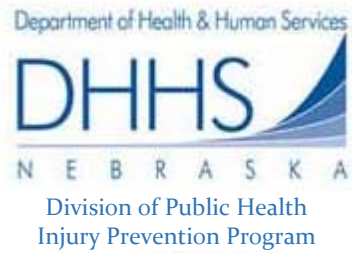




2015 Nebraska Sports Concussion Head Coach Survey Results

May 2015



NEBRASKA SCHOOL ACTIVITIES ASSOCIATION



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Nebraska Department of Health & Human Services
Injury Prevention Program

Nebraska School Activities Association

Brain Injury Association of Nebraska

Nebraska State Athletic Trainers Association, Inc.

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Executive Summary

Background: evaluating the effectiveness and impact of Nebraska's Concussion Awareness Act

In an attempt to reduce the long-lasting consequences of second-impact concussions, the Nebraska State Legislature enacted the Concussion Awareness Act in 2012. There are four essential components of this law, which are:

- Concussion education training must be made available to all coaches on how to recognize symptoms of a concussion, and how to seek proper medical treatment.
- Athletes and parents must be provided with information about concussions prior to an athlete's participation in school sanctioned sports on an annual basis.
- An athlete suspected of having a concussion must be removed from participation and may not return until evaluated by an appropriate licensed health care professional.
- An athlete removed from participation for a suspected concussion must receive written and signed clearance from an appropriate licensed health care professional and from the athlete's parents prior to returning to play.

In 2014, an amendment was added to the Concussion Awareness Act, creating a fifth component: Schools must have a policy outlining the protocol for students returning to the classroom after sustaining a concussion.

In order to evaluate the effectiveness and impact of this law, the Concussion Evaluation Work Group was formed from individuals participating in the Injury Community Planning Group (ICPG). The work group created three separate surveys to answer a broad array of evaluation questions. Head coaches of organized high school sports, athletic directors at high schools, and youth who received a concussion as a result of participation in an organized sport were surveyed. **This report presents the results of the Head Coach Survey. Surveys were conducted in 2013 and 2015 to assess change over time.**

Survey sample

- 1,074 surveys were collected from high school head coaches in April 2013 (response rate: 45.7%).
- 1,333 surveys were collected from high school head coaches in April 2015 (response rate: 61.1%).

Survey Results

Ten key indicators were selected to serve as a summary of the results from the Nebraska Sports Concussion Head Coach Survey and are contained in Figure 1 below. All ten indicators showed at least some improvement from 2013 to 2015, though not all of these improvements are necessarily statistically significant. The most notable areas of improvement are seen in schools making concussion training mandatory (#3), participation in one of the four state-approved concussion training (#4), and notification when a student athlete suffers a concussion in another sport (#9 and #10).

Figure 1		Comparison of selected survey items: 2013 to 2015	
		2013	2015
Concussion Training	1. School made training available before the start of practice on the signs and symptoms of concussions by class of school	92.0%	94.9%
	2. Attended any concussion training	91.2%	95.5%
	3. School made concussion training mandatory	76.6%	90.4%
	4. Attended at least one of the four state-approved concussion trainings (among those who attended any concussion training)	85.7%	97.0%
Nebraska Concussion Awareness Act	5. School has provided any education or training on the components and requirements of the Nebraska Concussion Awareness Act	72.9%	77.1%
	6. Perceive the Concussion Awareness Act as effective or highly effective in allowing a student with a concussion to recover completely before returning to play	89.1%	93.1%
	7. Impact of Concussion Awareness Act on coaching ability: "It has helped" or "It has helped, but there have been some difficulties added to my position as a coach"	57.0%	64.2%
Removal of Athletes from Play	8. Knowledge of school's policy on removal and return to play for athletes with suspected concussions	90.7%	94.8%
	9. Always or often notified when a student athlete suffers a concussion in another school sport	43.8%	55.9%
	10. Always or often notified when a student athlete suffers a concussion in a non-school sanctioned activity or club sport	19.0%	28.7%

