

FEND

LEXINGTON CAMPAIGN

JANUARY 2020-JUNE 2021



Preventum
Initiative

ACKNOWLEDGMENTS

FEND is a campaign developed with collaboration with researchers, technologists and subject matter experts. The Preventum Initiative received funding for the FEND Lexington program from a grant awarded to the Lexington-Fayette Urban County Government from the Keenan Charitable Trust.

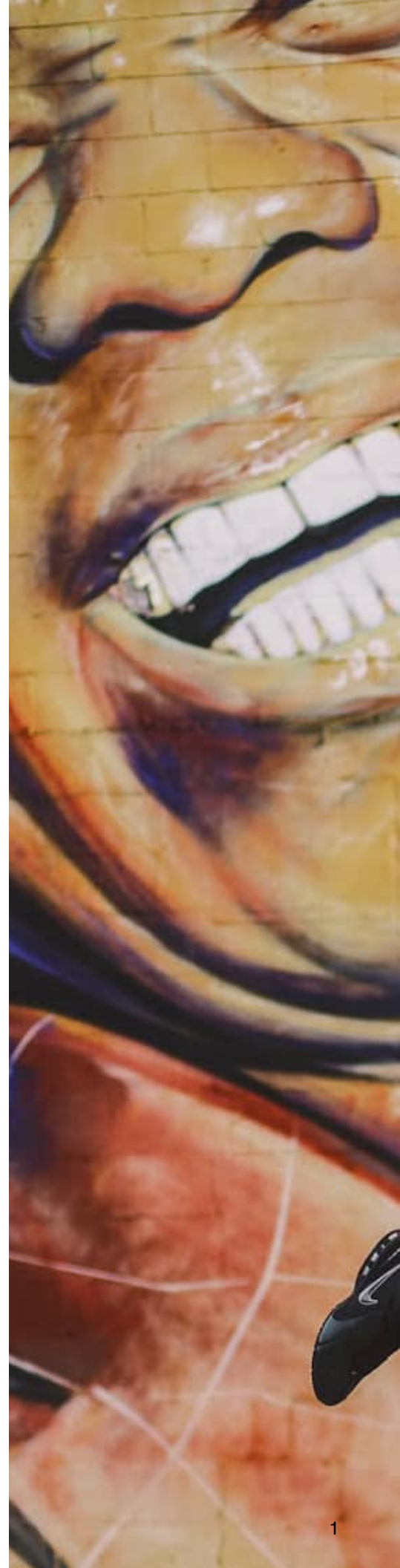
Preventum Initiative wishes to thank the following individuals and organizations for their support in making FEND-Lexington a success.

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- Eric Geary, The Lexington Leadership Foundation
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INTRODUCTION

Drug use in America is alive and well. It is estimated that 10% of Americans over the age of 12 struggle with a substance use disorder. This has resulted in a cost of over \$750b annually in lost productivity, health care costs and criminal activity. Overdose deaths are also on the rise. Drug overdose deaths rose nationwide by 29% during the early months of the COVID-19 pandemic, with Kentucky ranked third among states in the increase of such deaths, according to the CDC. (Ahmad et al, 2021)

In Kentucky, long plagued by high rates of substance use disorders, overdose deaths rose by 50% from September 2019 to September 2020, compared to the previous 12 months. (Ahmad et al, 2021)

Our youth are not immune to our drug crisis. 21% of teens aged 12 to 17 years have dabbled in prescription opioids, with 82% adhering to the prescription, 15% continuing into misuse, and 3% developing chronic substance use disorder, which often expands to include the use of illegal drugs. (Hudgins et al, 2019)

The National Survey on Drug Use and Health has revealed that an estimated 30 million U.S. citizens over the age of 12 had used illicit drugs in the 30 days preceding the 2017 survey alone. (SAMSHA, 2018)

Given the chronic, cascading and far-reaching effects of chronic substance use and abuse, it follows that, with this disease in particular, prevention is better than cure. Education must begin in childhood.

