



LIFE OF AN ATHLETE

A Program of NHIAA

YEAR 1 FINDINGS

Fall 2014

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I. Background

The New Hampshire Interscholastic Athletic Association (NHIAA) began the coordination of the implementation of Life of an Athlete program in high schools across the state of New Hampshire during the 2013-2014 school-year.

Life of an Athlete (LoA) is a school-based program that primarily targets student athletes as the entry point to change norms and create a positive school climate based on increasing healthy lifestyle choices including adequate sleep, nutrition and abstinence from drugs and alcohol; a whole health approach. The program activities motivate youth to make healthy choices by demonstrating to them that these choices play a direct role in their athletic performance. Nutrition, sleep and substance use information is provided to give youth increased knowledge about how choices related to these areas of their health affect their bodies, and more specifically, their athletic performance.

There are a few reasons why focusing on athletes as a means to reduce substance use makes sense. First of all, a meta-analysis of 34 studies showed that participation in sports was positively associated with alcohol use (22 studies showed this relationship.) (Lisha, N.E. & Sussman, S., 2010) Research has also shown that because athletes have the perception that athletes drink more than other students, they are more likely to drink themselves. (Lewis, T.F. 2008 and Grossbard, J.R, et al, 2009) Finally, high school athletes often become college athletes, and college athletes have been shown to have higher use of substances, in particular binge drinking. (Wechsler H., 1997)

This program became of interest to many community stakeholders in New Hampshire (NH) as a novel approach to addressing and reducing substance use among high school age youth. There are a few reasons why an investment in LoA in NH makes sense. First, NH has a large proportion of youth, along with their parents, involved with a school sport, which makes it an opportune way to reach a large number of youth and parents using a universal prevention approach. Second, NH parents and community members rally around high school sports. Therefore, the audience for this program is an easier one from which to obtain support and buy-in for such a program given they could expect that participation will lead to increased wins on the athletic field. Third, given that substance use has been shown to be higher among college athletes than non-athletes, instilling a culture of healthy choices before entering college can set in place behaviors that will continue through college years among those who continue to play sports following high school. Finally, community stakeholders often report that high school athletes are at times not treated the same as others when caught using substances. The Life of an Athlete program sets the precedent for equal treatment and helps set community norms that confirm substance use is not acceptable.

Program Design

In NH, the LoA program is an initiative of the NHIAA. The NHIAA oversees the rules related to interscholastic athletic competition and the championship matches for its 90-member schools. This includes all of the public high schools in New Hampshire as well as a number of private high schools. Participation in the LoA program is open to all high schools, and therefore all student athletes in participating high schools. There are two staff members at the NHIAA who coordinate the implementation, materials and training for the LoA program. They provide information about the

program, recruit schools to implement the program, and provide the training for the school implementers, youth and coaches.

The LoA program is made up of five components that are implemented with each participating school—codes of conduct, pre-season meetings, coach trainings, youth leadership and stakeholder unity. Each component has guidelines indicating how it should be implemented. These guidelines include a series of activities that ultimately lead to changes in the five different areas the program addresses. However, the guidelines also leave some room for schools to have flexibility and creativity in the specificity of how the activity is implemented, taking into consideration their existing infrastructure and programs. Each component and the guidelines are briefly described in the following pages. The LoA Manual also provides more detailed descriptions of the implementation.

The Five Components of Life of an Athlete

Although Life of an Athlete is unique to other school-based substance use programs, it is grounded in core elements that are known to be successful in other prevention programs. This includes peer learning, parental education, and policy change. It also includes more unique elements that have been shown to have an effect such as the role of coaches and the role of athletes in setting norms.

A description of each component and supporting research is provided below.

Pre-Season Meetings

The establishment of mandatory seasonal meetings for parents/guardians and athletes are held to discuss conditions for involvement with the program, expectations, philosophy, impact of alcohol and other drug use on performance and what it means to be an athlete. There is a large meeting every fall with smaller make-up sessions at the start of the winter and spring seasons for parents/guardians and/or athletes who have not already attended the session during the academic year. Parents are provided suggestions of ways they can help their student athlete get adequate sleep, communicate openly, avoid alcohol and drugs and discourage bullying.

Research shows that adolescents who report low parental monitoring are significantly more likely to use substances (Shillington et al, 2005). On the other hand, a positive parenting style and close monitoring by parents are proven to have the opposite effect; serving as protective factors for adolescent's use of alcohol and other drugs (Stewart, 2002).

Codes of Conduct

Revisions are made to the student codes of conduct and plans are made for enforcement that includes the principles of restorative justice. The staff of the program reviews the codes and provides feedback to the school administrators in order to help improve the codes so that they are clear and easy to enforce.

Research into school policies related to alcohol and drug use have shown written policy statements to be associated with a lower likelihood of binge-drinking compared to unwritten statements. (Desousa, C.,

et al 2008) Effective delivery of policy messages to students is associated with reduced student drug use. (Evans-Whipp, T.J., et al 2007)

Training for Coaches

Trainings for all coaches at all levels are held so that coaches understand and promote positive lifestyle choices (including ATOD) amongst athletes. This includes workshops on how to send a message to the team and how to use student leaders to monitor team dynamics.

In one study among Division 1 college athletes, coaches who endorsed strict team policies against alcohol had a positive impact on both rates of drinking and team leader's perceptions toward drinking behavior. (Lewis, T. F, 2008)

In another study analyzing coaches' attitudes and perceptions of alcohol prevention, coaches who were required by school policy to talk with athletes about the dangers of alcohol were also significantly more likely to establish clear policies and expectations towards drinking, and to help their athletes resist the social pressure to drink. (King, K. et al 2010)

Youth Leadership

Students who have potential to serve as leaders among their teammates are identified and asked to participate in youth leadership development activities. Their role is to assist the coach in improving athletic performance and team unity through the promotion of healthy lifestyle choices among teammates, such as the benefit of abstaining from alcohol and other drugs.