2013 Nebraska Sports Concussion Head Coach Survey Results

Introduction

In an attempt to reduce the long-lasting consequences of second-impact concussions, the Nebraska State Legislature enacted the Concussion Awareness Act in 2012. There are four essential components of this law, which are:

- Concussion education training must be made available to all coaches on how to recognize symptoms of a concussion, and how to seek proper medical treatment.
- Athletes and parents must be provided with information about concussions prior to an athlete's participation in school sanctioned sports on an annual basis.
- An athlete suspected of having a concussion must be removed from participation and may not return until evaluated by an appropriate licensed health care professional.
- An athlete removed from participation for a suspected concussion must receive written and signed clearance from an appropriate licensed health care professional and from the athlete's parents prior to returning to play.

In 2014, an amendment was added to the Concussion Awareness Act, creating a fifth component: Schools must have a policy outlining the protocol for students returning to the classroom after sustaining a concussion.

In order to evaluate the effectiveness of this new law, the Concussion Evaluation Work Group was formed from individuals participating in the Injury Community Planning Group (ICPG). The work group designed three surveys to answer the following evaluation questions:

- Do coaches and athletic trainers have concussion training available? Are they aware of the signs and symptoms of concussions?
- Do youth and parents receive education on concussions before the start of practice?
- Are youth athletes with a suspected concussion as a result of a school related activity removed from play? Are their parents given notification? Are they offered post-concussion assistance when returning to school? Are they cleared by a licensed medical professional and parent before returning to play?
- Do schools and youth sport organizations have a policy in place for removal, clearance, and return to play?
- Do schools and organizations have a policy for paperwork and record keeping when a youth receives a concussion?
- Are second impact concussions being prevented?

Three surveys were developed to gather feedback from one of the following groups: (1) head coaches of Nebraska high school organized sports, (2) athletic directors at Nebraska high schools, and (3) youth who received a concussion as a result of participation in an organized sport.

This report presents the results from the Head Coach Survey of Nebraska high school organized sports. An online survey was administered via SurveyMonkey in April 2013 and a follow-up in April 2015 to head coaches of high school organized sports.

Survey Response and Respondent Characteristics

In the 2015 administration of the Nebraska Sports Concussion Head Coach Survey, there was a total of 1,333 respondents, making for a response rate of 61.1% (Figure 2). Figures 3 through 6 outline demographic characteristics from both administrations of the survey. Note that the 2015 administration of the survey had a higher proportion of smaller schools (i.e., Class C and D) compared to 2013 (Figure 5).

Figure 2	Survey response		
	Number of Respondents	Number of Surveys Sent Out	Response Rate
2013	1,074	2,348	45.7%
2015	1,333	2,180	61.1%

Figure 3	Type of school	
	Public	Private/parochial
2013 (n=1,074)	86.0%	14.0%
2015 (n=1,331)	90.3%	9.7%

Figure 4	School description			
	High school	Middle School	Both high school and middle school	K-12
2013 (n=1,074)	52.3%	0.7%	13.9%	33.1%
2015 (n=1,331)	53.7%	0.4%	14.0%	32.0%

Figure 5. Class in which school participates for most sports and activities (n=164)

