

Optimizing PrEP Uptake Among Youth In Los Angeles And New Orleans Via Telehealth Coaching, Online Peer Support And Automated Texting: Results From ATN 149

August 15, 2022

UCLA-CDU CFAR & CHIPTS HIV Grand Rounds Dallas Swendeman, PhD, MPH ADOLESCENT MEDICINE TRIALS NETWORK FOR HIV/AIDS INTERVENTIONS

Acknowledgments & Disclosures

Funding: This research was supported by the Eunice Kennedy Shriver National Institute Of Child Health & Human Development of the National Institutes of Health under Award Number U19HD089886 for the Adolescent Trials Network (ATN) for HIV Medicine (MPIs Rotheram, Fernandez, Swendeman). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

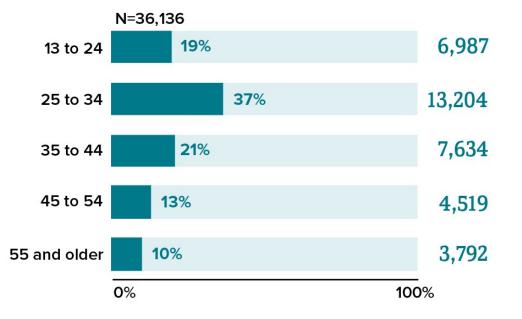
We declare no conflicts of interest, financial or other

Background on HIV & PrEP among Youth & Young Adults



Differences in New HIV Diagnoses by Age

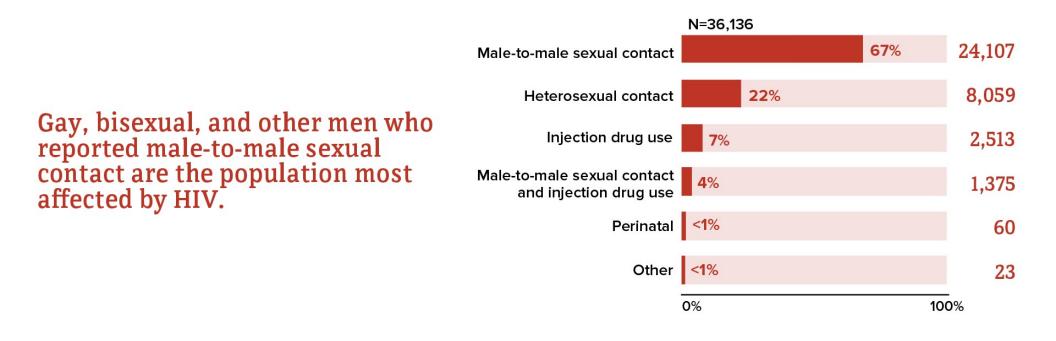
People aged 13 to 34 accounted for more than half (56%) of new HIV diagnoses in 2021.





Source: CDC. Diagnoses of HIV Infection in the United States and Dependent Areas, 2021. HIV Surveillance Report 2023;34.

Differences in New HIV Diagnoses by Transmission Category**



* Among people aged 13 and older.

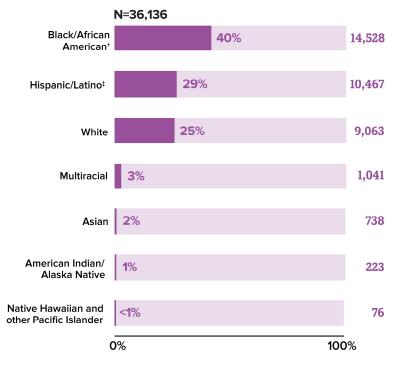
⁺ Transmission category is classified based on a hierarchy of risk factors most likely responsible for HIV transmission. Classification is determined based on the person's assigned sex at birth. Data have been statistically adjusted to account for missing transmission category.

Source: CDC. Diagnoses of HIV Infection in the United States and Dependent Areas, 2021. HIV Surveillance Report 2023;34.

New HIV Diagnoses in the US and Dependent Areas by Race and Ethnicity, 2021*

Racial and ethnic differences in HIV diagnoses persist.



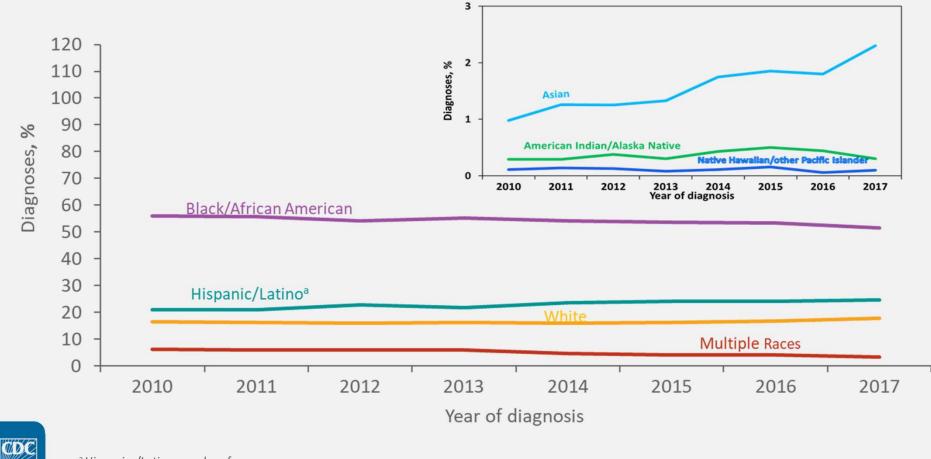


* Among people aged 13 and older.

⁺ Black refers to people having origins in any of the Black racial groups of Africa. African American is a term often used for people of African descent with ancestry in North America. ⁺ Hispanic/Latino people can be of any race.

Source: CDC. Diagnoses of HIV infection in the United States and dependent areas, 2021. HIV Surveillance Report 2023;34.