A meta-analysis of 120 adolescent drug prevention programs in North America found that peer-led or peer-involved programs were statistically superior to teacher-led prevention programs. (Black, D. R. 1998)

Stakeholder Unity

The Stakeholder Unity component includes activities to create positive social norms across the community using media and marketing materials. These materials include the key messages of the LoA program to be disseminated widely through print and social media. However, they are also designed to allow individual schools to customize and adapt the format to carry local logos and language to appeal to the particular community. These activities ensure *all* members of the community take a stake in increasing the number of youth who choose positive lifestyle choices and avoid substance use.

Research has shown that in a social norms campaign to reduce alcohol misuse among college student-athletes, social marketing substantially reduced misperceptions related to alcohol consumption and lowered rates of drinking. (Perkins, H.W. & Craig, D.W. 2006) In the general population, social-marketing is well proven to positively change health behaviors, with longer interventions having more significant impacts. (Cugelman, B. et al 2011)

II. Evaluation Methods

The logic model for the LoA program depicts the theory of change for the program (see Appendix A). It states that if the activities of the components are implemented—codes of conduct, pre-season meetings, training for coaches, youth leadership and stakeholder unity—the following changes would be expected: increased enforcement of student codes of conduct; athletes with an understanding of the consequence of their lifestyle choices (nutrition, sleep, substance use); the athletic community (coaches, athletic directors, administrators) with increased support of positive lifestyle choices, proper fan behavior and the role coaches play; student athletes making positive lifestyle choices; coaches with increased amounts of effective communication; parents with increased effective communication; coaches with skills in promoting character development; and youth leaders supporting the enforcement of the codes and helping to make teammates accountable.

Once those changes in perceptions and behaviors are seen, ultimately there will be a change in:

- Norms of healthy behaviors in the student athletic community
- Decrease in substance use among athletes
- Decrease in substance use in the entire school community

In order to be able to understand whether this sequence of changes does in fact occur from the LoA program, an evaluation was structured to collect, analyze and report the relevant data.

The design of the evaluation is a quasi-experimental, where control and intervention sites were defined by asking schools for their participation in each group (rather than through a random sample). Both quantitative and qualitative data were collected using a mixed methods design.

Tools developed for data collection include the following:

Tool	Purpose and Description of Data Collected	Timing of Data Collection
Implementation Tracking Log	Collect information about the activities of the program implemented with each school	Director of LoA at NHIAA continually inputs information relative to the implementation activities at each school
Student Athlete Survey	<p>Collect information about the knowledge, skills, behaviors and perceptions of high school athletes.</p> <p>Collect information about the perception of high school athletes of the behaviors and perceptions of their parents, coaches and community in relation to health behaviors.</p>	At the start and end of each athletic season
Coach Survey	Collect information about the knowledge, skills, behaviors and perceptions of high school athletes.	At the start and end of each athletic season
Athletic Director Survey	<p>Collect information about the perception of athletic directors of implementing school policies</p> <p>Collect information about the perception of athletic directors of the skills of the coaches</p>	Annually at the start of the school year
Training evaluation survey	<p>Collect information about the knowledge and skills gained in the training.</p> <p>Collect information about the satisfaction of participants with the training</p>	At the end of each youth and coach training
Youth Risk Behavior Surveillance Survey (YRBSS)	Collect information about substance use behavior in the whole student population	Every other year starting with 2013

The director of the LoA program at NHIAA identified control and intervention groups of schools to participate in the evaluation from the pool of schools that expressed interest in initiating the implementation of the program starting in 2013. In order to ensure diversity among the groups, schools in each of the three athletic divisions, which are based on school size as well as a diversity of geographic locations across NH, were selected. Incentives were offered to schools for their participation in the evaluation. The LoA Director at NHIAA sent out links and paper copies for each of the surveys administered each season and used the Implementation Tracking Log to monitor all activities across the schools.

Evaluation Questions

The evaluation questions were defined based on the LoA program logic model . Evaluation questions are:

Process measures:

- To what extent was LoA initiated in high schools across NH?
- To what extent were each of the five components of LoA implemented in the schools?
- What type and number of trainings were held?
- How many youth, athletic directors and coaches were reached by LoA?

Outcome measures comparing intervention schools to control schools:

- Did the enforcement of student codes of conduct increase?
- Did student athletes gain an understanding of the consequences of lifestyle choices on their health and athletic performance?
- Did the athletic community increase support of positive lifestyle choices, proper fan behavior, and the role of coaches?
- Did student athletes increase their positive lifestyle choices?
- Did coaches increase effective communication with student athletes, youth leaders and parents?
- Did parents increase effective communication with youth and coaches?
- Did coaches increase skills in promoting character development and supporting positive lifestyle choices among student athletes?
- Did youth leaders support enforcement of the codes of conduct and confront their teammates about being accountable?
- Was there a change in norms around substance use among the athletic community?

- Was there a decrease in substance use among student athletes?
- Was there a decrease in substance use in the entire school community?

Analysis Plan

Six schools participated in the intervention group of the evaluation and three schools participated in the control group.

The evaluation plan indicated surveys administered to youth at the beginning and end of each season to measure change within each sport season. Challenges in the local evaluation activities resulted in reliable survey collection once per season.

All the intervention group school data were aggregated across all the athletic seasons and all the control group school data across all the seasons were aggregated. Data collected from these two groups were compared to each other to determine differences between youth, coaches and athletic directors in the schools that implemented LoA compared to those who did not. To determine whether the differences in percentages among the intervention and control groups were statistically significant, chi-square tests ($p < 0.05$ indicated significant differences, "NS" = not significant) were performed.