It is clear that it's not only adults that need to realize this but young people too, who desperately need to feel enabled to seek and even provide help where necessary because lives and futures depend on it.

When Mayor Linda Gorton was first elected, she made addressing the opioid crisis in Lexington and Fayette County a priority. Working with local agencies and the Drug Free Lexington Coalition a range of measures were instituted to lower the death rate from overdoses. It soon became evident that the city also needed to invest in primary prevention for its youth.

From January 2020 to June 2021, FEND Lexington has been one of the tools used in the effort to provide primary prevention and harm reduction information to the youth of Lexington and Fayette County.

INTRODUCING FEND LEXINGTON

FEND Lexington launched on January 6, 2020 with a press conference hosted by Mayor Gorton. From there we hit the ground running launching the FEND campaign for Lexington.

FEND (Full Energy, No Drugs) is an innovative primary prevention and harm reduction tool delivered via an app on the 21st Century's most popular and readily available device amongst young people – the smartphone. The combination of the right device, right content, and right rewards, delivered at the right time (when it suits the participant to view it) is what makes FEND effective.

The FEND campaign content is geared toward engaging our youth and seeks to empower them, as opposed to preaching or lecturing to them (which has so often proved to be counter-productive). Furthermore, gamification techniques are used to engage and incentivize users to participate and learn by offering relevant and desired rewards such as Amazon, Starbucks, and Dunkin' Donut gift vouchers, and gaming consoles.

Youth Advisory Group

Local youth from the target audience were recruited to form a Youth Advisory Group (YAG). The group was managed by the FEND community coordinator. The Lexington YAG's role was to guide content, messaging, rewards and competitions to ensure they were relevant.

Stakeholder Support

Prior to launching FEND Lexington, the team from Preventum Initiative met with various stakeholders from the community to get input into the development of FEND Lexington. The group reviewed the proposed curriculum and shared ideas on local substance use trends and youth engagement.

Participant Recruitment in a COVID World

With each regional FEND campaign, getting into the schools is an important part of recruiting youth participants. Between January and March 2020, we achieved good success in recruiting participants through in-person school presentation by our community coordinator, Devine Carama. Devine met face-to-face with more than 2000 students at five schools in the first three months of the campaign roll-out. During this time an effort was made by FEND's community coordinator and Andrea James from the City to engage the Fayette County Public School System for additional engagement with the local schools as part of their drug prevention strategy; however, this effort was unsuccessful.

In March 2020, just three months into the FEND campaign, schools in Lexington, Fayette County began to close due to the COVID-19 pandemic. For the next 12-months schools were either fully or partially closed or had restrictions on visitors. This had a significant impact on our ability to recruit students as our community coordinator could no longer meet students face-to-face.

To work around this, we enhanced our social media interaction and developed a social media ad campaign to recruit new users. In addition, we also started developing a youth-led podcast called Voices of FEND. The social media campaign was beginning to show results with 279 new participants onboarding in just eight weeks. Had FEND continued we are confident this number would have increased dramatically through testing and measuring of results.

THE FEND CAMPAIGN

After downloading the FEND app (freely available on the App Store or Google Play), participants sign-up, provide demographic details and then complete the baseline survey (pre-test), designed to gauge awareness of drug facts and how to respond correctly in various threatening, drug-related scenarios. From there, participants go through the nine core content sections. The core content topics for FEND Lexington are shown below.

Substances

OPIOIDS
BENZODIAZEPINES
FENTANYL

Overdose

HOW TO RECOGNIZE/RESPOND
GOOD SAMARITAN LAWS

Mental Wellbeing

RESILIENCE

Addiction

ADDICTION IS A DISEASE
PRESCRIPTION TO ADDICTION

Let's talk

ASKING FOR HELP
STARTING THE CONVERSATION

Each content piece includes information on one of the core topics in the form of a short video (personal story, or animation/motion graphic) geared at informing through engagement. This is followed by a pop-quiz to reinforce the content objective and, finally, a key takeaway message is given. Points are awarded to the participant for viewing the video and completing the pop quiz.