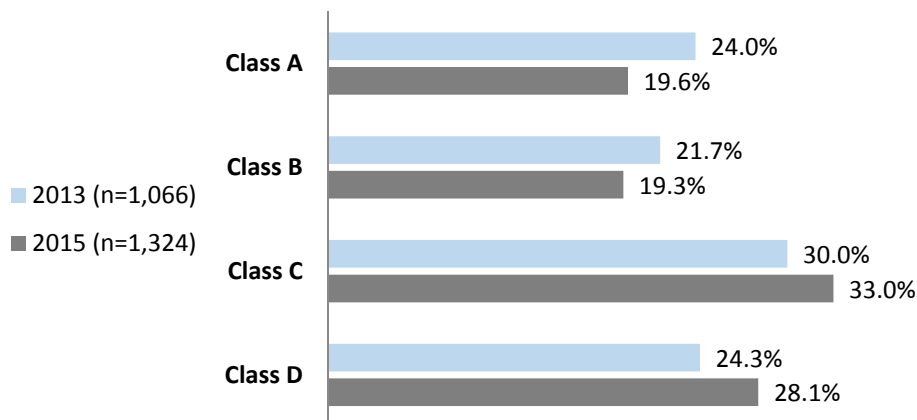
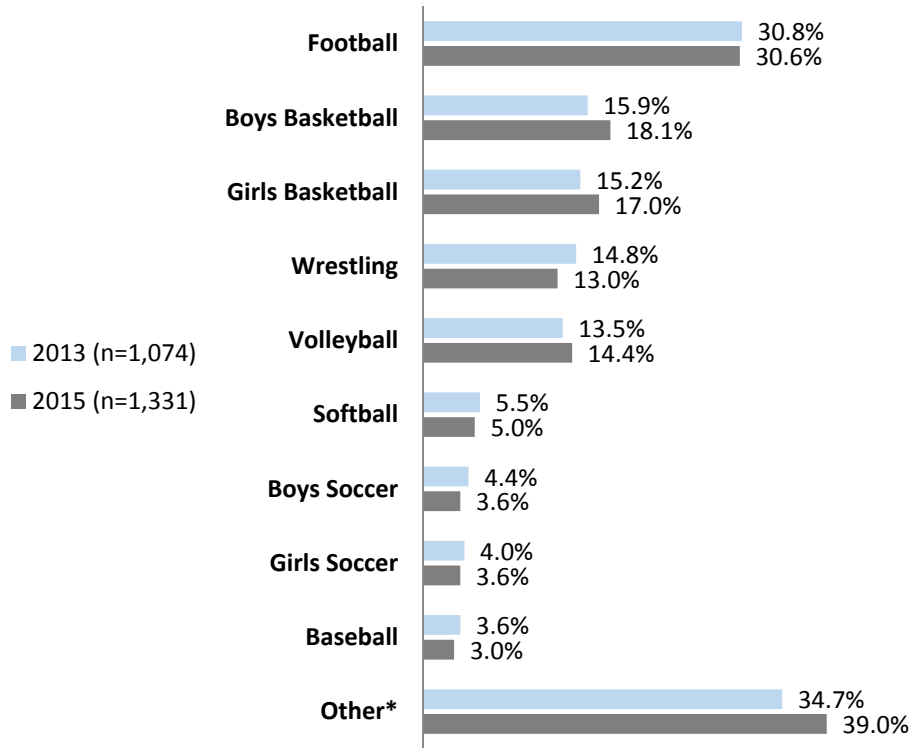


Figure 6. Sports teams coached (multiple responses)

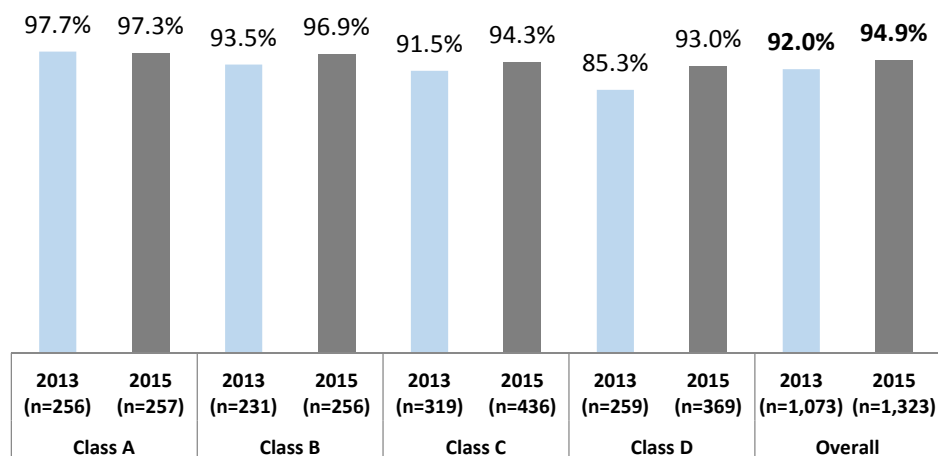


*"Other" includes track and field, cross country, golf, tennis, swimming, strength and conditioning, and junior high sports.