Year 2 data collection will be conducted at the start and end of each sport season and analyzed in order to measure changes within each season among the same population.

III. Findings

PROCESS OUTCOME FINDINGS

The initiation of this program through NHIAA across the state of NH included both the program implementation and evaluation. It was important in this first year to know how to improve each of these. Process measures were thus, very highly valued. The evaluation findings related to the process questions help to inform the implementation structure for the coming year and provide guidance to other states that are interested in implementing the program with a similar structure.

Process Outcome Data		
Question	Data	Description of population from whom data were collected
Annual number of schools that implement LoA	Number of high schools that implemented LoA in 2013-2014 = 33 Number of NHIAA member high schools = 90 Percentage of NHIAA high schools implementing LoA = 37%	LoA Director
Annual number of student athletes who participate in LoA	Number of student athletes in LoA implementing high schools = 11,063 Number of student athletes in NHIAA member high schools = 43,000 Percentage of student athletes who are in high schools implementing LoA = 26%	LoA Director
Annual number of athletic directors who participate in LoA	Number of athletic directors in LoA implementing high schools = 21 Number of athletic directors in NHIAA member high schools = 90 Percentage of athletic directors who are in high schools implementing LoA=23.3%	LoA Director

Process Outcome Data

Question	Data	Description of population from whom data were collected
Type and Number of trainings held	Number of program implementer trainings held = 2 Number of local youth trainings held = 21 Number of statewide youth trainings held = 2 Number of statewide coach trainings held =2	LoA Director
Number of program implementers trained	Number of administrators who attended program implementer trainings = 163	LoA Director
Number of youth trained	Number of youth who attended the trainings = 1141 including the local and statewide trainings	LoA Director
Number of coaches trained	Number of coaches who attended the coach training = 323	LoA Director
Number of pre-season meetings held which incorporate LoA	Number of pre-season meetings held with parents and student athletes that include an LoA component=3 in each school = 99 meetings	LoA Director

Process Outcome Data

Question	Data	Description of population from whom data were collected
Number of schools that used feedback from policy review	<p>Number of school policy review/change presentations = 23</p> <p>Number of school code review/change presentations at schools = 23</p>	LoA Director
Number of school codes reviewed by LoA Director	Number of schools that sent their codes to LoA Director and were reviewed = 33	LoA Director
Number of quality assurance measures	Frequency of meetings held to discuss quality insurance of evaluation = 2 meetings per month throughout the year between NHIAA and external evaluation partners	Evaluator

OUTCOME FINDINGS

The control group had a total of 892 responses and the intervention group had a total of 1,388 responses. In total 2,271 students completed the survey over the fall, winter, and spring seasons.

All grades were well represented, though almost one-third of respondents were in grade 9 (31%). Over half were male (53%) and over half (57%) were from the fall season. A wide range of sports were represented, with the most popular being basketball (21%), soccer (18%), and football (12%).

Intervention Group Compared to Control Group

Positive findings are reported below. Please see Appendix B for the complete set of findings.

When asked the extent of agreement to a number of statements about perceptions and behaviors, a **significantly higher** percentage of students in the intervention group ***agreed or strongly agreed*** that:

Awareness of risks

- An athlete could lose up to two weeks of athletic training after getting drunk once (82% vs. 73%)
- Athletes who drink are more likely to get injured (82% vs. 73%)
- Alcohol reduces the body's ability to repair damaged muscle fibers (93% vs. 89%)
- Alcohol can reduce the amount of testosterone in the body for up to 96 hours (88% vs. 83%)
- High school athletes can lose 15% to 30% of their potential by drinking alcohol (88% vs. 85%)

Impacts on Performance

They did the following to maximize training and performance:

- Avoid alcohol use 90% vs. 83%
- Avoid tobacco use 90% vs. 83%
- Avoid marijuana use 90% vs. 84%

Athletic contracts

- Teammates hold each other accountable to the current athletic contracts (77% vs. 69%)
- The current athletic contracts are clearly written (93% vs. 87%)

Coaches

- I understand the expectations that my coach has for me (97% vs. 96%)
- My coach encourages the team to eat healthy and balanced meals (95% vs. 93%)

Parents

- My parents see my coach as an important person in my life (85% vs. 81%)

Team/youth leaders

- The leaders on my team avoid alcohol, tobacco, and other drug use (87% vs. 82%)
- The leaders on my team keep healthy sleep habits (87% vs. 83%)
- The leaders on my team help others avoid use of alcohol, tobacco, and other drug use (86% vs. 77%)
- The leaders on my team encourage players to get enough sleep (87% vs. 82%)
- The leaders on my team encourage players to eat in a healthy way (87% vs. 82%)

Social norms and interpersonal behavior

- I support the athletic contracts (95% vs. 92%)
- I am willing to address sensitive topics (such as, alcohol and drug use, respectful behavior, sportsmanship) with my teammates (91% vs. 88%)
- I am willing to address sensitive topics (such as, alcohol and drug use, sportsmanship, emotional health) with my coach (88% vs. 82%)

There were also instances of higher positive behaviors in the intervention group compared to the control but were not “significantly different”. The intervention group were more likely to consider (1) avoiding alcohol use (90% vs. 83%), (2) avoiding tobacco use (91% vs. 86%), and (3) avoiding marijuana use (90% vs. 84%) as maximizing training and performance. In addition, the intervention group was more likely to sign the athletic contract (80% vs. 66%) and have parents who signed it (81% vs. 62%).