The participant continues on through the core content at their own pace with the incentive of accumulating points as they go. After completing the core content, participants then complete the exit survey (post-test), after which more points will be awarded.

In addition to the core content, the app has a resources section that provides participants with additional information, such as where to get help, and a list of local support services and helplines available for teens.



FEND™

FULL ENERGY NO DRUGS

RESULTS

Demographic Characteristics

In total, 2806 people participated in the FEND Lexington campaign. Demographic data for all participants are shown in Appendix A. The target audience for this campaign was 11 to 19-year-olds. Results presented in this report focus on participants aged 11-19 years who completed the full FEND Lexington campaign, including baseline, core content and exit surveys. By doing this we are able to provide information on these young people's understanding of drug knowledge and perceived risk before and after completing the FEND campaign.

A total of 1074 participants aged 11 to 19 years completed the full FEND Lexington campaign. The demographic characteristics of these participants are shown below.

Age range

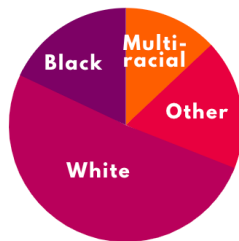
11-13 years	49%
14-16 years	49%
17-19 years	2%

Gender

Male	49%
Female	49%
Other	2%

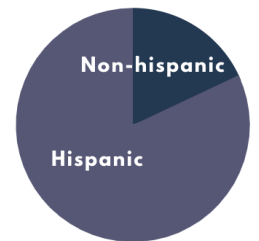
Race

Multi-racial	13%
Black	18%
White	51%
Other	18%



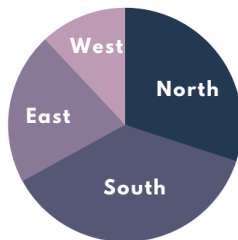
Ethnicity

Hispanic	18%
Non-hispanic	82%



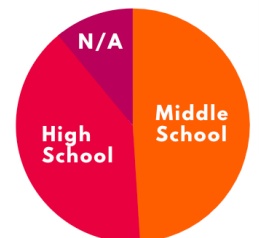
Area of Lexington

North	30%
South	37%
East	21%
West	12%



School

Middle School	49%
High School	40%
Not applicable	11%



OVERDOSE

With overdose rates on the rise in Kentucky, being able to recognize the signs of an overdose and knowing how to respond is critical for today's youth. This knowledge can potentially save a life.

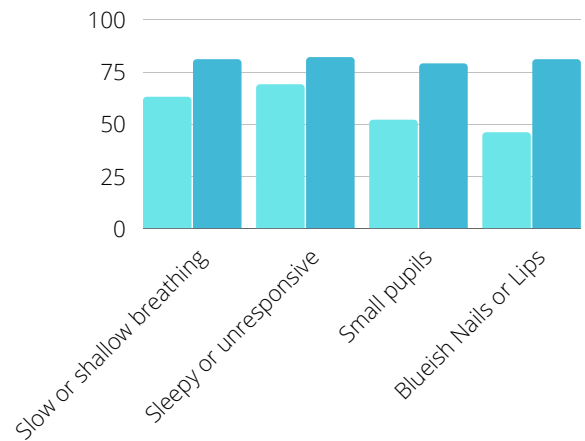
Confidence in recognizing and responding to an opioid overdose

Between baseline and exit participants confidence in recognizing and responding to an opioid overdose increased by 30% (26% to 56% (p < .001)).

Recognizing the signs of an opioid overdose

Participants were asked to select the signs of an opioid overdose from a list of eight, of which only four were correct. There was a significant increase in knowledge achieved between baseline and exit, with all four responses achieving significance (p < .001).

