Intervention IP-092: Keep It Up (KIU)! eHealth HIV Risk Reduction Intervention

The intervention Keep It Up (KIU)! was designed to reduce condomless anal sex acts and sexually transmitted infections among young men who have sex with men. The intervention is an interactive online multimedia HIV prevention project that was conducted in 5 major US cities. The multimedia addresses HIV knowledge, importance of HIV testing, and skills for negotiating condom use within relationships. The intervention produced significant decreases in condomless anal sex acts with casual male partners and sexually transmitted infections 12 months post-intervention.

Overview

Purpose of Intervention:

Keep It Up (KIU)! is an online sexual health program designed by and for diverse, young gay, bisexual, and queer men to maintain negative HIV/STI status. KIU! has been updated over time and is intended to be scalable for delivery by community organizations or directly to consumers.

Intervention Type:

Research-Tested — *Interventions with strong methodological rigor that have demonstrated short-term or long-term positive effects on one or more targeted health outcomes to improve minority health and/or health disparities through quantitative measures; Studies have a control or comparison group and are published in a peer-review journal; No pilot, demonstration or feasibility studies.*

Intervention Details

Intervention was Primarily Driven, Led, or Managed by:

Both Community and Academic/Clinical Researchers

Citations:

- Mustanski B, Parsons JT, Sullivan PS, Madkins K, Rosenberg E, Swann G. Biomedical and Behavioral Outcomes of Keep It Up!: An eHealth HIV Prevention Program RCT. American journal of preventive medicine. 2018 Aug;55(2):151-158. Epub 2018 Jun 28.
  Relevance: Post-Intervention Outcomes, Main Intervention
- Greene GJ, Madkins K, Andrews K, Dispenza J, Mustanski B. Implementation and Evaluation of the Keep It Up! Online HIV Prevention Intervention in a Community-Based Setting. AIDS education and prevention : official publication of the International Society for AIDS Education. 2016 Jun;28(3):231-45.
  Relevance: Evaluations and Assessments

- Mustanski B, Saber R, Jones JP, Macapagal K, Benbow N, Li DH, Brown CH, Janulis P, Smith JD, Marsh E, Schackman BR, Linas BP, Madkins K, Swann G, Dean A, Bettin E, Savinkina A. Keep It Up! 3.0: Study protocol for a type III hybrid implementation-effectiveness cluster-randomized trial. Contemporary clinical trials. 2023 Apr;127:107134. Epub 2023 Feb 24.
  Relevance: Evaluations and Assessments

Adaptation of Another Research-based Intervention:

No

Contact Information

Primary Contact Affiliation:

Northwestern University

Intervention URL:

https://kiu.northwestern.edu/

Results

Intentions

Improve minority health or the health of other populations with health disparities (e.g. rural populations, populations with low SES)

Intervention Primary Outcome:

Incident gonorrhea or chlamydia and condomless anal sex (CAS) acts

Intervention Secondary Outcome:

HIV knowledge, HIV motivation and behavioral skills, condom errors, health protective communication, PrEP intentions and use

Key Findings:

KIU! resulted in significantly lower STI incidence and reduction in CAS with a casual male partner. Among those with specimens at month 12, STI rates increased for the control and decreased for the KIU! arms. The primary endpoint of any STI at month 12 was 40% (95% CI=5%, 63%, p=0.01) lower in the KIU! arm. Secondary models that considered effect modification by strata did not find statistically significant differences by age, enrollment location, race/ethnicity, or sexual orientation, although, point estimates suggested higher efficacy in YMSM who were Black, aged 18–24 years, or lived in the South. Additionally, at baseline, 69% of control and 68% of KIU! participants reported any CAS with a casual male partner in the prior 3 months, with declines seen over time in both groups. At month 12, 44% of control and 37% of KIU! participants reported CAS prevalence ratio=0.83, 95% CI=0.70, 0.99, p=0.04; The estimated average effect over follow-up was 11% (prevalence ratio=0.89, p=0.07).