When asked about their use of alcohol and drugs, a **significantly lower** percentage of students in the intervention group reported that they:

- Used alcohol in the past 30 days (8% vs. 15%)
- Used tobacco in the past 30 days (3% vs. 8%)
- Used marijuana in the past 30 days (5% vs. 9%)

Intervention Group Compared to Control group by Grade Levels

Very commonly, healthy behaviors have been shown to decrease among high school students as they progress from 9th grade to 12th grade. In order to study the relationship between grade level and outcomes, the data was broken down by each of the grades (9-12.)

Findings showed that the largest number of positive significant differences between the intervention and control groups occurred among the youth in the 12th grade. The reported differences between the two groups in the 12th grade reflect the majority of significant findings in the groups overall. This includes perceptions, knowledge and behaviors. See Appendix C.

TRAINING OUTCOMES

Youth Leadership Conference

A conference which included various trainings was held for youth leaders. Close to 400 youth attended this conference. Eighty-two of the youth responded to questions on a survey at the end of the conference.

Youth were asked to what extent the session about Life of an Athlete increased their knowledge. Findings showed the following percentages of responses indicating “very much.”

Question about the Training	Percent of youth who said “Very Much”
Increased knowledge of how sleep impacts your performance	80.0%
Increased your knowledge of how nutrition impacts performance	77.3%
Increased your knowledge of how alcohol, tobacco, and other drugs impacts performance	77.3%

Provided information and resources you will use	70.3%
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Athletic Directors were asked to participate in a focus group. Themes that emerged from the discussion include:

- Student buy-in to the program and leadership in activities creates the change in the school's culture
- Student athletes showed an increase in their awareness of healthy lifestyles: "Awareness is beginning to take root"
- The program has helped students develop a sense of responsibility
- Coaches recognized they serve as role models in all areas of the community
- Challenges are in changing parental norms
- Coaches need more training and education in the program

Citations

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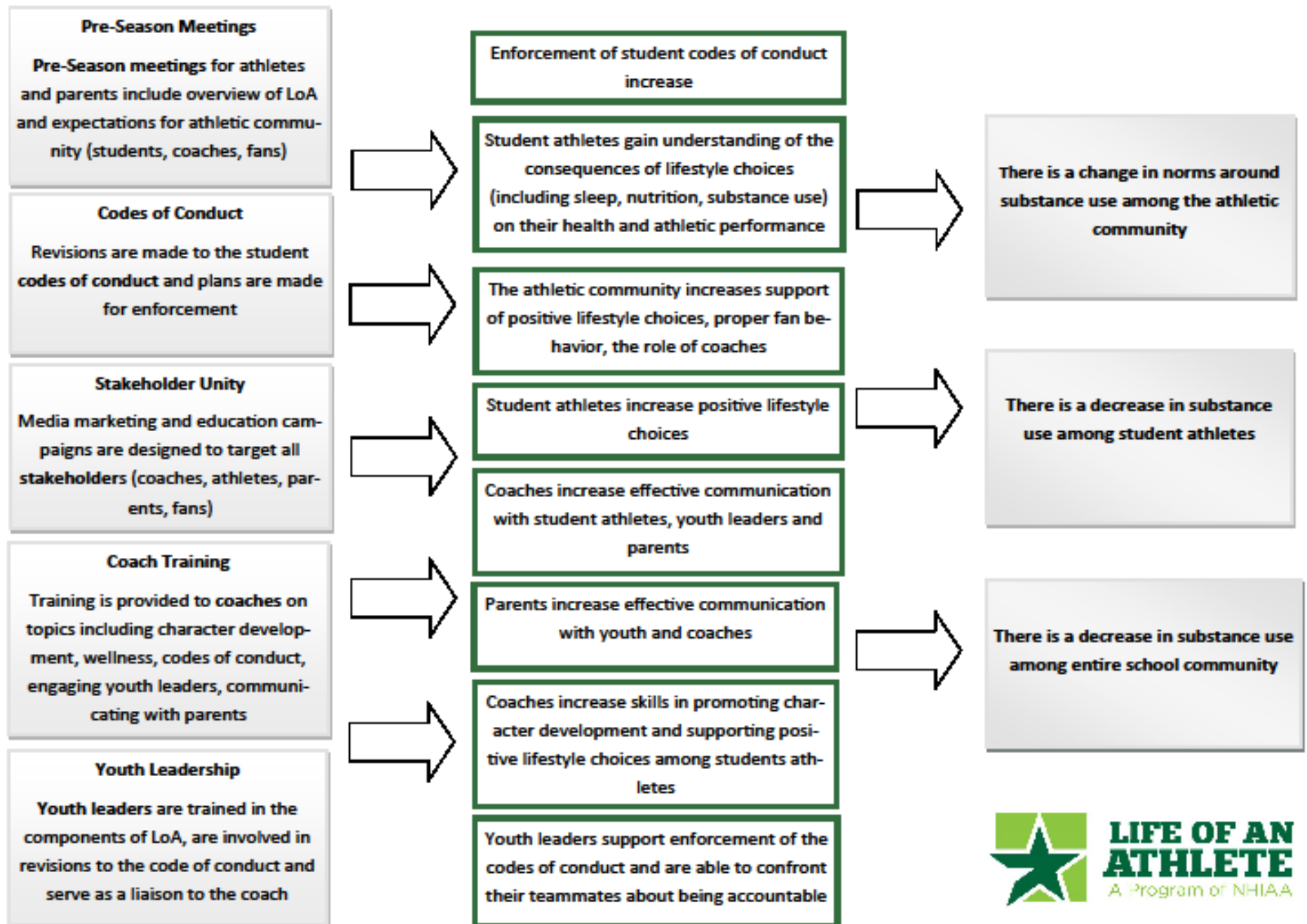
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Appendices

- A. Life of an Athlete Logic model
- B. Data by Group (Intervention vs. Control)
- C. Data by Group and Grade

What Could Implementing Life of an Athlete Change?

This diagram shows the components of LoA, which lead to outcomes in the athletic and larger school community, which then lead to changes in substance use behaviors.