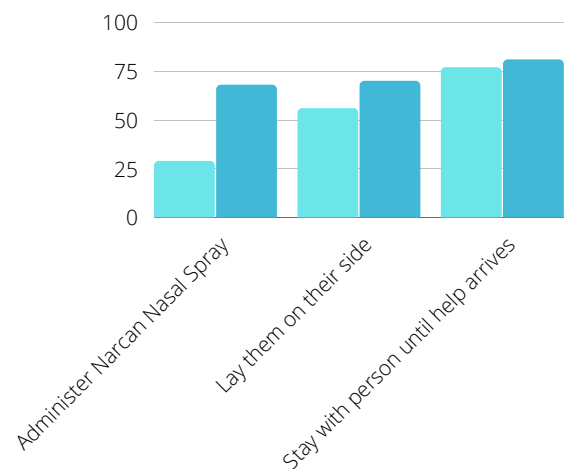
	Pre	Post
Slow or shallow breathing	63%	81%
Sleepy or unresponsive	69%	82%
Small pupils	52%	79%
Blueish Nails or Lips	46%	81%



How to respond to an overdose

Participants were asked how they would respond to an opioid overdose (in addition to calling 911) from a list of seven, of which only three were correct. There was a significant increase in knowledge achieved between baseline and exit, with all three responses achieving significance (p < .001).

	Pre	Post
Administer Narcan	29%	68%
Lay them on their side	56%	70%
Stay with person until help arrives	77%	81%



Likelihood of seeking medical help

Participants were asked the likelihood of seeking medical help if a friend collapsed or became unresponsive after drinking alcohol or taking drugs – at exit 83% said they were 'very likely' to seek help.

Knowledge of Good Samaritan Laws

Surprisingly, only 33% of participants said they knew about the Good Samaritan Laws prior to watching the video on the FEND app.

Observations of demographic characteristics

The following significant associations ($p < .001$) were observed:

- High school students had higher confidence in recognizing and responding to an opioid overdose than middle school students, and they also had better knowledge on how to respond to an overdose than middle schoolers.
- White participants were more likely than participants from other races to seek medical help if a friend collapsed or became unresponsive after drinking alcohol or taking drugs
- Hispanic participants could identify more correct ways to respond to an overdose than non-Hispanic participants.
- Participants from the south area in Lexington were more likely to correctly recognize the signs of an overdose than participants from other areas of Lexington.

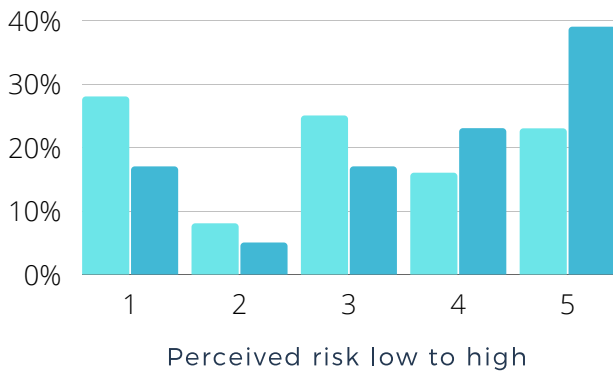
RISK PERCEPTION

We included questions around perceived risk because of the predictive nature of risk perceptions to substance use among adolescents. Research shows attitudes and beliefs, such as perceived risk and disapproval, significantly influence drug-using behavior. In fact, perceived risk is a leading indicator of changes in use.

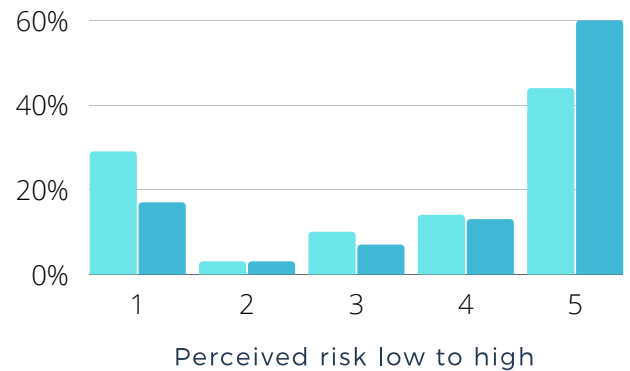
Participants were asked to rank the received risk of the following on a scale of 1 to 5 (1= no risk, 5= high risk).