Concussion Training

Over 90% of respondents in both survey administrations indicated that their school made concussion training available to them before the start of practice. Overall, there was a slight improvement from 2013 to 2015 on this indicator, with the largest improvement being among Class D schools (Figure 7).

Figure 7. School made training available before the start of practice on the signs and symptoms of concussions by class of school



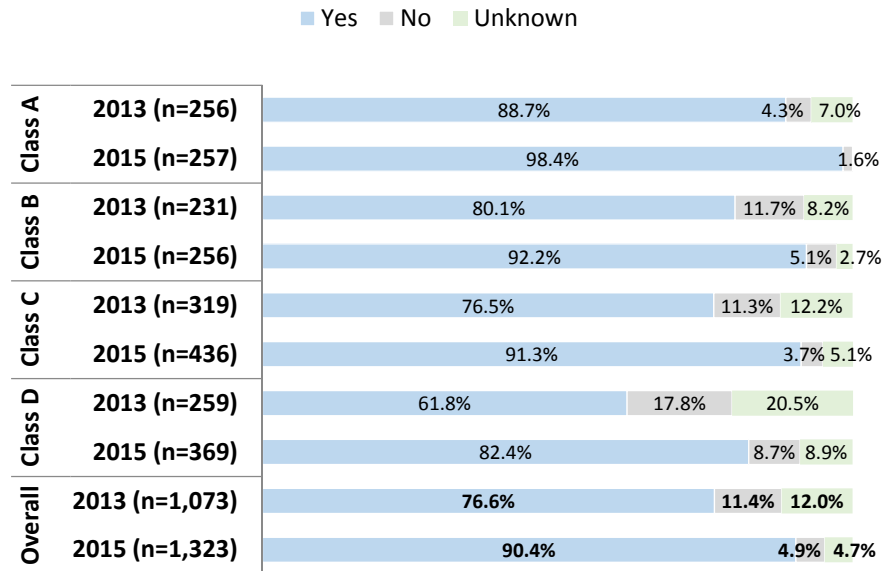
In 2013, 91.2% of respondents indicated that they participated in concussion training (either provided by the school or another organization). This increased to 95.5% in 2015 (Figure 8).

Figure 8	Participation in concussion training by class of school (multiple responses)									
	Class A		Class B		Class C		Class D		Overall	
	2013 (n=256)	2015 (n=257)	2013 (n=231)	2015 (n=256)	2013 (n=319)	2015 (n=436)	2013 (n=259)	2015 (n=369)	2013 (n=1,073)	2015 (n=1,323)
Attended concussion training provided by school	84.8%	80.5%	77.9%	81.6%	64.1%	70.1%	59.1%	66.1%	70.9%	74.6%
Attended concussion training provided by another organization	25.4%	30.4%	20.3%	28.1%	40.6%	34.4%	41.7%	39.8%	32.9%	33.9%
Attended <i>any</i> concussion training*	97.7%	96.9%	88.3%	96.9%	91.5%	96.1%	86.9%	93.0%	91.2%	95.5%

*Either offered by the school or another organization.

There was a notable improvement from 2013 to 2015 in the percentage of respondents indicating that their school made concussion training mandatory, increasing from 76.6% to 90.4%. Improvements were seen across all classes of schools, with the greatest improvement being among Class D schools (Figure 9).

Figure 9. School made concussion training mandatory by class of school



Among those who have participated in concussion training, the vast majority (97.0%) of respondents indicated that they participated in at least one of the four state-approved trainings in 2015 (compared to 85.7% in 2013), with most participating in the training “Concussion in Sports – What You Need to Know (National Federation of High Schools)” (Figure 10).