Appendix B
NH Life of an Athlete Year 1 Evaluation Summary Data

Table 1. Demographics

	<i>Control</i> (N=892)		<i>Intervention</i> (N=1388)		<i>Total</i> (N=2280)	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Grade ¹						
Grade 9	240	27%	471	34%	711	31%
Grade 10	244	25%	341	25%	565	25%
Grade 11	221	25%	314	23%	535	24%
Grade 12	205	23%	255	18%	460	20%
Gender ²						
Male	522	59%	665	48%	1187	53%
Female	360	41%	710	52%	1070	47%
School						
A	-	-	199	14%	199	9%
B	-	-	252	18%	252	11%
C	-	-	33	2%	33	2%
D	-	-	161	12%	161	7%
E	-	-	545	39%	545	24%
F	576	65%	-	-	576	25%
G	-	-	198	14%	198	9%
H	143	16%	-	-	143	6%
I	173	19%	-	-	173	8%
Division						
1	143	16%	578	42%	721	32%
2	576	65%	198	14%	774	34%
3	173	19%	612	44%	785	34%
Season						
Fall	546	61%	749	54%	1295	57%
Winter	89	10%	438	32%	527	23%
Spring	257	29%	201	14%	458	20%
Sport ³						
Baseball	137	15%	112	8%	249	11%
Basketball	210	24%	269	19%	479	21%
Bass fishing	14	2%	6	<1%	20	1%
Bowling	10	1%	7	1%	17	1%
Cross country	51	6%	60	4%	111	5%
Field hockey	6	1%	96	7%	102	5%
Football	92	10%	174	13%	266	12%
Golf	30	3%	21	2%	51	2%
Gymnastics	2	<1%	15	1%	17	1%
Ice hockey	35	4%	63	5%	98	4%
Indoor track	169	19%	82	6%	251	11%
Skiing-alpine	61	7%	25	2%	86	4%

	Control (N=892)		Intervention (N=1388)		Total (N=2280)	
	N	%	N	%	N	%
Skiing-Nordic	5	1%	43	3%	48	2%
Soccer	160	18%	252	18%	412	18%
Softball	71	8%	83	6%	154	7%
Spirit	14	2%	104	8%	118	5%
Swimming and diving	35	4%	20	2%	55	2%
Tennis	22	3%	49	4%	71	3%
Unified sports (soccer, basketball, volleyball, track)	94	11%	20	2%	114	5%
Volleyball	35	4%	129	9%	164	7%
Wrestling	4	<1%	40	3%	44	2%
Other	92	10%	100	7%	192	8%

¹ Frequency missing = 9, ² Frequency missing = 23, ³ Frequency missing = 14

Table 2. Awareness of Risks (Strongly Agree or Agree)

	# missing	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
		N	%	N	%	N	%	
There are long term effects of heavy drinking on an athlete's performance	14	849	96%	1328	96%	2177	96%	
Alcohol use impacts an athlete's performance	13	845	95%	1321	96%	2166	96%	
An athlete could lose up to two weeks of athletic training after getting drunk once	21	646	73%	1135	82%	1781	79%	<0.01
Athletes who drink are more likely to get injured	22	647	73%	1123	82%	1770	78%	<0.01
Alcohol reduces the body's ability to repair damaged muscle fibers	39	786	89%	1271	93%	2057	92%	<0.01
Alcohol can reduce the amount of testosterone in the body for up to 96 hours	54	731	83%	1188	88%	1919	86%	<0.01
Sleep is not necessary for athletes to perform their best	28	150	17%	233	17%	383	17%	
Between the ages of 14-24 there are the most possibilities for serious injury	43	683	78%	1074	79%	1757	79%	
Most teens drink before age 16	41	618	70%	954	70%	1572	70%	
Alcohol interferes with the messages your brain sends to your muscles	43	846	96%	1312	97%	2158	96%	
When a person drinks alcohol, it takes more thinking to perform even the simplest task	26	851	97%	1318	96%	2169	96%	
High School athletes can lose 15% to 30% of their potential by drinking alcohol	28	747	85%	1212	88%	1959	87%	<0.01

Table 3. Athletic Contracts (Strongly Agree or Agree)

	# missing	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
		N	%	N	%	N	%	
My current athletic contracts influence my choice to use alcohol and other drugs	69	609	70%	971	72%	1580	71%	
Teammates hold each other accountable to the current athletic contracts	53	597	69%	1047	77%	1644	74%	<0.01
The current athletic contracts are upheld by coaches	52	799	92%	1282	94%	2081	93%	
The current athletic contracts are upheld by parents	52	711	82%	1146	84%	1857	83%	
The current athletic contracts are clearly written	57	756	87%	1265	93%	2021	91%	<0.01
The current athletic contracts are fair	65	781	90%	1226	91%	2007	91%	

Table 4. Coaches (Strongly Agree or Agree)

	# missing	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
		N	%	N	%	N	%	
My coach takes his/her role as a coach seriously	45	853	97%	1335	98%	2188	98%	
My coach cares about my wellbeing above and beyond athletic performance	45	838	95%	1296	96%	2134	95%	
I understand the expectations that my coach has for me	46	838	96%	1322	97%	2160	97%	0.02
My coach addresses team and individual issues well	49	809	92%	1272	94%	2081	93%	
My coach provides support and guidance to the team leadership to build unity	51	819	94%	1268	94%	2087	94%	
My coach stays in contact with my parents	59	690	79%	1059	79%	1749	79%	
My coach encourages the team to avoid alcohol and substance use	51	816	82%	1279	95%	2095	94%	
My coach encourages the team to get enough sleep	48	834	95%	1293	95%	2157	95%	
My coach encourages the team to eat healthy and balanced meals	59	810	93%	1283	95%	2093	94%	<0.01

