


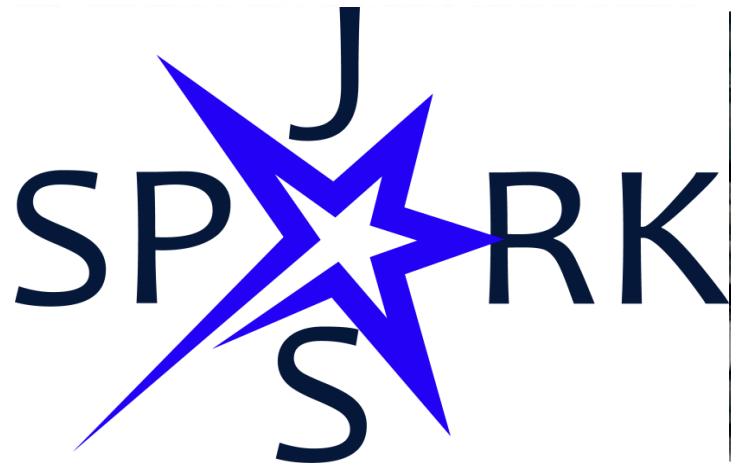


Empowering Youth: A Citizen Science Digital Intervention to Reduce HIV Stigma and Promote HIV Self-Testing in Kazakhstan

Gaukhar Mergenova

ПРОЕКТ JASSPARK

 РУССКИЙ  ҚАЗАҚ ТІЛІ  КОНТАКТЫ



Disclosures

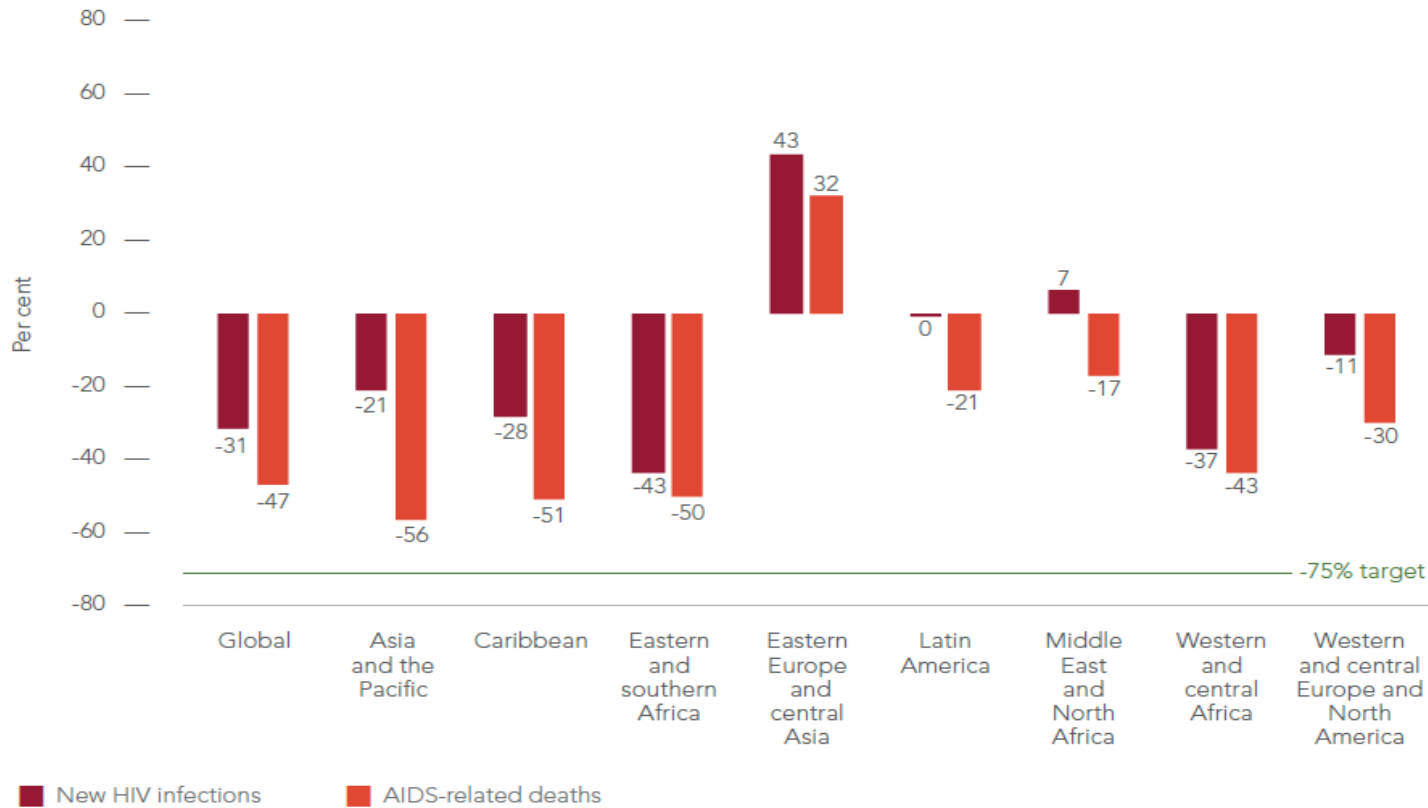
- Funding provided from the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) and the Fogarty International Center (FIC)
 - R21TW012017 (PIs: Davis & Mergenova)
- All study protocols received approval from the IRBs at Columbia University and Al-Farabi Kazakh National University.
- No conflicts of interest to declare.

Our Team

- KZ-Based Investigative Team
 - Gaukhar Mergenova (Multiple PI; GHRCCA)
 - Assel Terlikbayeva
 - Sholpan Primbetova
 - Denis Gryazev
 - Olga Balabekova
 - Valera Gulyaev
 - Pavel Gulyaev
 - Akbota Tolgenova
 - Youth and Community Steering Committee Members (~25)
 - Youth Volunteers (~25)
- US-Based Investigative Team
 - Alissa Davis (Multiple PI; Columbia)
 - Laura Nyblade (RTI)
 - Joseph Tucker (UNC-Chapel Hill)
 - Weiming Tang (UNC-Chapel Hill)
 - Karsten Lunze (Boston)
 - Nabila El-Bassel (Columbia)
 - Susan Rosenthal (Columbia)
 - Yihang Sun (Columbia)
 - Sara Landers (Columbia)
 - Azamat Kuskulov (Columbia)