Diagnoses of HIV Infection among Adolescents and Young Adults Aged 13–24 years, by Race/Ethnicity, 2010–2017—United States and 6 Dependent Areas

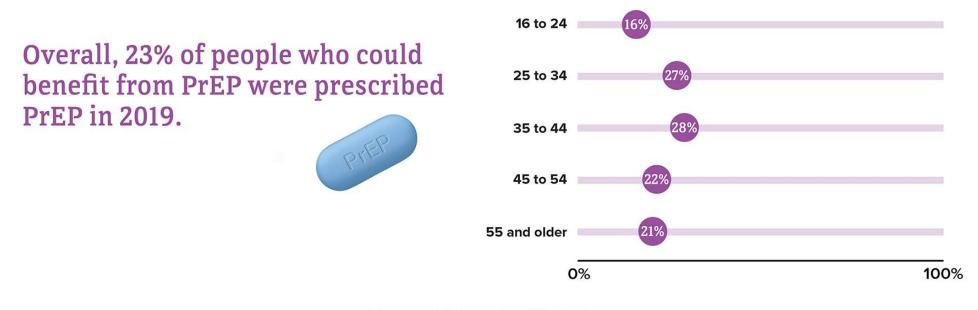




^a Hispanics/Latinos can be of any race.

PrEP Coverage in the US by Age, 2019*

PrEP is highly effective for preventing HIV from sex or injection drug use.

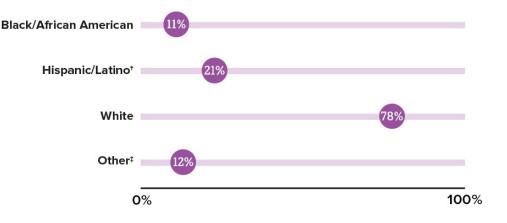


* Data not available for people aged 15 and under.

Source: CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2019. HIV Surveillance Supplemental Report 2021;26(2).

Differences in PrEP Coverage in the United States by Race and Ethnicity*

More work is needed to ensure equitable prescribing of PrEP. Of the 1.2 million people in the United States who could benefit from PrEP, only 30% were prescribed PrEP in 2021, with substantial differences by race and ethnicity.



Abbreviation: PrEP = Pre-exposure prophylaxis.

* Among people aged 16 and older. † Hispanic/Latino people can be of any race. ‡ Includes American Indian/Alaska Native, Asian, Native Hawaiian and other Pacific Islander, and multiracial people.

Source: CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2021. HIV Surveillance Supplemental Report 2023;28(4).



ATN 149: Optimizing Prevention Continuum for Youth in L.A. and NOLA

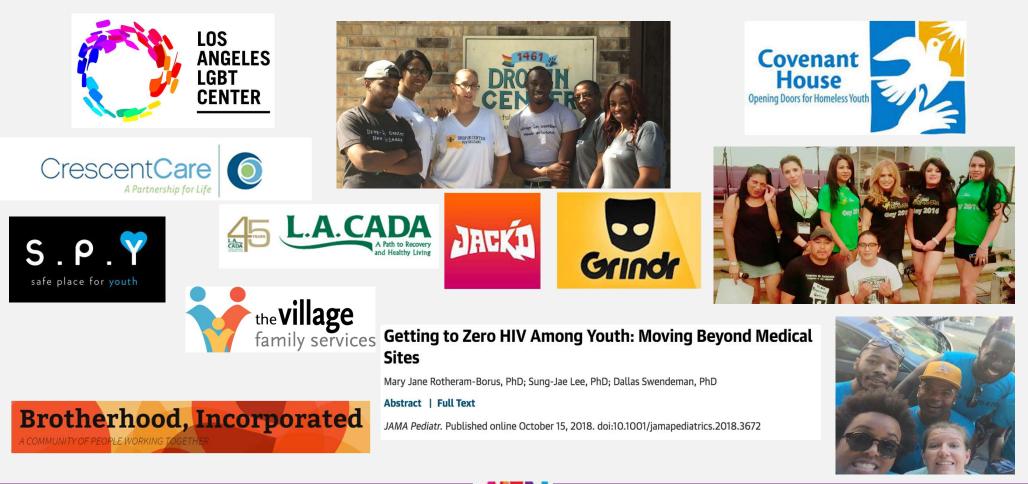


Objective, Aim & Hypothesis

- Objective: Test efficacy of 3 "Disruptive Innovation" intervention modalities to support HIV prevention and related outcomes in a 4-arm factorial RCT:
 - Automated text-Messaging and Monitoring (AMMI)
 - Peer Support on private social media space
 - Coaching strengths-based, telehealth delivered by near peers, no manuals
- Aim: Evaluate independent and synergistic intervention effects:
 - Primary HIV prevention choices PrEP, condoms, partners, PEP
 - Secondary mental health, substance use, housing/economic security
- Hypothesis: Combination of 3 interventions will have largest impacts

ATN

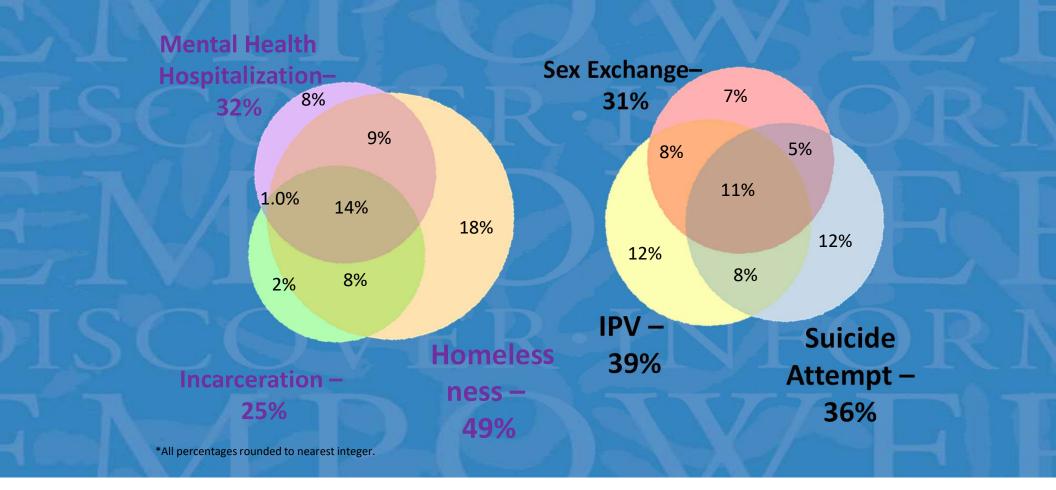
Community-Based Recruitment L.A. & New Orleans



08/23/23

ATN

Intersecting Challenges



Diverse & Inclusive Participant Sample

	No.	Col %		
Age categories				
12-18	151	15		
19-21	421	41		
22-24	465	45		
Sex assigned at birth				
Male	969	93		
Gender identity				
Cis-gender	839	81		
Transgender	124	12		
Gender diverse/Non-				
binary	72	7		
Sexual orientation				
Gay/Homosexual/Same				
GenderLoving/Downe	572	55		
Bisexual	287	28		
Pansexual	76	7		
Heterosexual	exual 50 5			
Queer	39	4		
Asexual/Other	8	1		
Unsure/questioning/DK	4	0		