Table 5. Parents (Strongly Agree or Agree)

	# missing	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
		N	%	N	%	N	%	
I learn to make healthy choices based on what my parents do	55	742	85%	1162	86%	1904	86%	
My parents encourage me to avoid use of tobacco, alcohol and other drugs	43	845	96%	1311	96%	2156	96%	
My parents encourage me to get enough sleep	43	839	96%	1288	95%	2127	95%	
My parents encourage me to eat in a healthy way	51	827	95%	1274	94%	2101	94%	
My parents see my coach as an important person in my life	57	709	81%	1145	85%	1854	83%	0.04
My parents are willing to address sensitive topics (such as, alcohol or drug use, emotional health, family issues) with me	63	820	94%	1261	94%	2081	94%	

Table 6. Community (Strongly Agree or Agree)

	# missing	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
		N	%	N	%	N	%	
The behavior of people in my community shows they disapprove of alcohol, tobacco and other drug use	50	571	65%	907	67%	1478	66%	
The behavior of people in my community shows they support healthy sleep habits for people my age	45	663	76%	1022	75%	1685	75%	
The behavior of people in my community shows they support eating in a healthy way	54	671	77%	1019	75%	1690	76%	
The behavior of people in my community shows they support coaches who emphasize character building	46	785	90%	1212	89%	1997	89%	
The behavior of people in my community shows they support respectful fan behavior	61	765	88%	1165	87%	1930	87%	

Table 7. Team/Youth Leaders (Strongly Agree or Agree)

	# missing	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
		N	%	N	%	N	%	
The leaders on my team avoid alcohol, tobacco and other drug use	60	715	82%	1172	87%	1887	85%	<0.01
The leaders on my team keep healthy sleep habits	63	721	83%	1170	87%	1891	85%	<0.01
The leaders on my team help others avoid use of alcohol, tobacco and other drug use	66	668	77%	1158	86%	1826	83%	<0.01
The leaders on my team encourage players to get enough sleep	60	716	82%	1167	87%	1883	85%	<0.01
The leaders on my team encourage players to eat in a healthy way	79	715	82%	1153	87%	1868	85%	<0.01

Table 8. Social Norms and Interpersonal Behavior (Strongly Agree or Agree)

	# missing	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
		N	%	N	%	N	%	
Most people my age think alcohol, tobacco and other drug use is unacceptable	55	409	47%	653	48%	1062	48%	
Most people my age think that getting enough sleep is important	46	581	66%	856	63%	1437	64%	
Most people my age think that eating in a healthy way is important	68	610	70%	912	67%	1522	69%	
I make healthy lifestyle choices	58	831	95%	1287	95%	2118	95%	
I support the athletic contracts	74	804	92%	1271	95%	2075	94%	<0.01
I see my coach as an important person in my life	59	788	90%	1233	91%	2021	91%	
I am willing to address sensitive topics (such as, alcohol and drug use, respectful behavior, sportsmanship) with my teammates	53	768	88%	1230	91%	1998	90%	0.04
I am willing to address sensitive topics (such as, alcohol and drug use, sportsmanship, emotional health) with my coach	71	719	82%	1174	88%	1893	86%	<0.01

Table 10. Behaviors in the Past 30 Days: Percent >0 Days

	# missing	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value*
		N	%	N	%	N	%	
Use alcohol	50	135	15%	102	8%	237	11%	<0.01
Use tobacco	58	72	8%	45	3%	117	5%	<0.01
Use marijuana	65	81	9%	65	5%	146	7%	<0.01
Use prescription drug use without a doctor's prescription	92	35	4%	34	3%	69	3%	
Get 8 or more hours of sleep	70	775	90%	1190	88%	1965	89%	
Eat 3 healthy meals	73	778	89%	1195	89%	1973	89%	

*Differences between <=5 days and >5 days

Table 11. Behaviors that Maximize Training and Performance¹

	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
	N	%	N	%	N	%	
Avoid alcohol use	725	83%	1211	90%	1936	87%	<0.01
Avoid tobacco use	757	86%	1231	91%	1988	89%	<0.01
Avoid marijuana use	735	84%	1206	90%	1941	87%	<0.01
Avoid prescription drug use without a doctor's prescription	782	89%	1228	91%	2010	80%	
Get enough sleep	761	87%	1174	87%	1935	87%	
Eat healthier	760	87%	1173	87%	1933	87%	

¹ Frequency missing = 57

Table 12. Athletic Contract

	Control (N=892)		Intervention (N=1388)		Total (N=2280)		p-value
	N	%	N	%	N	%	
Did you sign the athletic contract this year? ¹							
Yes	579	66%	1089	80%	1668	75%	<0.01
No	62	7%	25	2%	87	4%	
Not sure	231	26%	242	18%	473	21%	
Did your parents/guardians sign the athletic contract this year? ²							
Yes	542	62%	1097	81%	1639	73%	<0.01
No	65	7%	23	2%	88	4%	
Not sure	268	31%	240	18%	508	23%	

¹ Frequency missing = 25, ² Frequency missing = 20

Appendix C: DATA by GRADE

Statistically significant differences - comparison of grades (percentage that agree or strongly agree).

All percentages are reported as intervention group vs. control.

* = non-significant differences between groups.

