stigma-reduction intervention for nursing students and ward staff (i.e., staff who assist with hospital patient care, including transporting patients and changing bed sheets) in Bangalore, Mysore, and Mangalore in Karnataka state, India. The intervention addresses drivers of HIV stigma, such as fears and misconceptions regarding HIV transmission (e.g., acquiring HIV by shaking hands or transporting a patient) or pre-existing negative attitudes towards marginalized groups vulnerable to HIV that may affect care for persons with HIV (PWH) in hospital settings. Nursing students and ward staff receive two self-guided sessions on computer tablets and one in-person, skills-based group session led by study staff and a person with HIV. The tablet sessions include exercises and videos focused on defining and understanding stigma; reducing instrumental stigma by providing information on HIV transmission; addressing HIV transmission fears, misconceptions, and behaviors, including misconceptions on risks involved in patient procedures; and describing concepts of stereotyping, judgment, and empathy. Additionally, study staff provide information on caring for PWH and issues relating to stigmatizing actions and consequences of stigma for PWH.

#### Theoretical Basis

- Social Cognitive Theory
- India-specific Conceptual Model of HIV Stigma

#### Intervention Duration

- Three sessions (i.e., two tablet-based sessions and one in-person group session) lasting 30-90 minutes each and delivered during one month

#### Intervention Settings

- Computer tablet
- Private space at the hospital or nursing college

#### Deliverers

- Person with HIV from local network
- Study staff

#### Delivery Methods

- Group discussion
- Role plays
- Videos

## Structural Components

- Capacity Building – Provider/supervisor training
  - Train nursing students and ward staff to care for PWH by providing information on HIV transmission, building awareness of stigma in hospital settings, and creating an understanding of stigmatizing attitudes
- Social Determinants of Health – Acceptance and respect
  - Reduce HIV-related stigma, including instrumental stigma (e.g., fears and misconceptions regarding transmission during casual social contact) and symbolic stigma (e.g., pre-existing negative attitudes towards marginalized groups vulnerable to HIV), through exercises and videos focused on defining and understanding stigma; providing information on HIV transmission; and addressing fears, misconceptions, and behaviors.

## INTERVENTION PACKAGE INFORMATION

**The intervention package is not available at this time.** Please contact **Maria L. Ekstrand**, Division of Prevention Sciences, Department of Medicine, University of California, 550 16<sup>th</sup> Street, 3rd Floor, San Francisco, CA 94143, USA.

**Email:** [maria.ekstrand@ucsf.edu](mailto:maria.ekstrand@ucsf.edu) for details on intervention materials.

## EVALUATION STUDY AND RESULTS

### Study Location Information

The original evaluation study was conducted in Bangalore, Mysore, and Mangalore in Karnataka state, India, between September 2014 and August 2019.

### Key Intervention Effects

- Reduced HIV stigma

### Recruitment Settings

- Hospitals
- Nursing colleges

### Eligibility Criteria

Nursing students and hospital ward staff were eligible if they were 18 years of age or older and willing to participate in all sessions. Nursing students who were in their second or third year were recruited because they were doing clinical rotations, undergoing training in standard precautions, and having patient contact. Ward staff were required to be employed for at least one year prior to study initiation.

### Study Sample

The baseline study sample of 3182 participants (1625 nursing students and 1557 ward staff) is characterized by the following:

Nursing students (n = 1625):

- 94% female, 6% male
- Median age of 20 years

Ward staff (n = 1557):

- 74% female, 26% male
- Median age of 39 years

**Assignment Method**

Twenty-eight nursing colleges and 34 hospitals were randomly assigned to one of two arms using cluster randomization: 15 nursing colleges and 17 hospitals (N = 1525) to the DriSti intervention, and 13 nursing colleges and 17 hospitals (N = 1657) to the wait-list control.

**Comparison**

The wait-list control group was offered the intervention following the completion of the 12-month assessment.