HIV in the Region

CHANGE IN NEW HIV INFECTIONS AND AIDS-RELATED DEATHS, BY REGION AND GLOBAL, 2010–2020



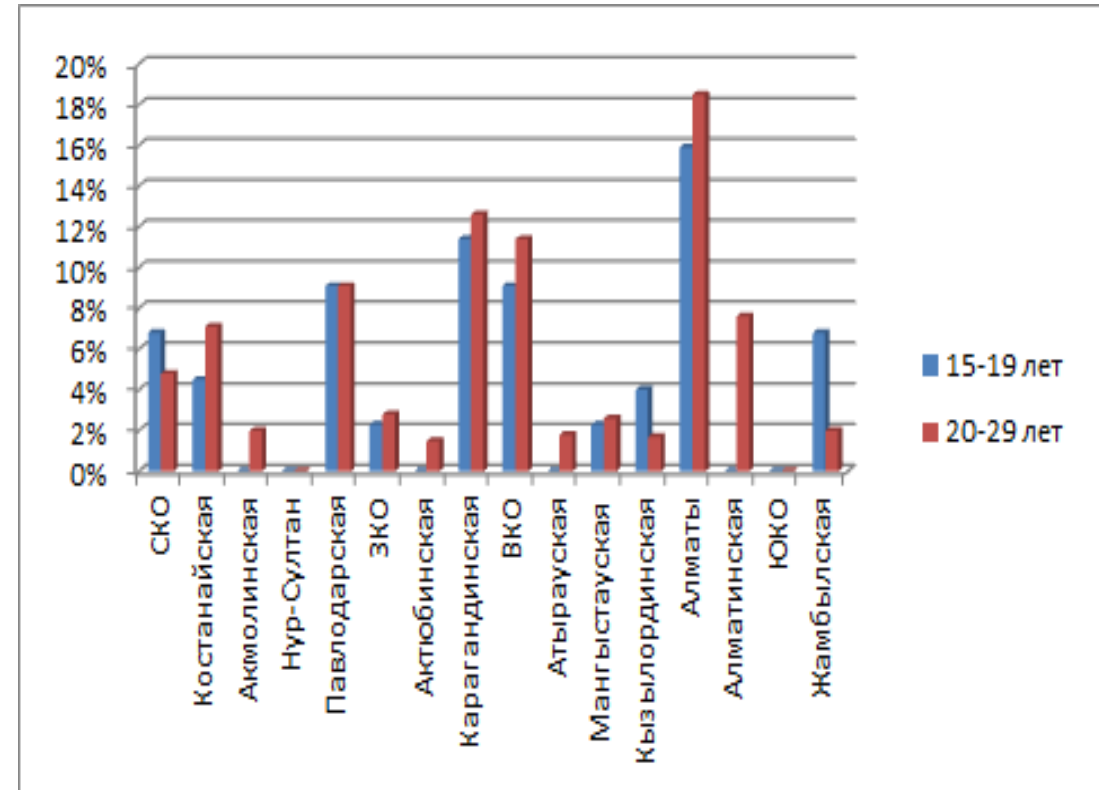
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

Kazakhstan had large increase in EECA HIV infections: *increase of **73%*** since 2010

HIV among Adolescents & Young Adults in KZ

- **One in four** new HIV infections occur among adolescents and young adults (AYA).
- Rates of HIV among AYA are **rapidly rising** (projected to increase 28% by 2030).
- AYA have **low HIV testing** rates in the country compared to other groups.
- **HIV-related** stigma is a major obstacle to HIV-related protective behaviors, including HIV testing

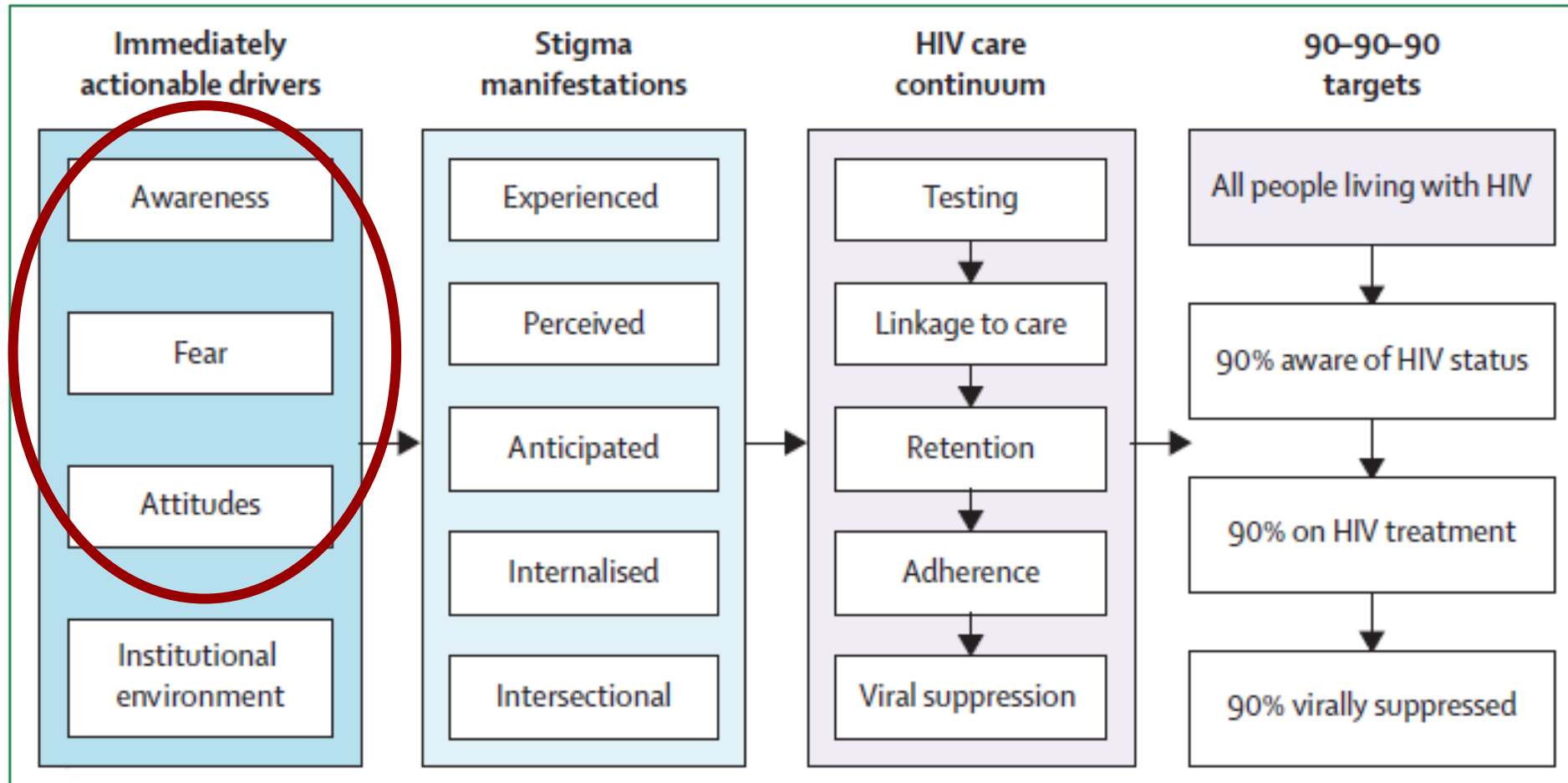
Distribution of reported cases of HIV infection by region, 2019



Manifestations of Stigma

- Experienced stigma: actual experienced or enacted interpersonal acts of discrimination
- Perceived stigma: perceptions of the prevalence of stigmatizing attitudes in the community and among health-care providers
- Witnessed stigma: hearing stories or witnessing events of how stigmatized individuals have been mistreated
- Anticipated stigma: the fear or expectation that one will experience stigma
- Internalized stigma: taking on (internalizing) experienced or perceived stigma and accepting it as just and true
- Intersectional stigma: convergence of multiple stigmatized identities within a person or group, or intersecting of stigmas experienced by individuals who are part of multiple marginalized groups

HIV Stigma Framework



Study Aims

Aim 1:

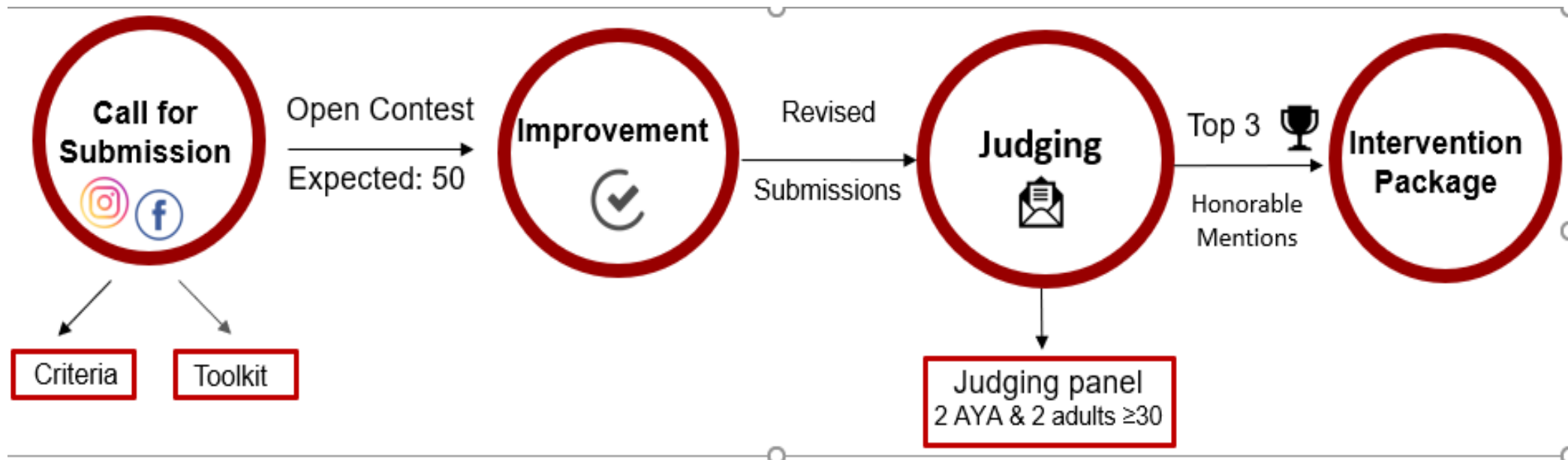
To develop a crowdsourced digital HIV stigma reduction and self-testing intervention for youth in Kazakhstan.

Aim 2:

To test the crowdsourced HIV intervention to determine its efficacy in reducing HIV stigma.

Phase 1: Develop a Crowdsourced Intervention Package

Theme: Reduce HIV Stigma to Promote HIV Testing

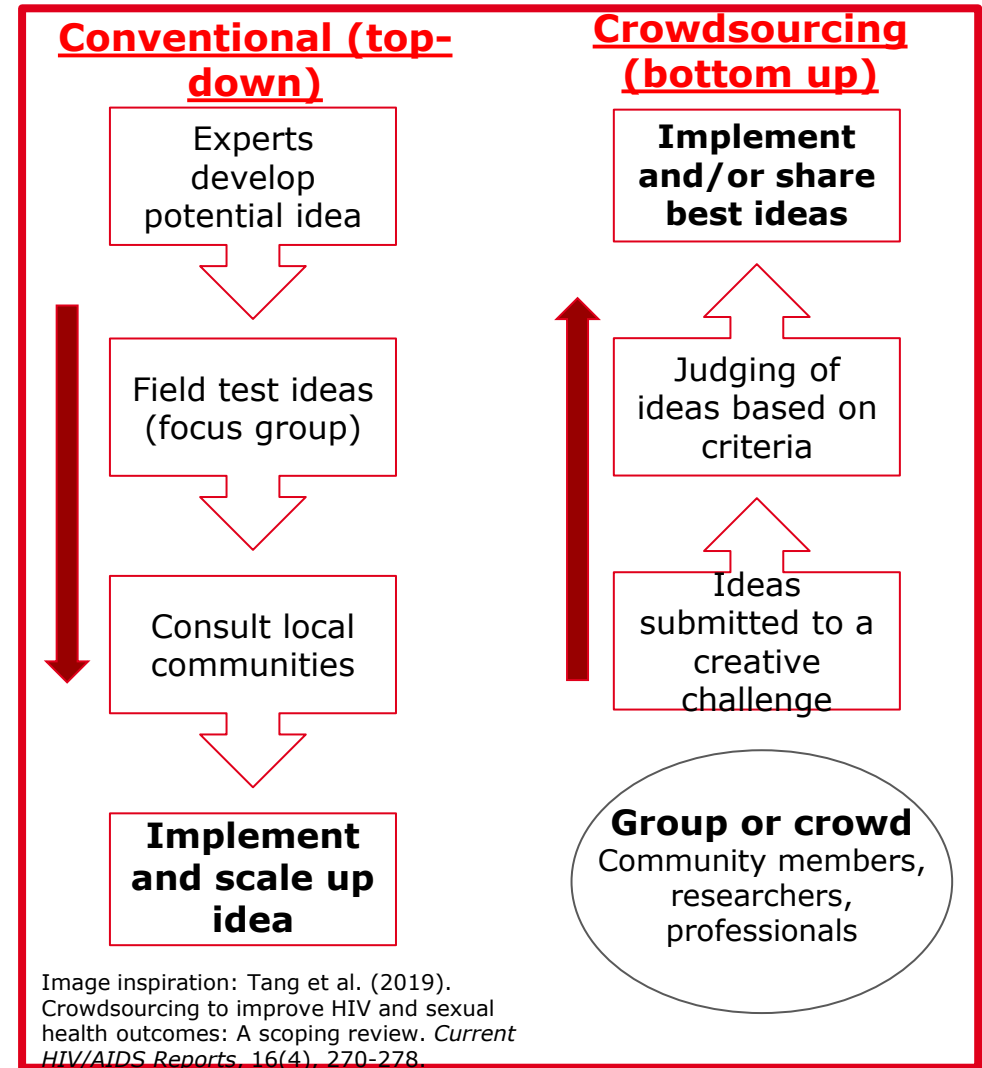


IAS What is Crowdsourcing?

Crowdsourcing is a powerful tool that can engage the local community to reduce HIV stigma and promote HIV testing and other protective behaviors.