There was a noticeable increase in perceived risk between baseline and exit – all of them significant ($p < .001$) – highlighting the effectiveness of the campaign.

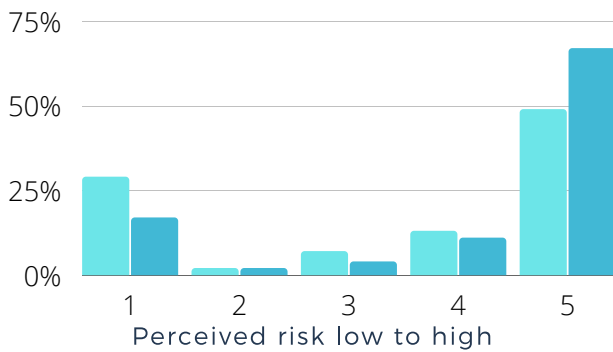
Taking prescription painkillers (to get high), once or twice



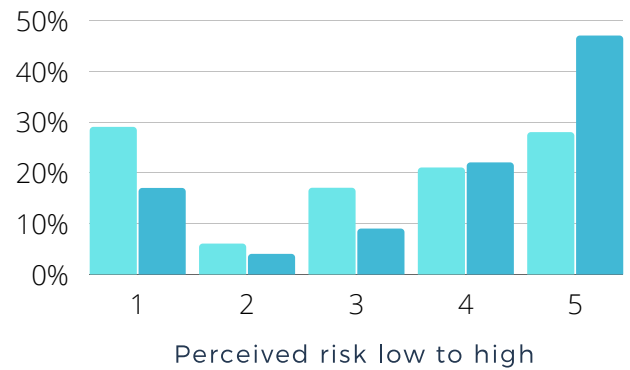
Taking prescription painkillers (to get high) regularly



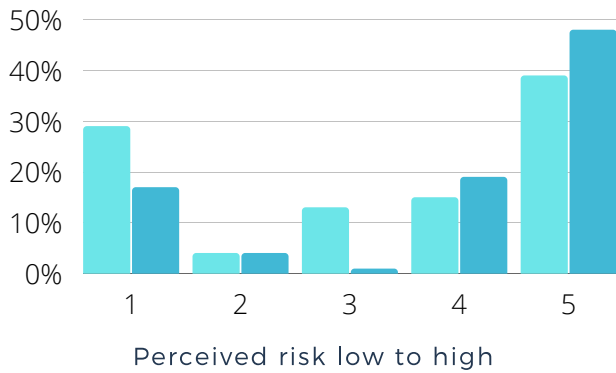
Taking Benzodiazepines to get high, once or twice?



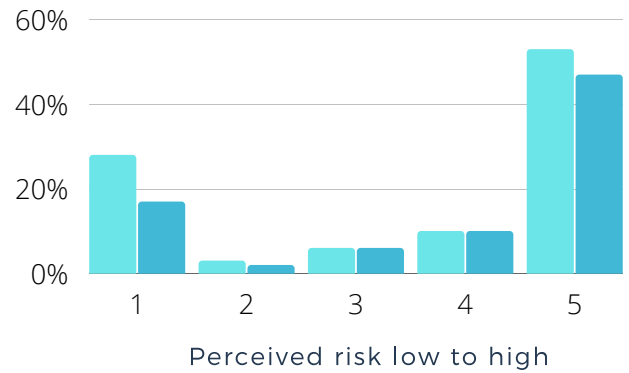
Taking Benzodiazepines to get high, regularly