SURVEY QUESTION	ALL LOA COMBINED (N=2280)	GRADE 9 (N=711)	GRADE 10 (N=565)	GRADE 11 (N=535)	GRADE 12 (N=460)
<i>Awareness of risks</i>					
Alcohol use impacts an athlete's performance	*	* 97% vs. 98%	* 96% vs. 99%	* 93% vs.96%	96% vs. 87%
An athlete could lose up to two weeks of athletic training after getting drunk once	82% vs. 73%	* 91% vs. 86%	* 82% vs. 77%	* 74% vs.74%	76% vs. 53%
Athletes who drink are more likely to get injured	82% vs. 73%	* 88% vs. 85%	82% vs. 74%	* 76% vs.74%	78% vs. 56%
Alcohol reduces the body's ability to repair damaged muscle fibers	93% vs. 89%	* 96% vs. 92%	* 93% vs. 92%	* 93% vs.91%	90% vs. 81%
Alcohol can reduce the amount of testosterone in the body for up to 96 hours	88% vs. 83%	* 92% vs. 90%	* 89% vs. 84%	* 81% vs.87%	88% vs. 72%
Between the ages of 14-24 there are the most possibilities for serious injury	*	* 80% vs. 84%	* 80% vs. 79%	* 76% vs.80%	80% vs. 66%
Most tee* drink before age 16	*	* 73% vs. 69%	65% vs. 76% (note: intervention was lower %)	* 71% vs.76%	71% vs. 59%
Alcohol interferes with the messages your brain sends to your muscles	*	* 97% vs. 97%	* 97% vs. 96%	* 95% vs.97%	98% vs. 94%
When a person drinks alcohol, it takes more thinking to perform even the simplest task	*	* 96% vs. 97%	* 96% vs. 98%	94% vs. 99% (note: intervention was lower %)	98% vs. 93%
High School athletes can lose 15% to 30% of their potential by drinking alcohol	88% vs. 85%	* 93% vs. 96%	* 98% vs. 89%	* 84% vs.84%	84% vs. 68%
Sleep is not necessary for athletes to perform their best	*	* 18% vs. 19%	* 16% vs. 19%	* 16% vs.13%	* 17% vs.17%
<i>Athletic contracts</i>					
My current athletic contracts influence my choice to use alcohol and other drugs	*	* 70% vs. 71%	* 75% vs. 68%	* 73% vs.71%	* 74% vs.70%
Teammates hold each other accountable to the current athletic contracts	77% vs. 69%	* 82% vs. 82%	* 80% vs. 73%	* 70% vs.63%	74% vs. 54%
The current athletic contracts are clearly written	93% vs. 87%	* 93% vs. 93%	* 94% vs. 92%	93% vs. 83%	92% vs. 80%

SURVEY QUESTION	ALL LOA COMBINED (N=2280)	GRADE 9 (N=711)	GRADE 10 (N=565)	GRADE 11 (N=535)	GRADE 12 (N=460)
The current athletic contracts are fair	*	93% vs. 97%	* 91% vs. 93%	* 91% vs. 89%	89% vs. 77%
The current athletic contracts are upheld by coaches	*	* 94% vs. 94%	* 96% vs. 94%	* 92% vs.88%	* 95% vs.93%
The current athletic contracts are upheld by parents	*	* 86% vs. 86%	* 88% vs. 83%	* 82% vs.83%	* 81% vs.74%
<i>Coaches</i>					
My coach takes his/her role seriously	*	* 98% vs. 98%	* 98% vs. 96%	* 98% vs.96%	* 99% vs.98%
I understand the expectatio* that my coach has for me	97% vs. 96%	* 97% vs. 98%	* 98% vs. 95%	* 96% vs.94%	99% vs. 95%
My coach addresses team and individual issues well	*	* 94% vs. 97%	97% vs. 92%	* 91% vs.89%	* 94% vs.91%
My coach encourages the team to eat healthy and balanced meals	95% vs. 93%	* 96% vs. 96%	* 96% vs. 92%	* 94% vs.94%	94% vs. 88%
My coach encourages the team to get enough sleep	*	* 98% vs. 96%	* 95% vs. 96%	* 93% vs.95%	* 95% vs.93%
My coach provides support and guidance to the team leadership to build unity	*	* 94% vs. 97%	* 95% vs. 94%	* 92% vs.91%	* 93% vs.92%
My coach stays in contact with my parents	*	* 84% vs. 85%	* 81% vs. 80%	* 72% vs.77%	* 74% vs.72%
My coach encourages the team to avoid alcohol and substance use	*	* 95% vs. 94%	* 95% vs. 94%	* 93% vs.95%	* 94% vs.90%
My coach cares about my wellbeing above and beyond athletic performance	*	* 97% vs. 98%	* 95% vs. 95%	* 94% vs.94%	* 96% vs.95%
<i>Parents</i>					
I learn to make healthy choices based on what my parents do	*	86% vs. 93% note: intervention was lower %)	* 89% vs. 84%	* 85% vs.86%	* 82% vs.77%
My parents encourage me to get enough sleep	*	* 96% vs. 97%	* 97% vs. 96%	92% vs. 98% (note: intervention was lower %)	* 91% vs.92%
My parents encourage me to eat in a healthy way	*	* 95% vs. 98%	* 95% vs. 96%	92% vs. 96% (note: intervention was lower %)	* 92% vs.90%
My parents see my coach as an important person in my life	85% vs. 81%	* 88% vs. 91%	87% vs. 80%	* 79% vs.79%	84% vs. 74%