***Crowdsourcing:** A group of community members, researchers, and professionals working together to solve a problem and then sharing solutions with the public.*





International AIDS Society
iasociety.org



Eligibility & Contest Details

- Between ages 13-29 years
- Languages: Russian or Kazakh
- Individual or group submission
- Can submit more than one submission

Submissions with an identifiable photo, video, or audio of anyone were required to sign & submit a media release form

- Submission categories: Audio, video, image, text
- Submissions should be focused on reducing HIV stigma to promote HIV testing

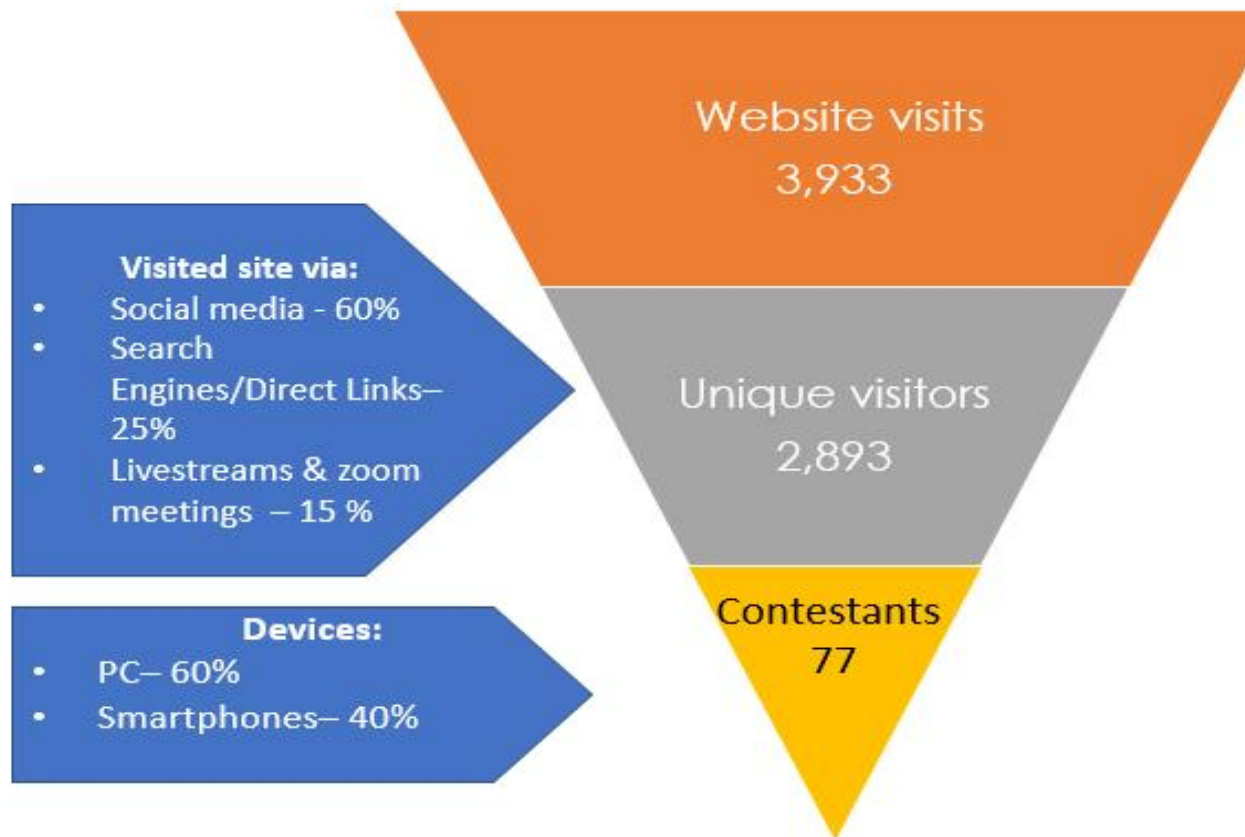
Top 3 prizes were given in each age category (13-18 and 19-29)

1st place – iPad (~\$500 USD)

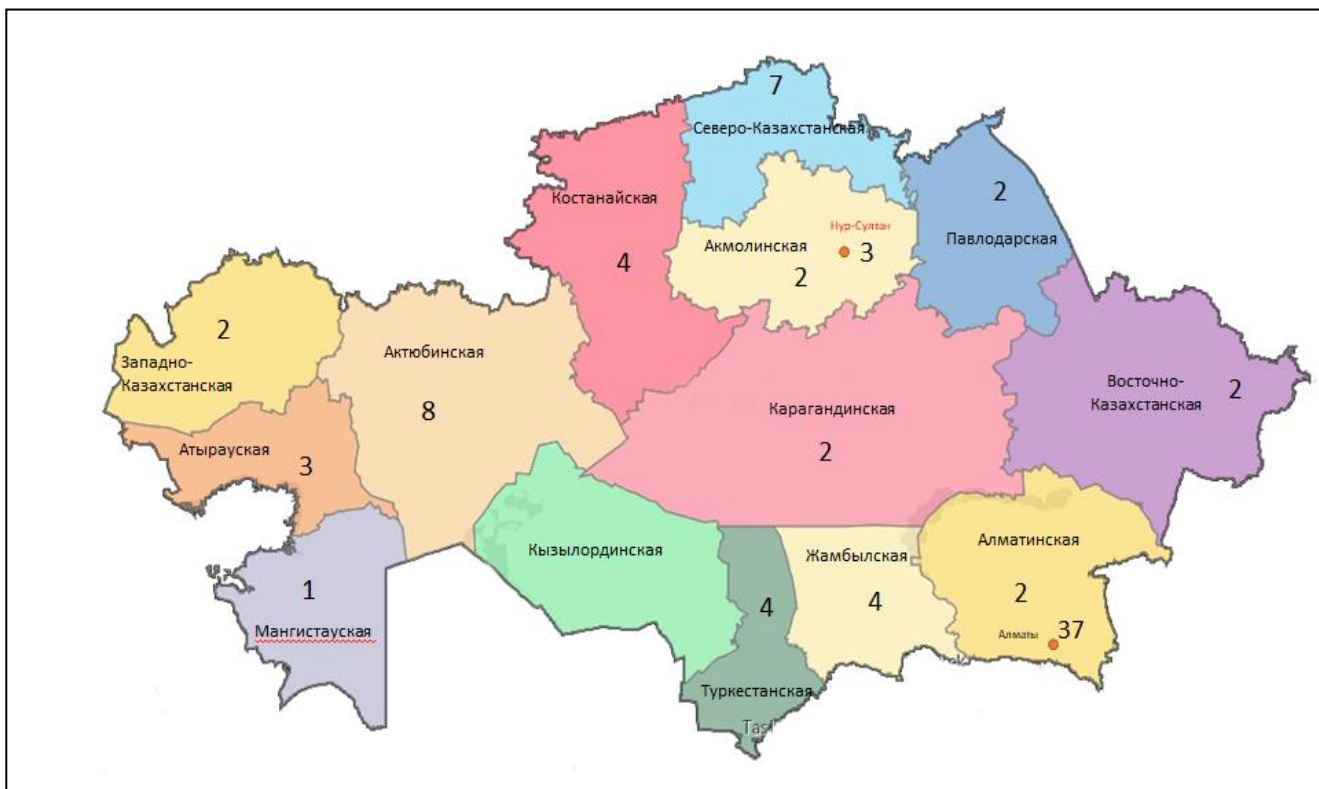
2nd place – Smartwatch (~\$300 USD)

3rd place – Smart speaker (~\$150 USD)