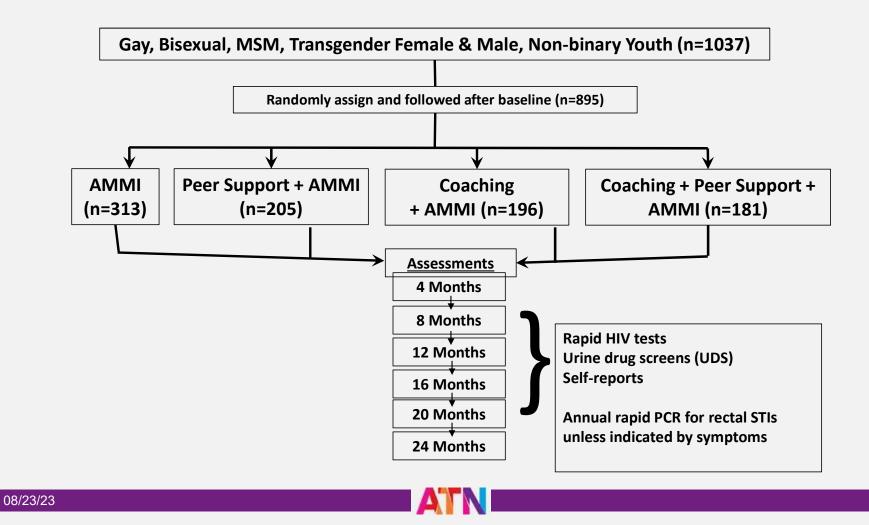
	No.	Col %	
Race / Ethnicity			
Black/African American	387	37	
Latino	333	32	
White	211	20	
Asian/HPI/NA/AN/Other	106	10	
Education level			
Below high school	191	19	
High school / equivalent	239	24	
Some higher education	462	45	
Completed Higher ed.	125	12	
Employment status			
Employed	488	48	
Unemployed	240	24	
Student	285	28	
Insurance status			
Insured	773	75	
Uninsured	190	18	
Unsure	71	7	
Income <poverty level<="" td=""><td colspan="3">vel 692 67</td></poverty>	vel 692 67		

ATN

	No.	Col %
HIV Prevention Program		
Experience	215	21
Consistent Condom Use	499	48
Lifetime PEP Use	61	6
Lifetime PrEP Use	190	18
Current PrEP Use	111	11
Lifetime Sex Exchange	257	25
Recent Sex Exchange	127	12
Lifetime sexual partners		
No partners	81	8
1-2 partners	111	11
3-10 partners	374	36
11 or more partners	465	45
Recent sexual partners		
No partners	157	15
1-2 partners	406	39
3-10 partners	397	38
11 or more partners	73	7
Condomless anal sex (12 m)	691	67

08/23/23

ATN 149 Study Design



PrEP Barriers & Intervention Impacts



Diverse & Inclusive Participants

	No.	Col %		
Age categories				
12-18	151	15		
19-21	421	41		
22-24	465 45			
Sex assigned at birth				
Male	969	93		
Gender identity				
Cis-gender	839	81		
Transgender	124	12		
Gender diverse/Non-				
binary	72	7		
Sexual orientation				
Gay/Homosexual/Same				
GenderLoving/Downe	572	55		
Bisexual	287	28		
Pansexual	76	7		
Heterosexual	50	5		
Queer	39	4		
Asexual/Other	8	1		
Unsure/questioning/DK	4	0		

	No.	Col %		
Race / Ethnicity				
Black/African American	387	37		
Latino	333	32		
White	211	20		
Asian/HPI/NA/AN/Other	106	10		
Education level				
Below high school	191	19		
High school / equivalent	239	24		
Some higher education	462	45		
Completed Higher ed.	er ed. 125			
Employment status				
Employed	488	48		
Unemployed	240	24		
Student	285	28		
Insurance status				
Insured	773	75		
Uninsured	190	18		
Unsure	71	7		
Income <poverty level<="" td=""><td>692</td><td>67</td></poverty>	692	67		

ATN

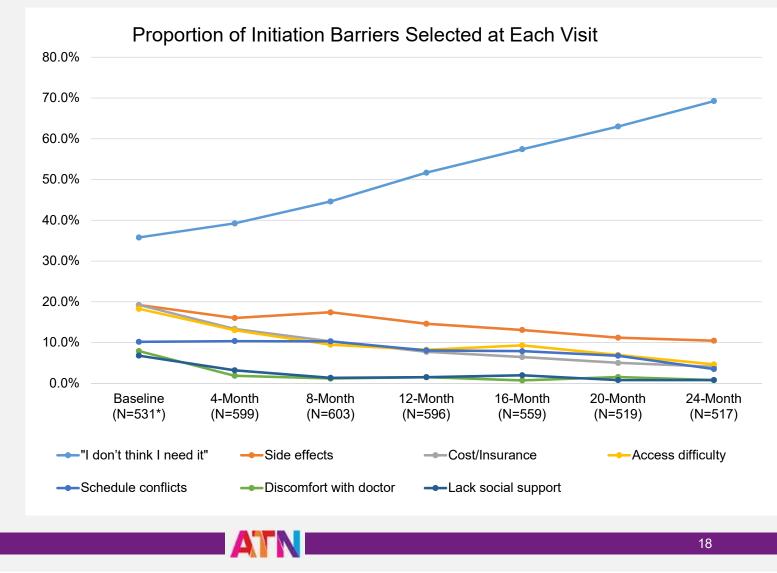
	No.	Col %
HIV Prevention Program		
Experience	215	21
Consistent Condom Use	499	48
Lifetime PEP Use	61	6
Lifetime PrEP Use	190	18
Current PrEP Use	111	11
Lifetime Sex Exchange	257	25
Recent Sex Exchange	127	12
Lifetime sexual partners		
No partners	81	8
1-2 partners	111	11
3-10 partners	374	36
11 or more partners	465	45
Recent sexual partners		
No partners	157	15
1-2 partners	406	39
3-10 partners	397	38
11 or more partners	73	7
Condomless anal sex (12 m)	691	67