Statistical Method Used:

The statistical methods used were unconditional generalized estimated equation, unconditional logistic regression model for primary behavioral outcome, logistic regression of STI at 12 months, and negative binomial regression evaluated number of casual CAS acts and of CAS partners.

Evaluations and Assessments

Were Any of the Following Assessments Conducted (Economic Evaluation, Needs Assessment, Process Evaluation)?:

Yes

- **Economic Evaluation:** We used a mixed methods micro-costing approach to assess KIU! expenses. Structured interviews and expense reports identified three categories of expenditure: start-up, variable, and time dependent. We estimated wages and material costs from staff reports and Bureau of Labor Statistics data. After quantifying and valuing all resources, we multiplied costs and unit utilization to derive cumulative cost of resource consumption. Sensitivity and post hoc analyses addressed bias and cost predictors.
- **Needs Assessment:** The results of the needs assessment found in our article, “Internet use and sexual health of young men who have sex with men: a mixed-methods study” - https://link.springer.com/article/10.1007/s10508-009-9596-1, suggested that the Internet fills an important and unmet need for sexual health education for young men who have sex with men (YMSM).

Demographic and Implementation Description

Diseases, Disorders, or Conditions:

Chlamydia, Gonorrhea, HIV/AIDS

Race/Ethnicity:

African American or Black, Hispanic or Latino, White, Unspecified

Populations with Health Disparities:

Racial and Ethnic Minority Populations

Age:

Young Adults (18 - 39 years)

Socio-demographics / Population Characteristics

Community Type:

Suburban, Urban / Inner City

Other Populations with Health Disparities:

None

Geographic Location:

All U.S. States

Socio-Economic Status:

Unspecified

Research Framework

		Levels of Influence			
		Individual	**Interpersonal**	**Community**	**Societal**
Determinant Types	**Biological**				
	Behavioral	✔	✔		
	Physical / Built Environment				
	Sociocultural Environment				
	Health Care System			✔	

Community Involvement

The community's role in different areas of the Intervention (Choices are "No Role", "Participation", and "Leadership"):

Design:

Leadership

Dissemination:

Participation

Evaluation:

Participation

Implementation:

Participation

Outreach:

Participation

Planning :

Participation

Recruitment:

Participation

Sustainability:

Participation

Characteristics and Implementation

Intervention Focus Area:

Behavior Change

Disease Continuum:

Primary Prevention

Delivery Setting:

Online

Mode of Delivery:

Online/e-Health

Who delivered the Intervention?:

Self-administered

Conceptual Framework

Intervention Theory:

Information-Motivation-Behavioral Skills Model of Change

Intervention Framework:

IM-ADAPT (Intervention Mapping – Adapt) for KIU! 3.0

Implementation

Intervention Study Design:

Individual Randomized Controlled Trial/Comparative (requires random assignment, a control/comparison group, and pre and post intervention outcome assessments), Pilot, feasibility, or demonstration study design

Targeted Intervention Sample Size:

901

Actual Intervention Sample Size:

901

Start Year:

2013

End Year:

2017

Intervention Exposures

Duration of Intervention/How Long it Lasted:

4-6 months

Frequency of Intervention Delivery:

5 total sessions including 2 booster sessions

Number of Sessions/Meetings/Visits/Interactions:

5-6 Sessions

Average Length of Each Session/Meeting/Visit/Interaction:

1-2 Hours

Format of Delivery:

Individual

Highest Reading Level of Intervention Materials Provided to Participants:

Grade 8-9

Impact, Lessons, Components

Produced an impact or change beyond the primary or secondary outcome:

Yes

Some CBOs were able to connect more with participants about various services that they provided because of our intervention. We integrated service forms throughout the intervention in KIU! 3.0 and participants were made aware of services that the CBOs can offer them related to the content that was just provided to the participants. Depending on what the CBOs select, some service forms were informational whereas others triggered a notification to the CBO that the participant was interested in a specific service that they offered.