Phase 1: Contest promotion and advertisement



Phase 1: Crowdsourcing contest

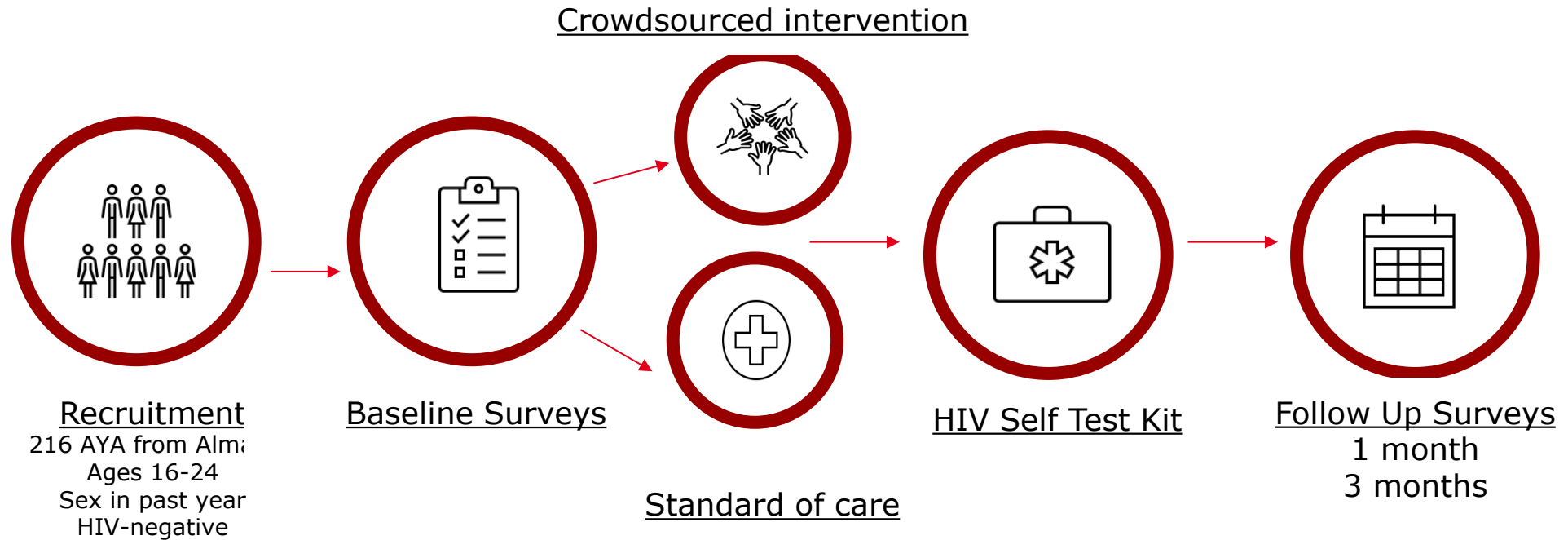


77 contestants



96 submissions

Phase 2 Randomized Controlled Trial



Methods

- Informed consent and screening completed online.
- Received surveys and assigned digital content (intervention or control) electronically via Qualtrics.
- **Primary outcome:** HIV stigma (Stangl. et al.)
- **Secondary outcome:** Ordered HIV self-test kit

- Conducted multilevel linear mixed models to assess within group and between group changes in mean stigma.
 - Random effects for intercept and fixed effects for time (categorical), study arm, and their interaction.
 - Models adjusted for baseline stigma levels, age, sex, sexual orientation, prior HIV testing, and if the participant had submitted content to the crowdsourcing contest.
- Also conducted moderation analyses by sex.
 - Controlled for false discovery rate (FDR) using Benjamini-Hochberg methods.
- For secondary outcome of HIV self-testing uptake, conducted logistic regression to examine whether the intervention was associated with increased HIV self-testing uptake in the follow-up period.

Table 1: Sociodemographics (N=216)

Characteristic	Overall N (%)	Intervention Arm N (%)	Control Arm N (%)	p-value
Sex at birth				0.14
Male	100 (46.3%)	46 (41.4%)	54 (51.4%)	
Female	116 (53.7%)	65 (58.6%)	51 (48.6%)	
Sexual Orientation				0.23
Heterosexual	166 (76.9%)	89 (80.2%)	77 (73.3%)	
Sexual Minority	50 (23.1%)	22 (19.8%)	28 (26.7%)	
Ethnicity				0.49
Kazakh	121 (56.0%)	58 (52.3%)	63 (60.0%)	
Russian	65 (30.1%)	37 (33.3%)	28 (26.7%)	
Other	30 (14.0%)	16 (14.4%)	14 (13.3%)	
Tested for HIV prior to the study?				0.03
Yes	63 (29.6%)	40 (36.0%)	23 (22.5%)	
No	150 (70.4%)	71 (64.0%)	79 (75.5%)	
HIV Test Ordered at Baseline				0.03
Yes	46 (21.3%)	17 (15.3%)	29 (27.6%)	
No	170 (78.7%)	94 (84.7%)	76 (72.4%)	
	Overall Mean±SD	Intervention Arm Mean±SD	Control Arm Mean±SD	
Age	19.7±2.4	20.1±2.4	19.4±2.4	0.02
HIV Stigma Scale	47.6±10.2	47.1±10.1	48.0±10.3	0.53

Table 2: Adjusted Mean Changes of Perceived Community Stigma from Time 1 to Time 3

Study Arm	Intervention (Arm 1)			Control (Arm 2)			Between Group Difference in Mean Change (95% CI)	P-value
	Time 1 Adjusted Mean (SE)	Time 3 Adjusted Mean (SE)	Within Group Change (95% CI)	Time 1 Adjusted Mean (SE)	Time 3 Adjusted Mean (SE)	Within Group Change (95% CI)		
HIV Stigma Total	47.48 (0.71)	44.60 (0.75)	-2.87 (-4.67, -1.08)**	47.89 (0.74)	47.32 (0.79)	-0.58 (-2.46, 1.31)	-2.30 (-4.90, 0.30)	0.08
Perceived community HIV stigma	24.65 (0.45)	23.28 (0.47)	-1.36 (-2.44, -0.29)*	25.05 (0.47)	24.74 (0.50)	-0.31 (-1.44, 0.81)	-1.05 (-2.60, 0.51)	0.37
Fear & judgement stigma	11.12 (0.35)	10.56 (0.36)	-0.56 (-1.31, 0.20)	11.24 (0.36)	11.08 (0.38)	-0.16 (-0.95, 0.63)	-0.39 (-1.49, 0.70)	0.48
Perceived HIV healthcare stigma	5.80 (0.14)	5.57 (0.15)	-0.23 (-0.58, 0.11)	5.90 (0.15)	5.89 (0.16)	-0.02 (-0.38, 0.35)	-0.21 (-0.72, 0.29)	0.48
Perceived HIV test stigma	5.92 (0.13)	5.56 (0.14)	-0.73 (-1.07, -0.39)**	5.70 (0.14)	5.64 (0.14)	-0.07 (-0.42, 0.30)	-0.67 (-1.16, -0.18)*	0.032