08/23/23

PrEP Initiation Barriers Over Time

'I don't think I need it' most frequently reported barrier

08/23/23



Perceived Need for PrEP

- Reporting <u>'I don't think I need it' more common</u> among SGMY who were:
 - <u>Black or White</u> (compared to Latino): OR=2.048, 95% CI [1.137, 3.690]; OR=2.143, 95% CI [1.176, 3.903]
 - <u>Gender diverse or transgender male (compared to MSM)</u>: OR=2.247, 95% CI [1.035, 4.879]; OR=6.870, [2.241, 21.062]
 - Incarcerated in lifetime: OR=3.618, 95% CI [1.786, 7.330]
- <u>'I don't think I need it' less common</u> (i.e., higher perceived PrEP need) among SGMY who:
 - Had lifetime suicide attempts: OR=0.502, 95% CI [0.301, 0.838]
 - Lifetime PEP use: OR=0.066, 95% CI [0.008, 0.564]
 - 3+ recent sexual partners (compared to none): OR=0.398, 95% CI [0.194, 0.816]
 - Hazardous alcohol use: OR=0.571, 95% CI [0.360, 0.906]

PrEP Daily Adherence: Not the Primary Challenge

	baseline	4months	8months	12months	16months	20months	24months
Every day	84.40	71.21	69.35	76.64	73.79	82.08	76.24
Almost every day	12.84	19.70	20.16	11.21	12.62	12.26	13.86
Several days per week	2.75	3.79	7.26	4.67	7.77	2.83	4.95
Only before having sex	0.00	2.27	2.42	4.67	1.94	0.00	0.99
Only if I know my partner's HIV status	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	3.03	0.81	2.80	3.88	2.83	3.96

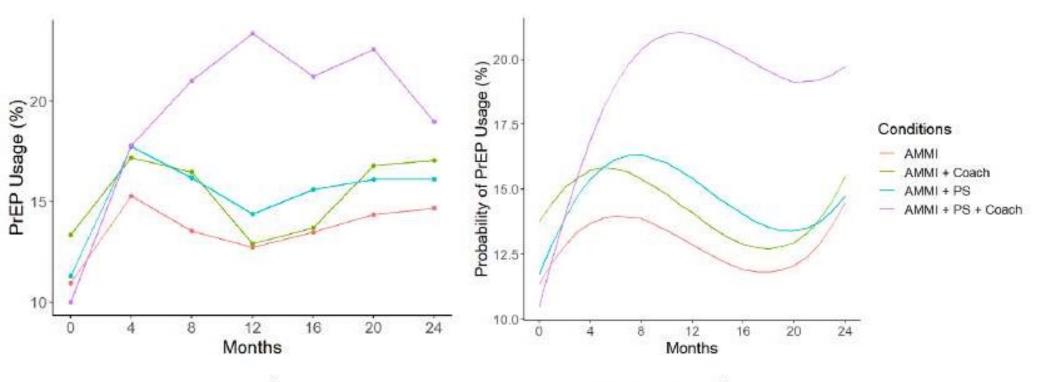
Table 3: PrEP frequency

Intervention Effects on PrEP Use

3 Adaptable and Flexible Interventions





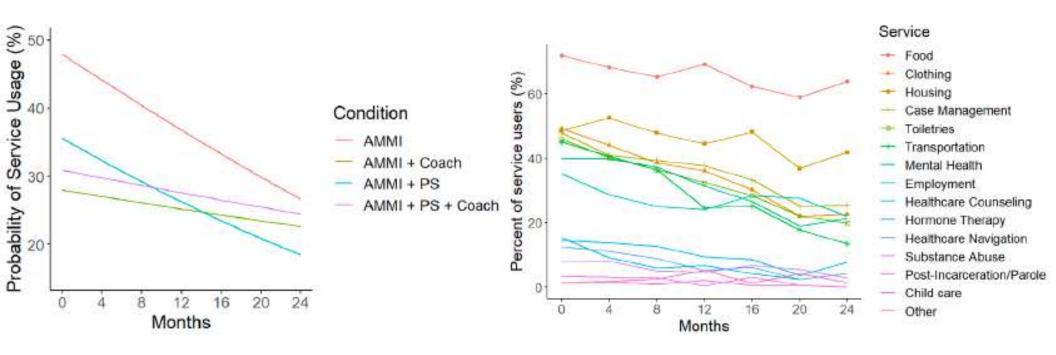


(OR 2.35; 95% CI:1.27-4.39 vs. AMMI control)

Secondary Outcomes



Intervention Effects: Services Use



(OR=1.23, 95% CI 1.12-1.35)

How did we get here? Interventions Deep Dive



CHIPTS Family Tree of EBI for Youth Small group primary HIV prevention trials:



- ▶ 1988 1992
- > Runaway adolescents in NYC
- Gay cohort NYC (no control)



NIMH Multi-site Trial - 1991-1995
 Youth Trial
 Computer Light (Lightfoot)

CHIPTS Family Tree of EBI for Youth Secondary HIV prevention trials with YLH:



> 1993 - 1997
 > Small Group Format
 > L.A., NYC, S.F., Miami



> 1998-2002
> One-on-One vs. Telephone
> L.A., NYC, S.F.

CDC Replication & Diffusion

Adaptation with CBO / ASO Staff & Clients



> 2002-2004



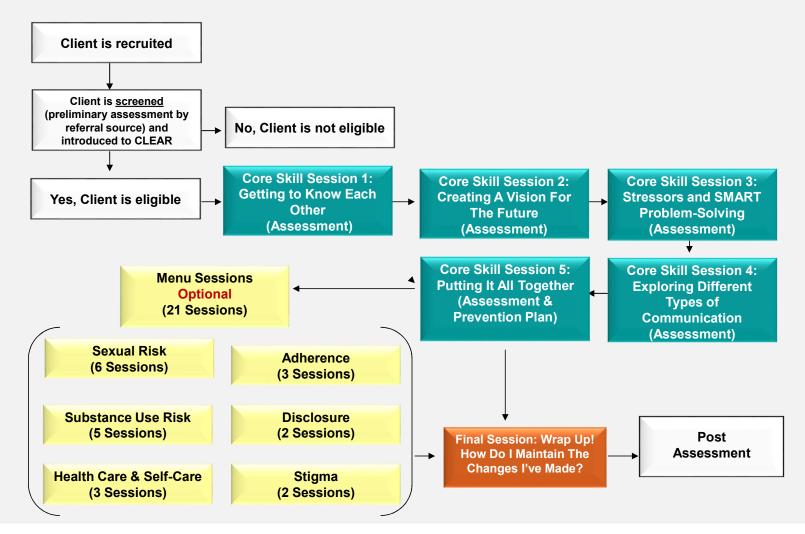
> 2004-2006



> 2005 − 2007

- Adaptation incorporated high-risk negatives
- Most "popular" DEBI, per CDC
- Trained 900+ providers in 300+ agencies since 2008, with 25+ agencies for 2015-2020

CLEAR Client Flow Chart



Common Elements Approach

How will I ever master all these Manualized Evidence Supported Treatments???