Essential Aspects for Success:

Some of the many aspects that are essential to the success of KIU! include: Establishing a team to implement KIU! to integrate with the agency’s HIV prevention program workflow/testing infrastructure and develop a plan for participant retention activities.

Lessons Learned

Key Lessons Learned and/or Things That Could be Changed or Done Differently:

Our findings from implementation in CBO settings illustrated the importance of compelling messaging highlighting benefits to participating in KIU!, CBO staff monitoring participant completion of KIU!, and sending routine reminders as needed to participants.

Insights Gained During Implementation

Insight Category	Insight Description
Cost of Implementing or Sustaining	Paying participants sufficiently to incentivize complete the intervention is highly preferred and may be cost-saving compared to other efforts that require more staff time. Additionally, CBOs need to be paid sufficiently to properly staff the intervention.
Logistics	The time between intervention modules was reduced.
Administrative Resources	CBOs can benefit from having structured To-Do lists for participant retention.
Training / Technical Assistance	Implementation would benefit from continued and personalized technical assistance for CBOs and availability of on-going training for new staff.
Staffing	It is recommended to hire people from the community being served.
Recruitment	It is recommended not to be too restrictive with eligibility criteria and aim to allow as many people as possible into the program if it addresses client's needs.

Intervention Components

Intervention Has Multiple Components:

Yes

Assessed Each Unique Contribution:

No

Products, Materials, and Funding

Expertise, Partnerships, and Funding Sources

	Used for Implementation	Needed for Sustainability
Expertise		
Health Education / Health Literacy	Yes	Yes
Clinical Care	Yes	Yes
Technology	Yes	Yes
Partnerships		
Partnerships are not required, but users can partner with CBOs for implementation.	Yes	No
Funding Sources		
Public funding (e.g., federal, state or local government)	Yes	No

Product/Material/Tools

	Tailored For Language	Language(s) if other than English	Material
Outreach/Recruitment Tools			
Implementation Guide	No		https://kiu.northwestern.edu/deliver/
Participant Educational Tools			
Implementation Guide	No		https://kiu.northwestern.edu/deliver/
Measurement Tools			
Implementation Guide	No		https://kiu.northwestern.edu/deliver/

Implementation Materials and Products

	Material
Implementation/Delivery Materials	
Intervention implementation guidelines	https://kiu.northwestern.edu/deliver/
Implementation/Output Materials	
Websites (include URL/link)	https://kiu.northwestern.edu/deliver/

Articles Related to Submitted Intervention

	Article
Reports/Monographs	
No Reports/Monographs provided.	
Additional Articles	
Validation	https://doi.org/10.1007/s10461-016-1525-4
Background Information	https://doi.org/10.1007/s13178-017-0312-y
Background Information	https://doi.org/10.1521/aeap.2018.30.4.335
Evaluation, Qualitative findings	https://doi.org/10.1007/s10461-013-0507-z
Evaluation	https://doi.org/10.1097/OLQ.0000000000000636
Evaluation	https://doi.org/10.2196/resprot.5740
Evaluation	http://dx.doi.org/10.1007/s10461-016-1480-0
Methodology	https://doi.org/10.1007/s11904-020-00491-5
Methodology	https://doi.org/10.1007/s11904-019-00455-4
Methodology	https://doi.org/10.1016/j.cct.2023.107134
Needs Assessment, Qualitative findings	https://doi.org/10.1007/s10508-009-9596-1
Evaluation	https://doi.org/10.1080/00224499.2011.558645
Evaluation, Qualitative findings	https://doi.org/10.1521/aeap.2016.28.3.231
Evaluation, Qualitative findings	https://doi.org/10.1521/aeap.2019.31.4.287
Methodology	https://doi.org/10.1007/s10508-018-1253-0
Evaluation, Qualitative findings	https://doi.org/10.1016/j.amepre.2018.04.026

	Article
Evaluation	https://doi.org/10.1080/10538720.2018.1408519
Evaluation, Qualitative findings	https://doi.org/10.1521/aeap.2017.29.1.1