*= p<0.05. **= p<0.01

Table 3: Subgroup Analyses of Mean Change in HIV Stigma from Time 1 to Time 3

Outcome	Potential Moderator	Level	Intervention (Arm 1)			Control (Arm 2)			Adjusted Difference in Mean Change (95% CI)	P-value	Test for Moderation
			Time 1 Adjusted Mean (SE)	Time 3 Adjusted Mean (SE)	Adjusted Mean Change (95% CI)	Time 1 Adjusted Mean (SE)	Time 3 Adjusted Mean (SE)	Adjusted Mean Change (95% CI)			
Stangl Total HIV Stigma	Sex	Male	47.44 (1.09)	47.80 (1.16)	0.36 (-2.43, 3.14)	47.63 (1.02)	46.41 (1.12)	-1.22 (-3.87, 1.43)	1.58 (-2.26, 5.42)	0.56	0.0015
		Female	47.55 (0.91)	42.39 (0.96)	-5.16 (-7.48, -2.84)**	48.24 (1.06)	48.17 (1.09)	-0.07 (-2.70, 2.56)	-5.09 (-8.59, -1.58)	0.012	
Perceived Community HIV Stigma	Sex	Male	24.40 (0.68)	24.66 (0.72)	0.27 (-1.40, 1.93)	24.35 (0.64)	24.03 (0.70)	-0.32 (-1.91, 1.26)	0.59 (-1.71, 2.89)	0.61	0.0024
		Female	24.88 (0.57)	22.37 (0.60)	-2.51 (-3.89, -1.12)**	25.74 (0.66)	25.37 (0.68)	-0.37 (-1.94, 1.20)	-2.14 (-4.23, -0.04)	0.091	
HIV Fear & Judgement Stigma	Sex	Male	11.47 (0.54)	11.46 (0.57)	-0.004 (-1.18, 1.18)	11.90 (0.51)	11.47 (0.55)	-0.43 (-1.56, 0.70)	0.42		0.80
		Female	10.85 (0.45)	9.89 (0.47)	-0.96 (-1.94, 0.02)	10.67 (0.53)	10.75 (0.54)	0.08 (-1.03, 1.19)	-1.04		
HIV Healthcare Stigma	Sex	Male	5.49 (0.22)	5.90 (0.23)	0.41 (-0.13, 0.94)	5.64 (0.21)	5.45 (0.23)	-0.19 (-0.70, 0.32)	0.60 (-0.14, 1.33)	0.15	0.0058
		Female	6.05 (0.18)	5.36 (0.19)	-0.68 (-1.13, -0.24)**	6.15 (0.21)	6.27 (0.22)	0.13 (-0.38, 0.63)	-0.81 (-1.48, -0.13)	0.052	
HIV Testing Stigma	Sex	Male	6.10 (0.20)	5.77 (0.21)	-0.32 (-0.85, 0.20)	5.75 (0.19)	5.48 (0.21)	-0.26 (-0.77, 0.24)	-0.06 (-0.79, 0.67)	0.87	0.0375
		Female	5.78 (0.17)	4.77 (0.18)	-1.00 (-1.44, -0.56)**	5.69 (0.19)	5.81 (0.20)	0.13 (-0.37, 0.63)	-1.13 (-1.80, -0.46)	0.004	

*= p≤0.05, **= p≤0.01

Table 4: Adjusted Relative Risk of Intervention Status Associated with Ordering an HIV Self-Test Kit during the 3-Month Follow-Up Period

- 48 out of 216 AYA ordered an HIV test in the follow-up period

Variable	ARR [95% CI]	P-value
Study Arm		
Intervention	1.13 [0.98, 1.32]	0.099
Control	Ref.	

*Model adjusted for history of HIV testing (prior to study or at baseline), submission of content to study crowdsourcing contest, and if participant had a main intimate partner (e.g., girlfriend/boyfriend, spouse).

Limitations

- Study was conducted among AYA in one city in KZ. Further work is needed to replicate findings.
- Study was conducted entirely online, so there may have been some sample bias toward AYA who are more engaged online than those who are not.
- Study was under-powered for secondary outcomes (i.e., HIV testing uptake). Larger studies are needed to determine if HIV stigma reduction interventions can lead to greater HIV testing uptake among AYA.

- Findings suggest the crowdsourcing intervention was effective at reducing HIV stigma among AYA females in Kazakhstan compared to KZ Ministry of Health materials.
- Crowdsourcing may be a promising, low-cost method of engaging community members to develop HIV stigma reduction and testing interventions in other settings.



Questions?