If only I could figure out the basic elements... I could apply them as needed

> Richard P. Barth, PhD, MSW Resity of Maryland School of Social Work hale the Effective Based Phartice Anthuia well SCHOOL OF SOCIAL WORK Presented at EUSARF Copenhagen, Denmark

September 4, 2014

rbarth@ssw.umaryland.edu



EBI share <u>COMMON</u> Theories, Functions, **Principles**, **Practices**, Elements...

3 Adaptable and Flexible Interventions



Automated text-Messaging and Monitoring Intervention (AMMI)



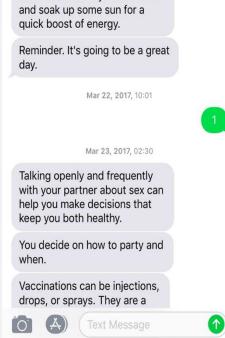
AMMI – Daily Text-Message "Nudges"

<u>5 content streams</u> Daily, 1 message from each:

- Healthcare
- Wellness
- Medication/PrEP Adherence
- Thursdays to Saturdays:
 - Sexual Health
 - Substance Use

~100 unique messages per content stream

- Adapted libraries from Cathy Reback, HRSA, etc.
- Youth Advisory Boards, Co-Is, Staff vetted & adapted
- Youth could opt-out at any time (<10% and many opted-in again)



(017) 000 0400

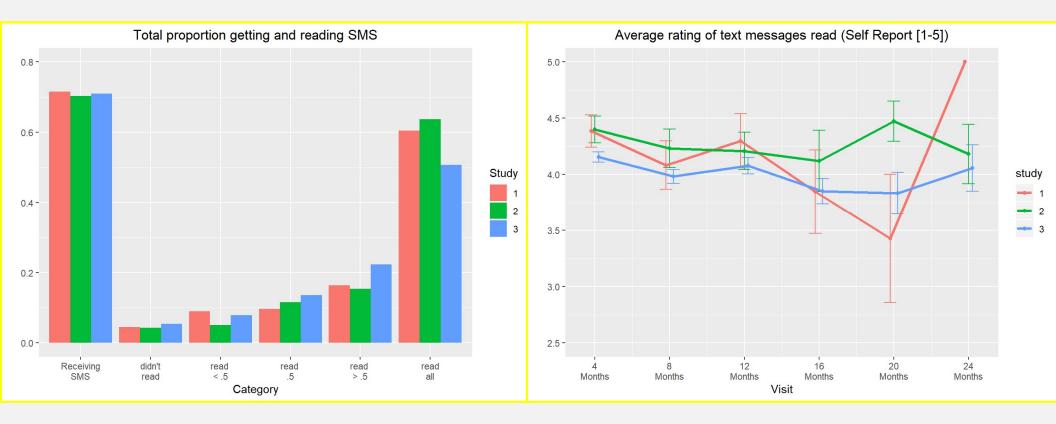
Don't rely on other people, take

Been inside all day? Get outside

your health seriously.

08/23/23

>70% report receiving and reading all or most text messages - stable over time

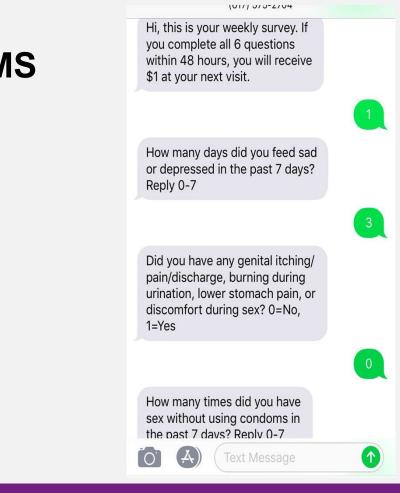


08/23/23

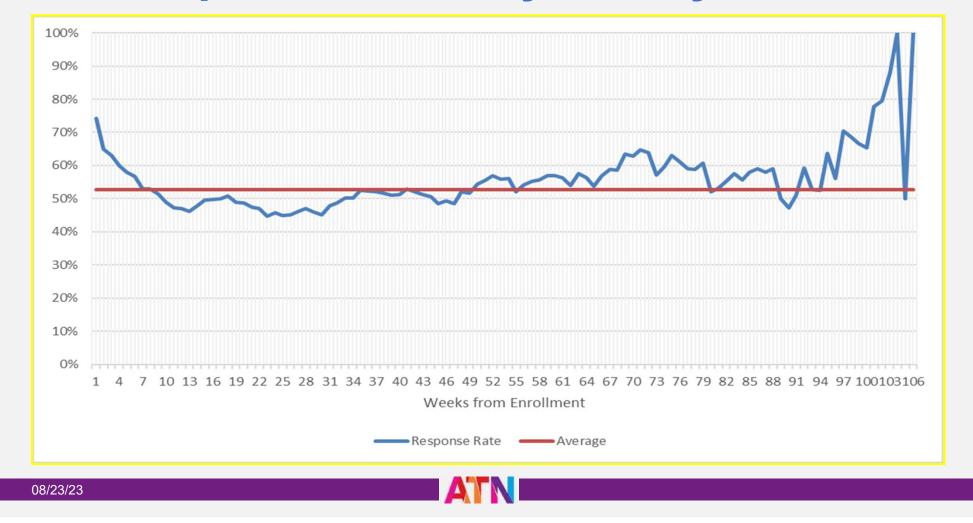
AMMI – Weekly Monitoring

7-item "check-in" survey by SMS or email:

- STI Symptoms
- Acute HIV symptoms
- Depression
- Substance use
- Condomless sex
- Housing & food insecurity
- Medication/PrEP adherence
- \$1 incentive per survey