**Relevant Outcomes Measured**

- HIV stigma was measured at baseline, 6 months, and 12 months, and defined as:
  - Intent to discriminate against PWH assessed as refusal to treat or intent to perform tasks on patients with HIV differently from other patients, in professional situations with low risk and high risk of fluid exposure
  - Endorsement of coercive policies, assessed as agreement with 17 policies related to patient rights (e.g., having the right to refuse treating PWH); the right to choose to disclose HIV status; the right of PWH to marry and have children; and mandatory HIV testing.

**Participant Retention**

- DriSTi Intervention:
  - 89.8% retained at 6 months
- Wait-list Control:
  - 89.9% retained at 6 months

Participant retention is not a criterion for the Structural Intervention (SI) chapter.

**Significant Findings on Relevant Outcomes***Nursing Students*

- Nursing students in the intervention arm reported a significantly greater reduction in the mean number of low-risk professional situations in which they intended to discriminate against PWH compared to those in the control arm (-0.81 vs. +0.38,  $p < 0.001$ ) at the 6-month follow-up.
- Nursing students in the intervention arm reported a significantly greater reduction in the mean number of high-risk professional situations in which they intended to discriminate against PWH compared to those in the control arm (-0.54 vs. +0.12,  $p < 0.001$ ) at the 6-month follow-up.
- Nursing students in the intervention arm significantly reduced their endorsement of coercive policies compared to those in the control arm (-0.50 vs. +0.23,  $p < 0.001$ ) at the 6-month follow-up.

*Ward Staff*

- Ward staff in the intervention arm reported a significantly greater reduction in the mean number of low-risk professional situations in which they intended to discriminate against PWH compared to those in the control arm (-0.14 vs. +0.16,  $p < 0.001$ ) at the 6-month follow-up.
- Ward staff in the intervention arm reported a significantly greater reduction in the mean number of high-risk professional situations in which they intended to discriminate against PWH compared to those in the control arm (-0.17 vs. +0.03,  $p < 0.001$ ) at the 6-month follow-up.
- Ward staff in the intervention arm reported a significantly larger decrease in endorsement of coercive policies compared to those in the control arm (-0.53 vs. +0.05,  $p < 0.001$ ) at the 6-month follow-up.

## Considerations

### *Additional significant positive findings on non-relevant outcomes*

- The study examined potential HIV stigma drivers such as instrumental stigma (i.e., worry about acquiring HIV by performing specific tasks), blame (i.e., degree to which someone “got what they deserved” based on how they may have acquired HIV), symbolic stigma (i.e., level of acceptance, level of comfort caring for, and level of comfort having as a neighbor for certain populations such as men who have sex with men or transgender persons), transmission misconceptions, and transmission knowledge.
  - Nursing students in the intervention arm reported being less worried about acquiring HIV outside of work compared to those in the control arm (-0.27 vs. -0.09,  $p < 0.01$ ) at the 6-month follow-up.
  - Nursing students in the intervention arm reported being less worried about acquiring HIV in professional situations with low risk of fluid exposure compared to those in the control arm (-0.20 vs. +0.01  $p < 0.001$ ) at the 6-month follow-up.
  - Nursing students in the intervention arm reported being less worried about acquiring HIV in professional situations with high risk of fluid exposure compared to those in the control arm (-0.26 vs. -0.12,  $p < 0.001$ ) at the 6-month follow-up.
  - Nursing students in the intervention arm had a greater mean increase in transmission knowledge compared to those in the control arm (+2.99 vs +1.31,  $p < 0.05$ ) at the 6-month follow-up.
  - Nursing students in the intervention arm had a larger decrease of misconceptions about HIV transmission risk compared to those in the control arm (-6.22 vs. -0.27,  $p < 0.001$ ) at the 6-month follow-up.
  - Ward staff in the intervention arm reported being less worried about acquiring HIV in professional situations with low risk of fluid exposure compared to those in the control arm (-0.06 vs. +0.12,  $p < 0.001$ ) at the 6-month follow-up.
  - Ward staff in the intervention arm reported being less worried about acquiring HIV in professional situations with high risk of fluid exposure compared to those in the control arm (-0.10 vs. +0.11,  $p < 0.001$ ) at the 6-month follow-up.
  - Ward staff in the intervention arm had a larger decrease of misconceptions about HIV transmission risk compared to those in the control arm (-6.83 vs. +1.46,  $p < 0.001$ ) at the 6-month follow-up.