Extra Slides

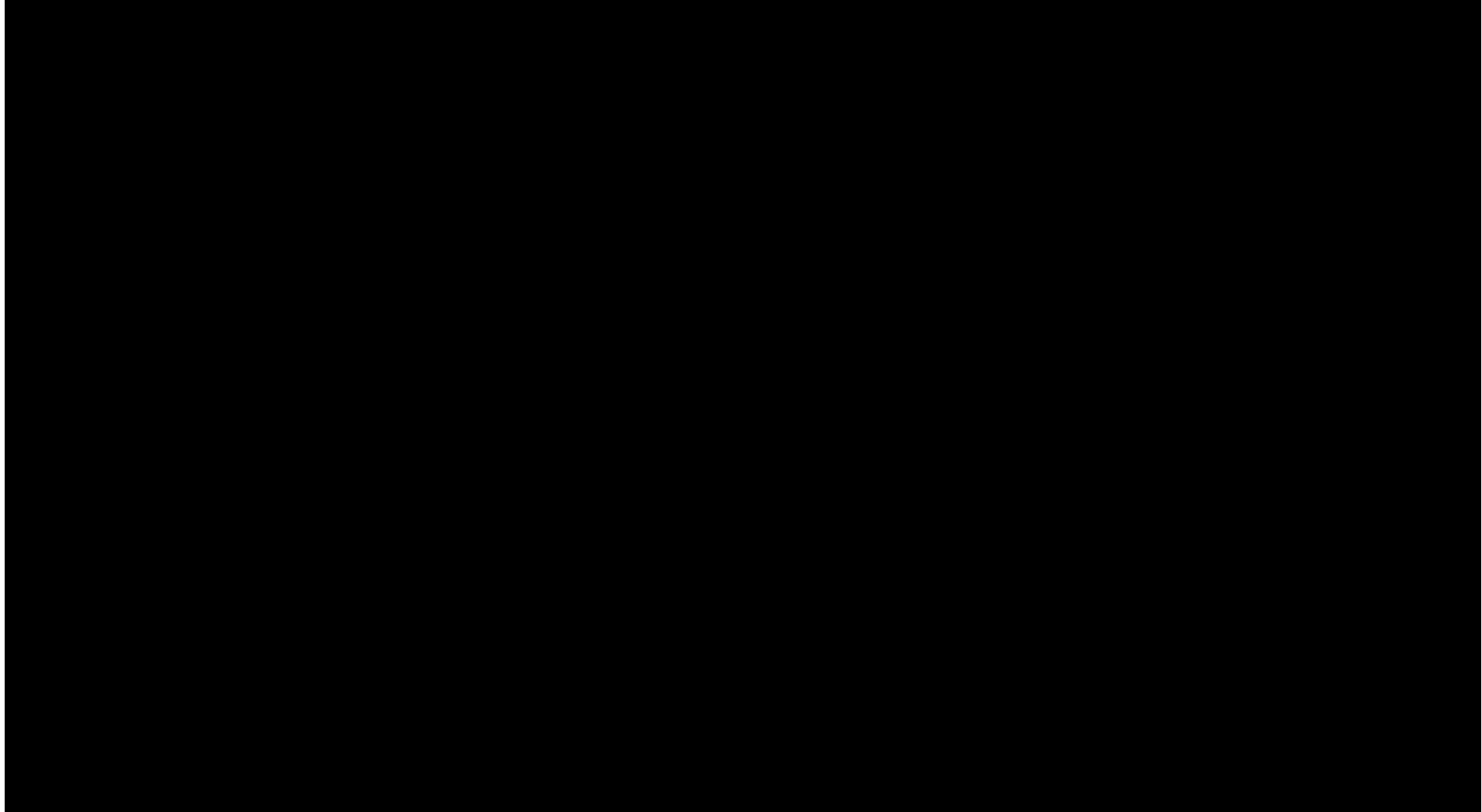
WINNING ENTRIES

J
SP * RK
S





13-19 YEAR OLD CATEGORY

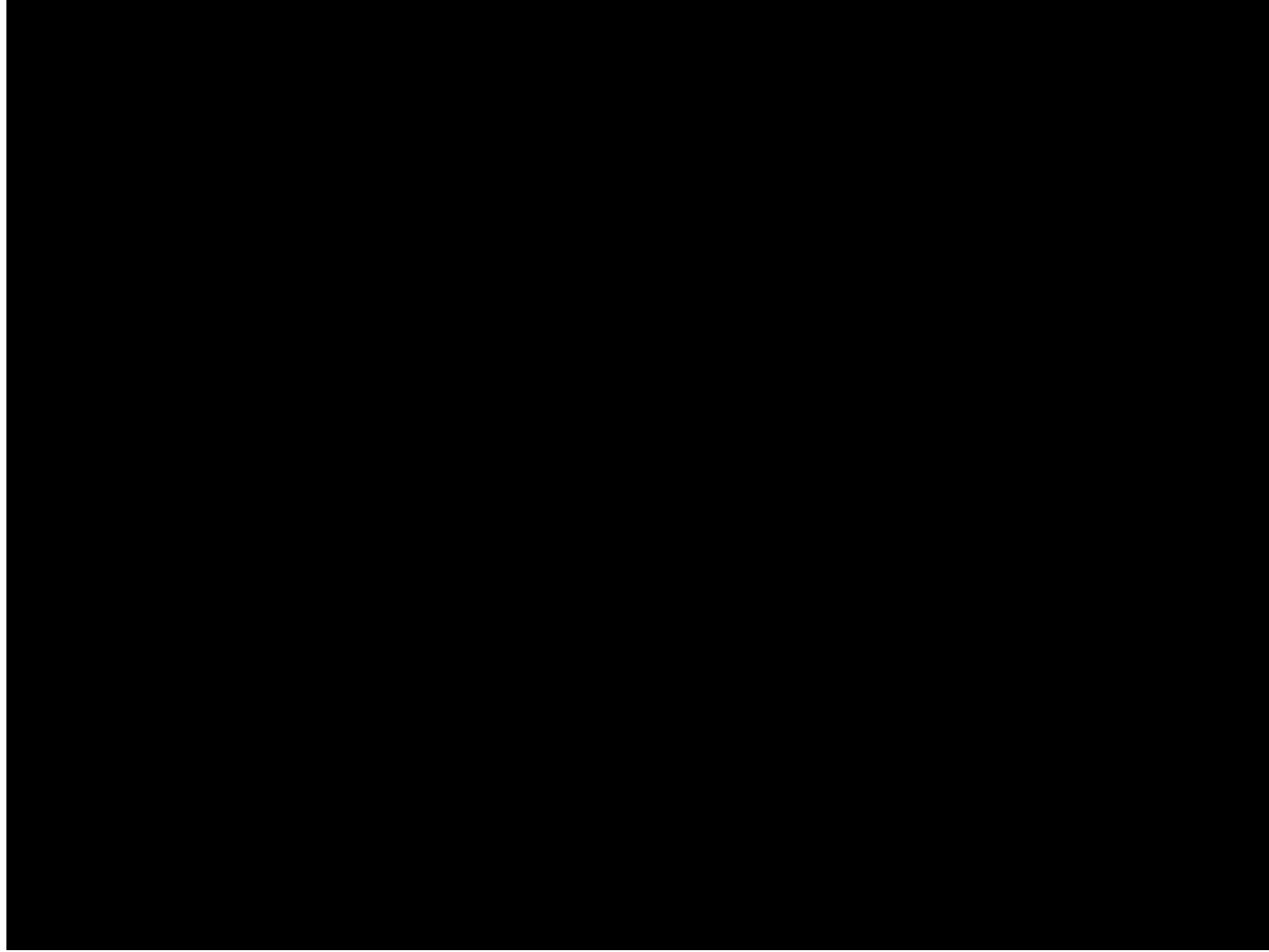


20-29 YEAR OLD CATEGORY



A person living with HIV should not be an outcast in society!

Crowdsourcing Feedback



Crowdsourcing Results

Average score: 3.4 on a 5-point scale

75 out of 96 submissions met eligibility criteria

- Excluded if unrelated to HIV testing or stigma, were low quality, plagiarized, or had stigmatizing content

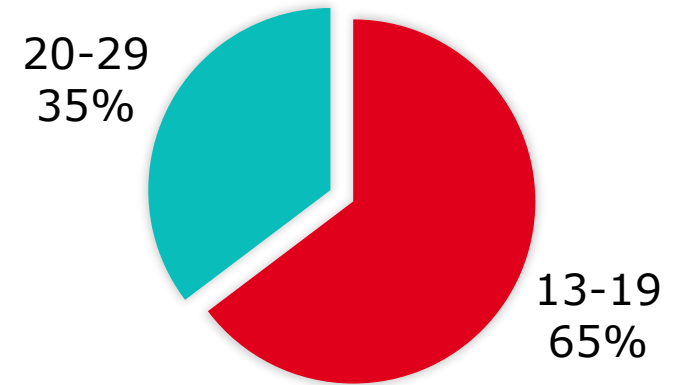
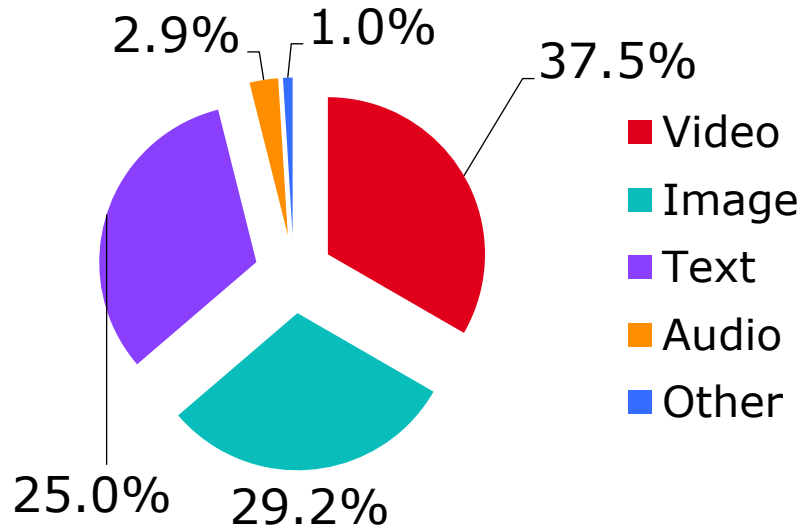
39 of the 75 submissions scored 70% or higher on the 5-point scale

Challenges

30 of the 96 submissions had stigmatizing content or misinformation
10 revised and resubmitted after feedback

Submission Characteristics

Average score: 3.4 on a 5-point scale



Dec. 2021 Jan. 2022

- Contest was announced on World AIDS Day -- Dec. 1st, 2021



Jan. 2022

- Series of mass protests began in Kazakhstan on Jan. 2, 2022, after a sudden surge in gas prices