~50% respond to weekly surveys over time

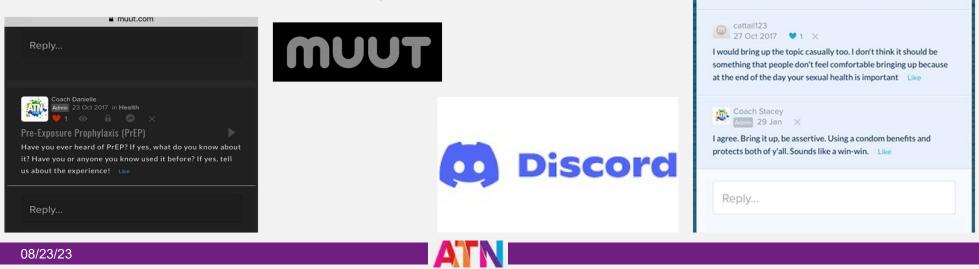


Peer Support – online, private community



Peer Support – Private Online Spaces

- Private, anonymous, not on FaceBook, etc.
- \$10 incentives to post 3x each week
 - Up to 16 weeks
- Study Coaches reduced role over time
 - Moderate, blog content development
 - YAB feedback to reduce presence -> Youth-led



muut.com

Have you ever had a conversation with someone you're dating about using condoms? If yes, how did it go? If no, how would you

I'm not much of a relationship person, but I do have talks with guys I

have sex with about protection all the time. I think the easiest way is to just bring it up as if it's normal cause it is and should be Unlike

Coach Danielle

Condom Convos

bring up the topic? Like

ohmystars 24 Oct 2017 V +1 X

AIN

23 Oct 2017 in Health

Peer Support Boards

- Peer norming is critical
- Coaches acting as peers, prompted conversations, answered questions, corrected misinformation, modeled best practices





Peer Support Board Conversation: PrEP

Topic: My prep pills

I don't know wether i should take my prep pills or not because my friends tell me that its not worth taking them because of the side effects and the fact that there using us as ginnie pigs so i dont know what to do should i take them i should i stop. (P1)

Have you talked with your doctor about your concerns? I am planning on starting prep, but am waiting until I can get a reliable supply. But I am nervous about the side effects, and may stop taking it if they're too troublesome. (P2)

I have multiple friends using PREP who have never experienced negative side-effects. This pill is not using people as a test subject, it's here to help prevent the spread of HIV. If you're having sex, I definitely recommend it! (P3)

No I haven't talked to a doctor (P1)

Talk to your doctor or someone at the LGBT Center! Prep is changing and saving lives in my opinion. I've never experienced any side affects, and I've been taking it for 3 years. (P4)

08/23/23

Coaching – Strengths-based, telehealth, by near peers

Coaching: A novel approach to "evidencebased" intervention

- Strengths-based
 - Assess and build on youths' strengths, resilience
- Client-Centered hierarchy of needs
 - Housing, employment, relationships, mental health, substance use -> HIV

Near-peer paraprofessionals

- Frontline HIV prevention workers
- Trained in Evidence-Based Practices
- Ongoing for 24-month follow-up period
 - Address needs in developmental transitions, crises
- Designed for Diffusion
 - Flexible for frontline workers roles, styles, language
 - Telephone, text-message, in-person delivery





Coaching: Strengths-Based and Youth-Centered

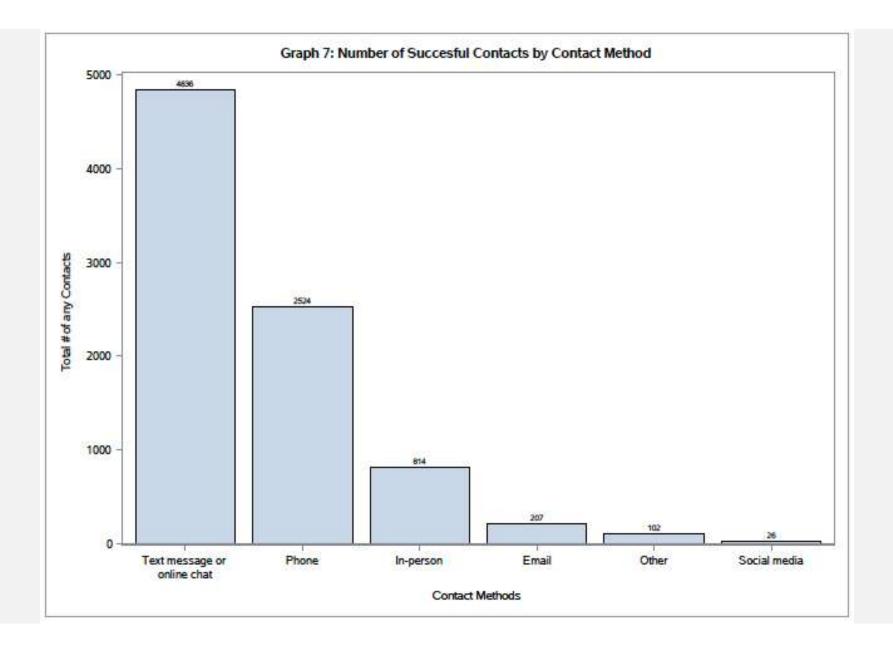
Core Elements

- Evidence-based practice training
- Assess strengths
- Hierarchies of needs
- Youth priorities+HIV/STI
- Link to services in cmty.
- Goal-setting, problem solving, follow-up



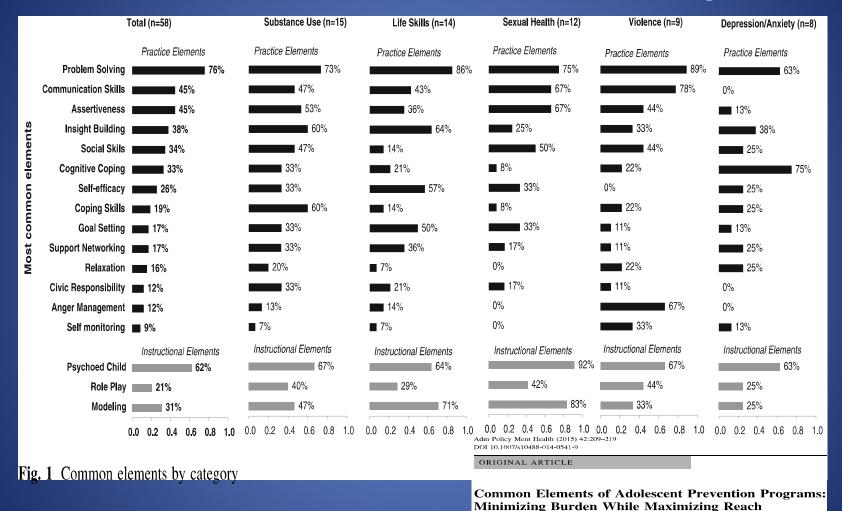
Flexible / Adaptable

- Coaches: near-peer CHWs or others
- Phone, video, text, inperson
- Weekly to monthly follow-ups
- Ongoing support for "seasons of risk"