SURVEY QUESTION	ALL LOA COMBINED (N=2280)	GRADE 9 (N=711)	GRADE 10 (N=565)	GRADE 11 (N=535)	GRADE 12 (N=460)
My parents are willing to address sensitive topics	*	96% vs. 95% *	95% vs. 97% *	93% vs. 94% *	90% vs.89% *
My parents encourage me to avoid use of tobacco, alcohol and other drugs	*	97% vs. 98% *	98% vs. 97% *	95% vs.96% *	94% vs.95% *
<i>Community</i>					
The behavior of people in my community shows they support coaches who emphasize character building	*	90% vs. 95% note: intervention was lower %)	* 91% vs. 90%	* 86% vs. 87%	* 89% vs.87%
The behavior of people in my community shows they support eating in a healthy way	*	79% vs. 84% *	75% vs. 79% *	72% vs. 75% *	72% vs.68% *
The behavior of people in my community shows they support respectful fan behavior	*	89% vs. 92% *	88% vs. 89% *	82% vs. 86% *	85% vs.84% *
The behavior of people in my community shows they disapprove of alcohol, tobacco and other drug use	*	72% vs. 75% *	68% vs. 65% *	63% vs. 62% *	60% vs.58% *
The behavior of people in my community shows they support healthy sleep habits for people my age	*	81% vs. 84% *	74% vs. 75% *	72% vs. 75% *	71% vs.66% *
<i>Team/youth leaders</i>					
The leaders on my team avoid alcohol, tobacco and other drug use	87% vs. 82%	91% vs. 97% (note: intervention was lower %)	* 87% vs. 84%	84% vs. 74%	84% s. 71%
The leaders on my team keep healthy sleep habits	87% vs.83%	* 91% vs. 90%	* 90% vs. 84%	* 79% vs. 81%	86% vs. 74%
The leaders on my team help others avoid use of alcohol, tobacco and other drug use	86% vs. 77%	* 89% vs. 91%	* 86% vs. 81%	81% vs. 72%	86% vs. 61%
The leaders on my team encourage players to get enough sleep	87% vs. 82%	* 91% vs. 86%	* 88% vs. 83%	* 81% vs. 83%	84% vs. 75%
The leaders on my team encourage players to eat in a healthy way	87% vs. 82%	* 90% vs. 87%	87% vs. 80%	* 81% vs. 85%	86% vs. 75%
<i>Social norms and interpersonal behavior</i>					
Most people my age think alcohol, tobacco and other drug use is unacceptable	*	61% vs. 71% (note: intervention	* 50% vs. 51%	* 38% vs. 38%	34% vs. 25%

SURVEY QUESTION	ALL LOA COMBINED (N=2280)	GRADE 9 (N=711)	GRADE 10 (N=565)	GRADE 11 (N=535)	GRADE 12 (N=460)
		was lower %)			
Most people my age think that getting enough sleep is important	*	* 68% vs. 74%	59% vs. 68% (note: intervention was lower %)	* 59% vs. 66%	* 64% vs. 57%
Most people my age think that eating in a healthy way is important	*	* 70% and 76%	* 70% vs. 73%	62% vs. 71% (note: intervention was lower %)	* 67% vs. 61%
I make healthy lifestyle choices	*	* 96% vs. 97%	* 97% vs. 97%	* 92% vs. 96%	96% vs. 90%
I support the athletic contracts	95% vs. 92%	* 97% vs. 99%	* 96% vs. 97%	* 92% vs. 93%	96% vs. 78%
I see my coach as an important person in my life	*	* 94% vs. 96%	* 91% vs. 90%	* 86% vs. 90%	94% vs. 85%
I am willing to address se*itive topics (such as, alcohol and drug use, respectful behavior, sportsma*hip) with my teammates	91% vs. 88%	* 91% vs. 89%	* 91% vs. 90%	* 89% vs. 88%	93% vs. 86%
I am willing to address se*itive topics (such as, alcohol and drug use, sportsma*hip, emotional health) with my coach	88% vs. 82%	* 90% vs. 89%	* 87% vs. 84%	* 84% vs. 77%	91% vs. 78%
<i>Behaviors in the past 30 days: % > 0 days</i>					
Use alcohol	8% vs. 15%	3% vs. 3% *	* 7% vs. 8%	9% vs. 20%	14% vs. 33%
Use tobacco	3% vs. 8%	2% vs. 2% *	* 2% vs. 2%	* 5% vs. 9%	7% vs. 22%
Use marijuana	5% vs. 9%	2% vs. 3% *	* 5% vs. 3%	* 7% vs. 11%	8% vs. 22%
Misuse prescription drugs	*	2% vs. 2% *	* 2% vs. 3%	* 3% vs. 6%	4% vs. 6% *
Get 8 or more hours of sleep	*	* 89% vs. 86%	* 88% vs. 87%	87% vs. 94%	* 89% vs. 92%
Eat 3 healthy meals	*	* 90% vs. 86%	* 89% vs. 87%	87% vs. 95%	* 91% vs. 91%
<i>View behaviors as maximizing training and performance</i>					
Avoiding alcohol use	90% vs. 83%	* 92% vs. 89%	* 92% vs. 91%	* 87% % vs. 82%	88% vs. 68%
Avoiding tobacco use	90% vs. 83%	* 92% vs. 89%	* 93% vs. 92%	* 89% vs. 89%	91% vs. 75%
Avoiding marijuana use	90% vs. 84%	* 91% vs. 88%	* 91% vs. 90%	* 86% vs. 84%	89% vs. 72%

SURVEY QUESTION	ALL LOA COMBINED (N=2280)	GRADE 9 (N=711)	GRADE 10 (N=565)	GRADE 11 (N=535)	GRADE 12 (N=460)
Eat healthier	*	89 vs. 84%	* 89% vs. 91%	* 83% vs. 89%	* 87% vs.83%
Avoiding prescription drug misuse	*	* 92% vs. 89%	* 93% vs. 94%	* 89% vs. 90%	* 90% vs.84%
Getting enough sleep	*	* 90% vs. 87%	* 91% vs. 93%	* 82% vs. 88%	* 84% vs.79%
<i>Sign athletic contract</i>					
Sign the athletic contract	80% vs. 66%	* 74% vs. 67%	82% vs. 68%	86% vs. 69%	85% vs. 62%
Have parents who signed it	81% vs. 62%	75% vs. 66%	82% vs. 63%	85% vs. 64%	83% vs. 55%