### *Non-significant findings on relevant outcomes*

- There were no significant findings for symbolic stigma among nursing students and ward staff at the 6-month follow-up.

### *Negative findings*

- None reported

### *Other related findings*

- None reported

### *Implementation-research related findings*

- None reported

### *Process/study execution-related findings*

- None reported

### *Adverse events*

- None reported

## Findings from Subsequent Studies

- Srinivasan et al., 2021, reports the effects of the DriSTi intervention on HIV stigma outcomes at the 12-month follow up among nursing students (n=1492). The manuscript also reports the results from a mediation analysis conducted to determine whether the change in stigma drivers (from baseline to immediate post-intervention) mediated the effect of the DriSTi intervention on HIV stigma outcomes at 12 months.
  - *Significant findings on relevant outcomes:*
    - Nursing students in the intervention arm reported a significantly greater reduction in the mean number of low-risk professional situations in which they intended to discriminate against PWH compared to those in the control arm (-0.78 vs. +0.46,  $p < 0.001$ ) at the 12-month follow-up.
      - In the mediation analysis, the effects of DriSti on low-risk professional situations in which nursing students intended to discriminate against PWH were significantly mediated by instrumental stigma: being less worried about acquiring HIV outside of work (indirect effect= -0.01, bootstrapped 95% CI= -0.04, -0.002) and being less worried about acquiring HIV in professional situations (indirect effect= -0.13, bootstrapped 95% CI= -0.19, -0.09).
    - Nursing students in the intervention arm reported a significantly greater reduction in the mean number of high-risk professional situations in which they intended to discriminate against PWH compared to those in the control arm (-0.50 vs. +0.14,  $p < 0.001$ ) at the 12-month follow-up.
      - In the mediation analysis, the effects of the intervention on high-risk professional situations in which nursing students intended to discriminate against PWH were significantly mediated by instrumental stigma: being less worried about acquiring HIV in professional situations (indirect effect= -0.09, bootstrapped 95% CI= -0.13, -0.06).
    - Nursing students in the intervention arm significantly reduced their endorsement of coercive policies compared to those in the control arm (-0.36 vs. +0.22,  $p < 0.001$ ) at the 12-month follow-up.
      - In the mediation analysis, the effects of the intervention on endorsement of coercive policies were significantly mediated by transmission misconceptions (indirect effect= -0.06, bootstrapped 95% CI= -0.13, -0.003), blame (indirect effect= -0.03, bootstrapped 95% CI= -0.07, -0.01), and symbolic stigma (indirect effect= -0.03, bootstrapped 95% CI= -0.08, -0.01).
  - Additional significant positive findings on non-relevant outcomes
    - Nursing students in the intervention arm had a larger decrease of misconceptions about HIV transmission risk through casual contact compared to those in the control arm (-0.47 vs. -0.16,  $p < 0.001$ ) at the 12-month follow-up.
    - Nursing students in the intervention arm reported being less worried about acquiring HIV outside of work compared to those in the control arm (-0.31 vs. -0.18,  $p < 0.05$ ) at the 12-month follow-up.
    - Nursing students in the intervention arm reported being less worried about acquiring HIV in professional situations with low risk of fluid exposure compared to those in the control arm (-0.22 vs. -0.02  $p < 0.001$ ) at the 12-month follow-up.
    - Nursing students in the intervention arm reported being less worried about acquiring HIV in professional situations with high risk of fluid exposure compared to those in the control arm (-0.33 vs. -0.16,  $p < 0.001$ ) at the 12-month follow-up.

## Funding

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