Training on Common Elements

Practitioner Guide Problem Objectives:	Solving	Use This When: To provide children with a systematic way to negotiate problems and to consider alternative solutions to situations.	For Child	
 to teach a method of 	problem solving that involves clear amining the solutions, implement			
Steps:	Discuss the fact that we all			
	 Note that solving them can make us feel good, and not solving them can make us feel bad. Discuss with the child the types of problems that people in general experience daily, and more specifically, those problems that the child might be dealing with. Appropriate self-disclosure may be useful. Ask the child to begin thinking about a particular problem he/she has experienced lately. 			
Teach 5 steps to problem solving	 Say what the problem is Think of solutions Examine each one (what g tried this solution?) Pick one and try it out See if it worked. If so, greatry another one. 			
 Practice using the problem solving steps 	 Familiarize the child with this problem-solving process by starting with your own problem and allow the child to help you in working through the problem solving steps. Keep your example brief (e.g., use only 2 or 3 possible solutions, and move through them quickly; the goal is to illustrate the process). Use questioning to make sure he/she understands the steps. 			
 Elicit personal example from child and practice 	After you have disclosed your problem, work with the child to identify a problem from his/her life that the two of you can work on using the problem solving steps. Do this in more detail than your example above. If the child is not ready to discuss his/her problems, use a story or a problem of someone the child is close to (i.e., a friend or family member).			PracticeWise
Review problem solving technique Practice assignment	Ensure that the child (a) knows we understands how to use this strate Ask the child to practice the pro-	itegy, and (c) knows each of	the five steps	
	to record his/her steps (with ca back to the next session for dis	Practitioner Guides		



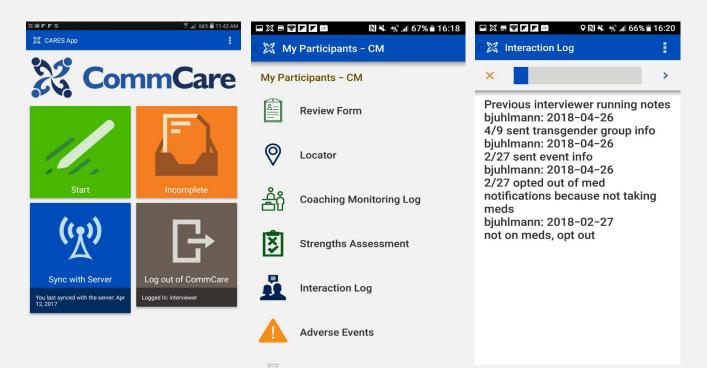
Common Practice Elements in Adolescent Prevention Programs

Maya M. Boustani · Stacy L. Frazier · Kimberly D. Becker · Michele Bechor · Sonya M. Dinizulu · Erin R. Hedemann ·

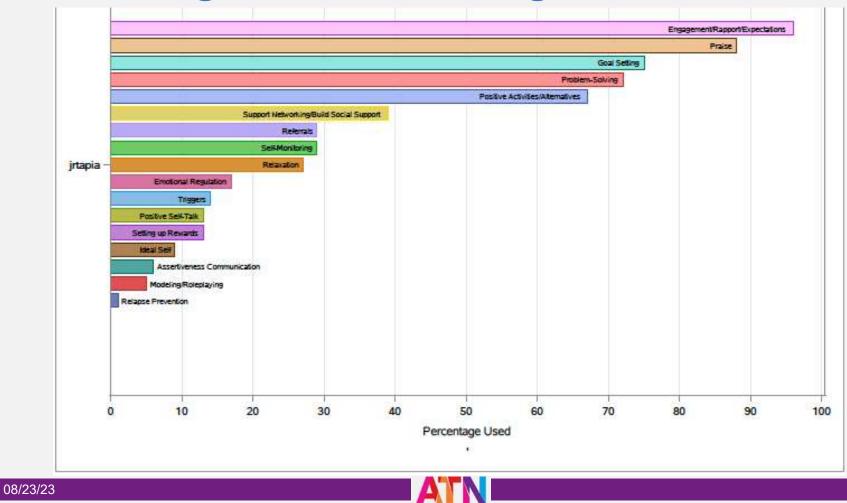
Robert R. Ogle · Dave S. Pasalich

Mobile-Web Data Collection, Intervention, & Supervision

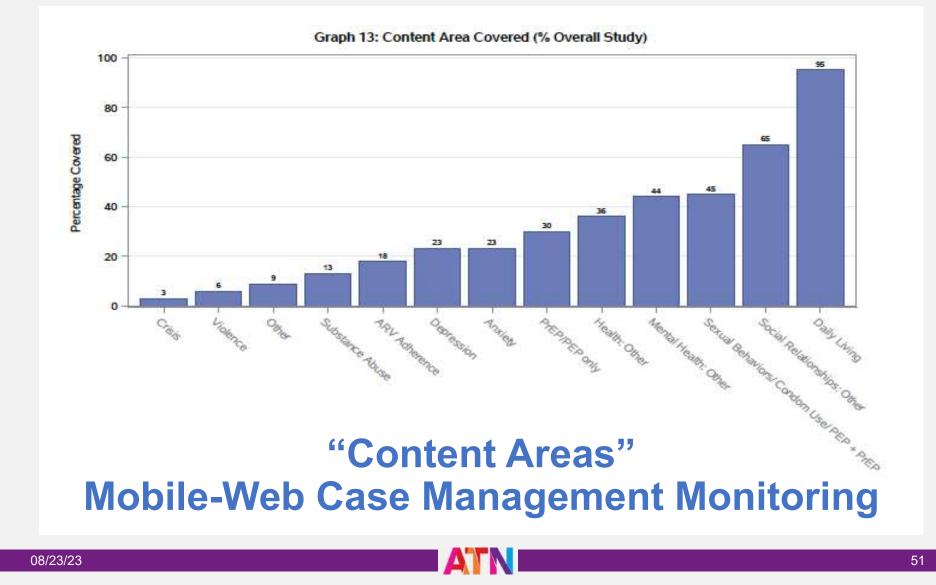
- Dimagi CommCare on mobiles, tablets, PCs
- Assessments, interactions, interventions, prompted & logged in realtime