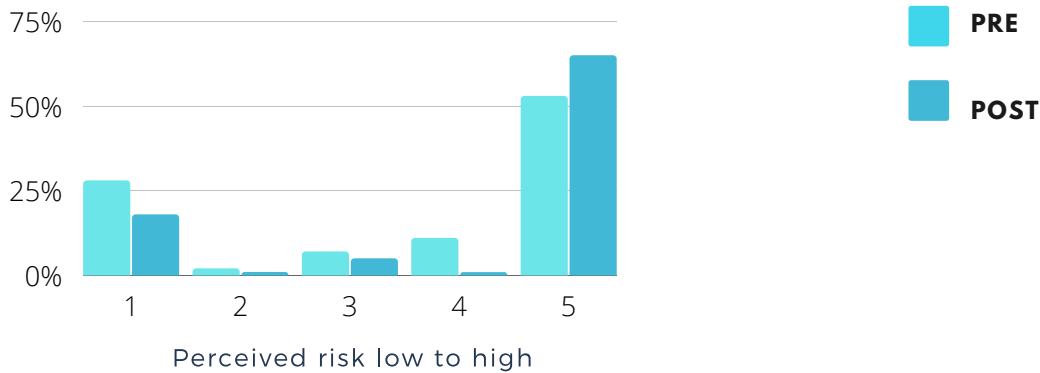
Trying Heroin once or twice



Taking unknown prescription pills at a party



Mixing prescription medications with alcohol



Observations of demographic characteristics

The following significant associations ($p < .001$) were observed:

- High school students perceived greater risk in each of the seven examples above than middle school students.
- Non-Hispanic participants perceived greater risk in each of the seven examples above than Hispanic participants.

DRUG KNOWLEDGE

We asked participants a series of questions about prescription painkillers and other commonly used medications, Fentanyl, counterfeit drugs and addiction/dependence to gauge their knowledge.

93% now know you can become addicted to prescription painkillers (opioids) in as few as 4-5 days (75% at baseline ($p < .001$))

76% know that avoiding addiction is not simply a matter of exercising self-control (29% at baseline ($p < .001$))

59% now realize the danger of mixing Benzos (like Xanax or Valium) with alcohol (38% at baseline ($p < .001$))

80% know that young people are more likely to die from an overdose of opioids than an overdose of alcohol, methamphetamines or cocaine (57% at baseline ($p < .001$))

68% are 'very likely to talk with their friends/family about the risks of prescription opioids (32% at baseline ($p < .001$))

Friend group behavior

Friend group behavior was also assessed in a set of pop-quiz questions that asked participants to think about their own close circle of friends and estimate how many of them would do the following:

Occasionally take prescription meds to get high	22% said more than half of their friends
Regularly take prescription meds to get high	19% said more than half of their friends
Occasionally mix prescription meds with alcohol	20% said more than half of their friends
Regularly mix prescription meds with alcohol	18% said more than half of their friends
Have experienced a bad reaction from popping pills at a party	19% said more than half of their friends

ADVERSE CHILDHOOD EXPERIENCES

Adverse Childhood Experiences (ACE) are traumatic experiences that can have a profound effect on a child’s developing brain and body with lasting impacts on a person’s physical and mental health throughout their lifespan.

A person with 4 or more ACEs is:

- 12 times as likely to attempt suicide
- 10 times as likely to use injection drugs
- 7 times as likely to be an alcoholic

We included the 19-item ACE-Q Teen Self-Report questionnaire, developed by the Center for Youth Wellness, in the FEND baseline survey to determine the ACE scores of participants (see Appendix B). Section 1 of the ACE-Q Teen SR contains the same 10 items as the original ACE Study questionnaire. (Frelitti et al, 2019) and Section 2 has 9 supplementary questions.

Looking at the ACE scores for Section 1, **50%** of participants reported no ACE score and **47%** reported a score of 1. Only 1% of participants recorded an ACE score of 4 or more.

MENTAL WELLNESS & RESILIENCY

In addition to the content and pre and post-test questions around opioids and other substances, the FEND Lexington campaign also included information on mental health and wellness, and ways to build resilience. In pop-quizzes, participants were asked a range of questions about their own mental health and wellness, including their confidence and ability to cope with challenging times and situations.

When going through tough times **48%** said they would keep it to themselves, **46%** would talk to somebody about it, and **6%** were unsure.