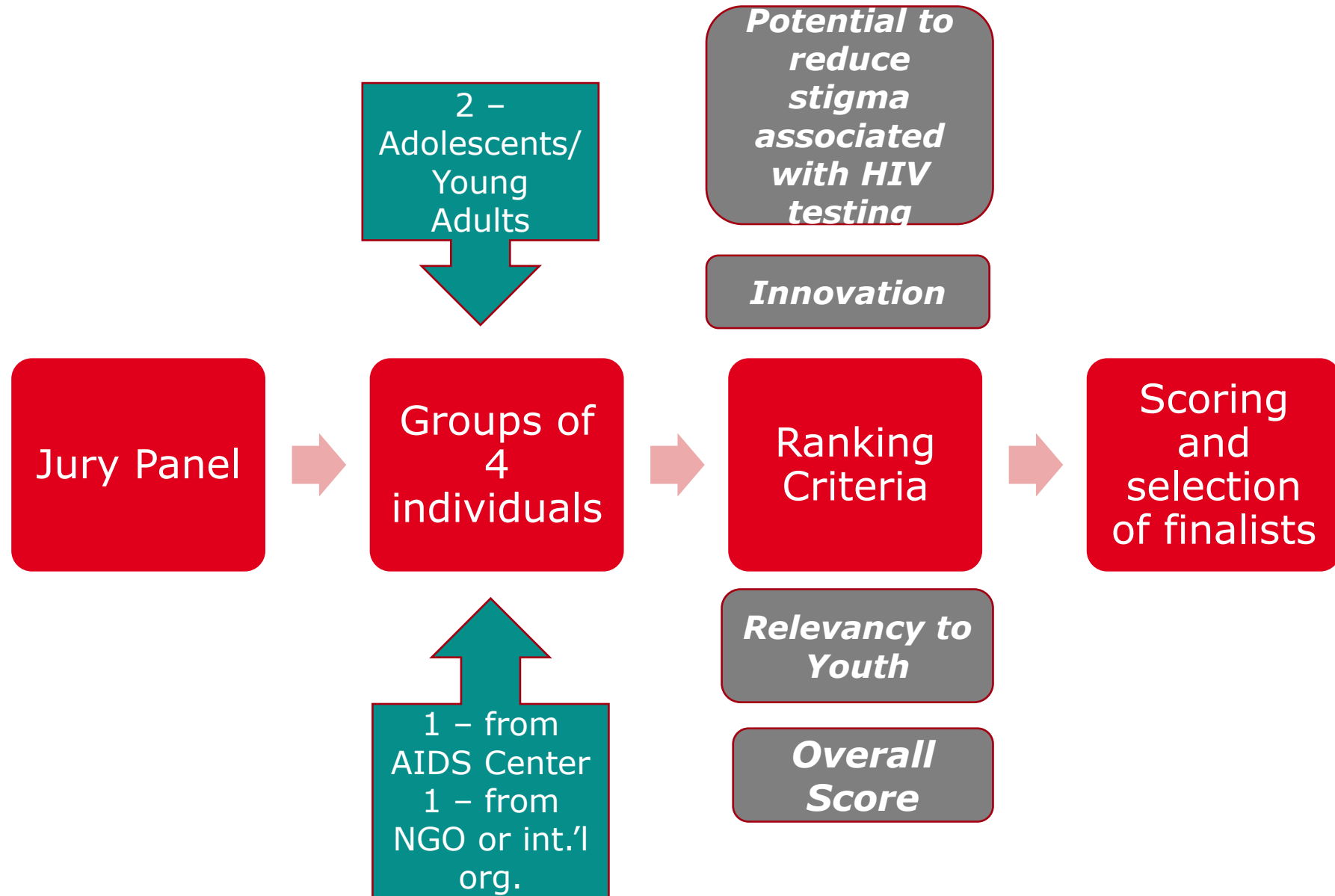
Feb. 2022

- Russian troops invaded Ukraine on Feb. 22, 2022



Deadline for the competition extended to March 31st, 2022

Overview of Judging Process



All

Даурен Салыков

Денис Гребенщиков

Дмитрий Беккер

Енлик Байсба

Жаннур Байдрахманова

Жасмина Кожамбет



Жасмина Кожамбет



Жанну Байдр



Арина Гаппарова



Алина Маканалина



Раимбек Рахметов



Нуржан Кенесбай



Денис Гребенщиков



Асан Зере



Камила Юсупова



Анвар Сафиулин



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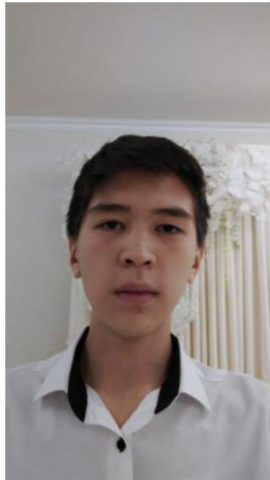


DANIYAL MAITEKOV

Публикация материалов в соцсетях, участие в разработке и оформлении сайта, привлечение и работа с лидерами мнений и пабликами для рекламных постов. Поиск

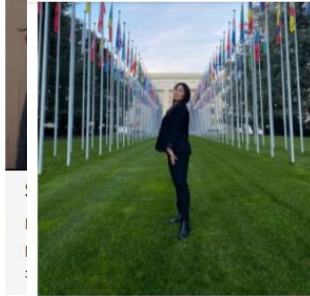
ПРОЕКТ JASSPARK

привлечение школ для проведения презентаций о конкурсе, написание постов, переводы материалов на английский язык.



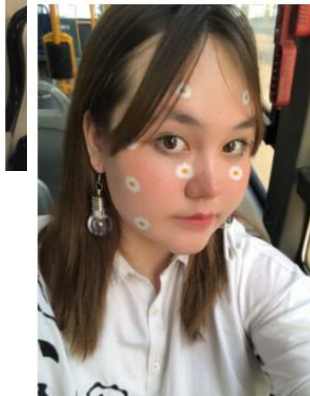
ANUAR RAKHIMBEKOV

Помощь в привлечении участников конкурса, переводы на казахский язык, помощь в подготовке сценария промо роликов, участие в съемках роликов, рекомендации и экспертное мнение.



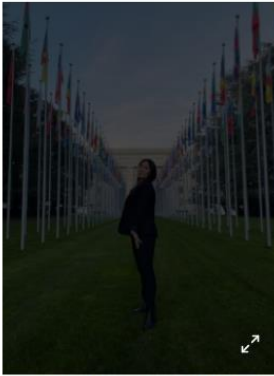
AKBOTA TOLEGENOVA

Организация и участие в промо кампаниях и прямых эфирах, помощь в привлечении участников конкурса, переводы на казахский язык.



MALIKA BEKEN

Озвучка роликов, помощь в подготовке сценария промо роликов, участие в съемках роликов, рекомендации и экспертное мнение.



AKBOTA TOLEGENOVA

Организация и участие в промо кампаниях и прямых эфирах, помощь в привлечении участников конкурса, переводы на казахский язык.



AMIRALI KUANYSH

Рекомендации и экспертное мнение.



ZHAMILYA KANIEYVA

Помощь в подготовке сценария промо роликов, участие в съемках роликов, рекомендации и экспертное мнение.