Case Management Monitoring: Practice Elements



50



Frontline Workers Can Adapt to their Local & Individual Clients

Local Adaptation

Content Tailoring

Foundation al Skills

Cultural Tailoring Ethnicity, Language, Income, Education

Shared processes Frame issue Knowledge Build skills Remove barriers Build social support

Domains (e.g., Anxiety) Situations Entering a new school Developmental challenges

Evidence-Based Practice Elements

Strengths Assessment: PrEP Barriers

[Participant] has heard of PrEP and wants to be on it but is worried that his medical information will be disclosed somehow to his mother since he is under her insurance and currently not out to her. [The participant said,] "I feel like if I get on PrEP there will be a way for her to find out. I don't know if it's super discreet." (PID: 110180030)

[Participant] was on PrEP starting February 2019 and got off it once he started reading about potential side effects...now that he's in a monogamous relationship and they both got tested together he doesn't feel the need to be on it. (PID: 110660097)

- Strengths assessment captured baseline PrEP preferences, barriers, and experiences
- Context of HIV risk and
 PrEP opportunities
 also captured across
 multiple domains
 (healthcare,
 relationships, physical
 health, etc.)

Strengths Assessment: Mental Health

- Strengths Assessment administered at first coaching session
- Descriptions, strengths, and challenges described for 6 domains of functioning:
 - Daily living, social relationships, physical health, healthcare, mental health, risks (sexual health and substance use)
- Strengths leveraged to reach health-related goals

"Realistically I have moments where I am down, but it has made me resilient and I'm able to bounce back." (Non-Binary, pansexual participant, White, age 20, Los Angeles)

"Having my medication is a strength. But having it NOT work perfectly is also a strength because it has pushed me to develop tools for my mental being. If Zoloft was perfect, I wouldn't have discovered the techniques in managing my depression and anxiety. That alone also helps me help others in discovering their own techniques to manage their anxiety and depression." (Cisgender gay male, White, age 20, Los Angeles)

ATN

Coaching: Strengths-Based and Youth-Centered

Goal-Setting

- Identify long and shortterm goals
- Support on 3 goals, always sexual health
- Problem-solve SMART goals
- Follow-up on goal progress
- Ongoing supportive
 accountability



Goal Setting

- Participants set goals with coaches
- Coaches follow up on goal progress and problem-solve
- 1 goal must be related to sexual health, others can be for other domains

I did meet with [my coach] really consistently over the two years. My goal, my personal goals that we had set together basically were all having to do with securing very basic needs...[My coach] helped me navigate a lot of like youth services...(Youth Advisory Board Session 4)



Participants' Goals: Diverse priorities

	Housing	<u>Finances</u>	<u>Work</u>		
Goals were made across a variety of domains including:	Participant would like to "get off the streets." He would like to secure housing for himself and his dogs.	To open a bank account and set-up direct deposit to save money	Apply to 10 job applications in the next two weeks and follow up.		
<u>School</u>	Government Services	<u>Relationships</u>	Physical Health		
Go to office hours for math and English	Obtain her certificate of naturalization	To reach out to friends at least once a week	Begin working out at home 2x a week		
Healthcare	Mental Health	Sexual Health	Substance Use		
Finding a doctor to update immunizations	The participant would like to build coping skills for anxieties he experiences for trusting other people	Wants PrEP before transferring to University in September	Limiting alcohol to every 2 weekends		
08/23/23 Δ ΥΝ 57					

Youth Advisory Board



Youth Advisory Board

Coaching Intervention Feedback

"...I really needed someone to keep me accountable to myself at that time in my life and [my coach] was my rock those first two years of being homeless...that was really special in that time in my life, because I felt like everybody who was important to me disappeared." (YAB Session 4)

PrEP Discussions

"...I weigh the chance of getting HIV is more dangerous than the potential side effects. And so, in my instance, I do take PrEP...I use also the reasoning [that] I would probably get in a more monogamous relationship eventually in the future...And so I figured that my time on PrEP would be limited." (YAB Session 9)

ATN

Youth Advisory Board

Inclusion of trans masculine and gender-diverse youth

"I like studies that involve trans men, because a lot of them don't, so when I can be there and show up for my community, especially my masculine-identified community, I want to do that so there can be more studies. I mean we need that so other people can...look at [it] and make that decision [about PrEP use], because I was able to be a part of that." (YAB Session 4)

Community Inclusion

"...you all have been doing an excellent job with including the community and gettinggathering feedback, and I've definitely seen you all's evolution with, you know, keeping us, keeping the population, and their voice kind of centered and being open to feedback...It's been great to watch this develop." (YAB Session 11)

Conclusions, Limitations, Next Steps



Conclusions

PrEP Use

- Modest increases is PrEP use with Coaching + Peer Support + AMMI
 - New and continued use over 12 to 20 months, but is it enough to bend the curve?
- How do the interventions function?
 - Peer Support social norming, sharing experiences, demystifying
 - Coaching goal setting (personal & sexual health), navigation, follow-up
 - AMMI nudges, reminders (little emphasis on PrEP use
 - Results support hypothesized synergistic effects

Services Utilization

• Coaching, with & without Peer Support, supports referral, linkage, navig.

ATN

Conclusions

- Need to address youths' diverse needs and priorities with complementary interventions to support HIV prevention
- Rapidly adaptable and implementable "disruptive innovation" interventions can be efficacious



Next Steps in Progress

- Cost-Effectiveness analyses
- As-treated / post-hoc analyses
 - Who did intervention work for or not?
 - Other outcomes for sub-groups? Mental health, substance use, condom use?

Intervention Innovations

- Chatbots interactive AMMI, coaching scalability
- Implementation with real-world navigators, peer counselors, outreach workers? Or "Direct-to-youth"

CHIPTS EHE Supplement for Implementation Preparation

Implementation research project for scale-up of ATN 149 interventions for youth at-risk for HIV in LA

- Phase 1: Mixed Methods Data Collection and Networking
- Phase 2: Intervention Package Update, Implementation Strategy Development, & Type 2 Hybrid Implementation-Effectiveness Trial Preparation

Partners:

- Friends Research Institute and Community Center in Hollywood
- TruEvolution in Riverside
- Loma Linda University Health's Institute for Community Partnerships

Interested in collaborating? Contact us!

Thank you to our team, youth & many more



Thank you! Questions? Collaboration?

dswendeman@mednet.ucla.edu