	Yes	No	Unsure
If you (or a friend) had feelings of depression, anxiety or suicidal thoughts, would you know where you could get help and support in your area	76%	14%	10%
In a crisis, I would have the support of friends and family	84%	7%	9%
If I was feeling really low, or suffering from depression or anxiety, I would know who to ask and where to get help	78%	7%	15%
I feel confident in my ability to handle tough times and change	72%	10%	18%
I often feel overwhelmed when I experience stress or difficulties	70%	13%	17%

DISCUSSION

The results highlighted in this report demonstrate the effectiveness of the FEND Lexington campaign as a tool for changing knowledge and perceived risk about opioids, commonly misused prescription medications and other drugs.

As expected, many young people who downloaded the FEND app initially had limited knowledge about the risks associated with drug use, how to recognize and respond to an overdose, and a misperception of how drug risk correlates with drug use behaviour.

Interesting demographic factors were highlighted in this report and provide insights on where to apply future prevention resources. For example, the lower perceived risk of drug use by middle schoolers is concerning, particularly given their lower knowledge about how to respond to an overdose and less likelihood of seeking medical help.

FEND serves to not only instruct and inform young people but also to encourage and empower them to make informed choices about their health and mental wellbeing.

Our findings in the FEND Lexington campaign indicate that the FEND app has resulted in improved knowledge and better perception of the risks associated with prescription opioids and other drug use. This positive result motivates us to expand and improve our work by reaching more young people and making use of their feedback.

To find out more about the FEND program, or the research methodology used for this report, please contact Dr Jacquii Burgess at jacquii@wearepreventum.org

APPENDICES

Appendix A

Demographic characteristics of **all** FEND participants who downloaded and completed the baseline survey, and partially or fully completed the FEND Lexington campaign and exit survey.

Age-range

Under 11 years	1%
11-13 years	8%
14-16 years	47%
17-19 years	21%
20+ years	23%

Gender

Male	46%
Female	52%
Other	2%

Race

White	51%
Black	20%
Other	12%
Multi-racial	11%
Asian	3%
Native Alaskan/Native Indian	2%
Hawaiian/Pacific Islander	1%

Ethnicity

Non-Hispanic	82%
Hispanic	18%

Area of Lexington

South	34%
North	32%
East	22%
West	12%

School

Middle school	52%
High school	40%
Not applicable	8%

Appendix B

ACE-Q TEEN SELF-REPORT

Please **DO NOT** mark or indicate which specific statements apply to you.

1) Of the statements in section 1, **HOW MANY** apply to you? Write the total number in the box.

Section 1. *At any point since you were born...*

- Your parents or guardians were separated or divorced
- You lived with a household member who served time in jail or prison
- You lived with a household member who was depressed, mentally ill or attempted suicide
- You saw or heard household members hurt or threaten to hurt each other
- A household member swore at, insulted, humiliated, or put you down in a way that scared you OR a household member acted in a way that made you afraid that you might be physically hurt
- Someone touched your private parts or asked you to touch their private parts in a sexual way that was unwanted, against your will, or made you feel uncomfortable
- More than once, you went without food, clothing, a place to live, or had no one to protect you
- Someone pushed, grabbed, slapped or threw something at you OR you were hit so hard that you were injured or had marks
- You lived with someone who had a problem with drinking or using drugs
- You often felt unsupported, unloved and/or unprotected

2) Of the statements in section 2, **HOW MANY** apply to you? Write the total number in the box.

Section 2. *At any point since you were born...*

- You have been in foster care
- You have experienced harassment or bullying at school
- You have lived with a parent or guardian who died
- You have been separated from your primary caregiver through deportation or immigration
- You have had a serious medical procedure or life threatening illness
- You have often seen or heard violence in the neighborhood or in your school neighborhood
- You have been detained, arrested or incarcerated
- You have often been treated badly because of race, sexual orientation, place of birth, disability or religion
- You have experienced verbal or physical abuse or threats from a romantic partner (i.e. boyfriend or girlfriend)

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