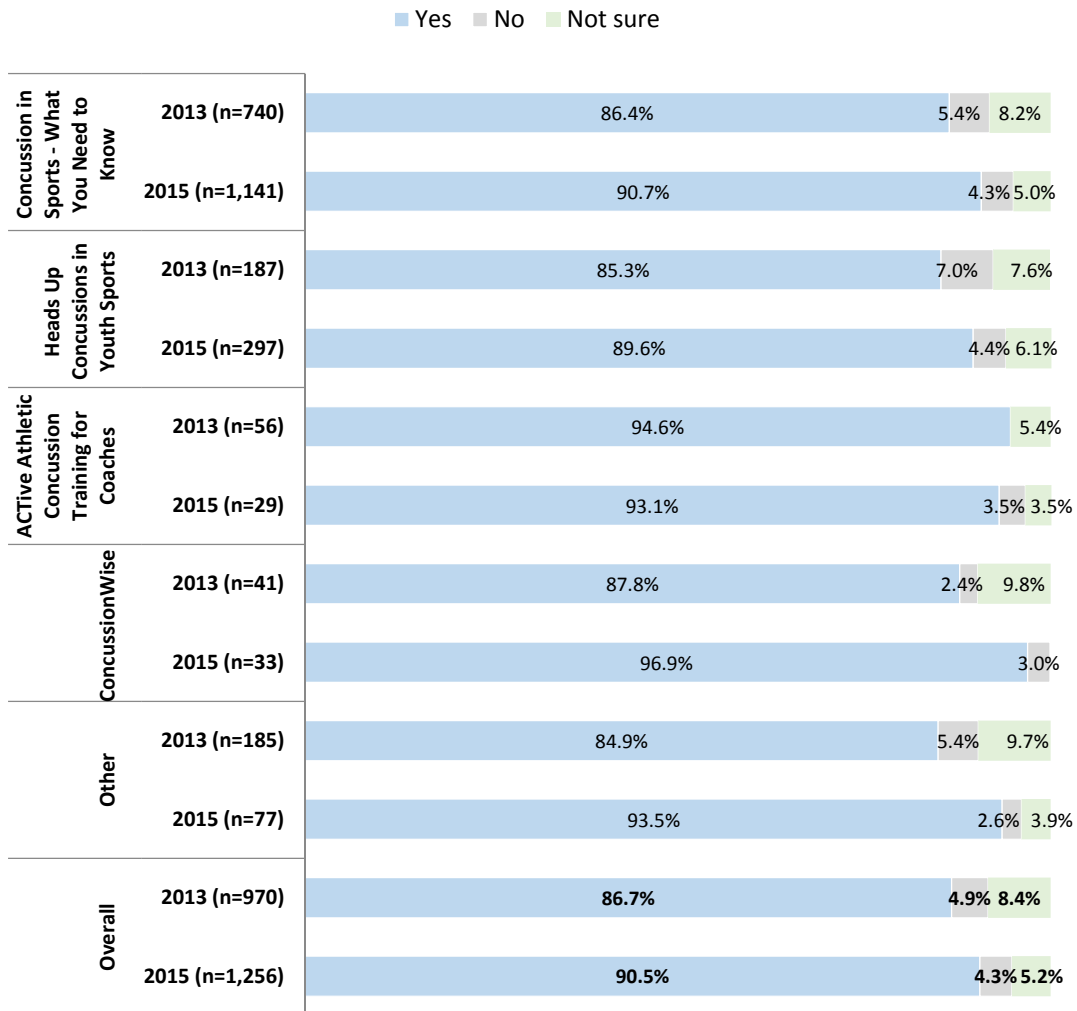
Figure 10	Type of concussion training participated in among concussion training participants by class of school (multiple responses)									
	Class A		Class B		Class C		Class D		Overall	
	2013 (n=248)	2015 (n=248)	2013 (n=203)	2015 (n=247)	2013 (n=288)	2015 (n=417)	2013 (n=223)	2015 (n=339)	2013 (n=970)	2015 (n=1,256)
Concussion in Sports - What You Need to Know (National Federation of High Schools)	83.5%	90.7%	76.4%	95.6%	72.6%	90.7%	73.5%	87.9%	76.3%	90.8%
Heads Up Concussions in Youth Sports (Center for Disease Prevention and Control)	15.7%	16.9%	18.7%	22.7%	21.1%	27.1%	19.3%	25.1%	19.0%	23.7%
ACTive Athletic Concussion Training for Coaches (Oregon Center for Applied Sciences)	3.6%	1.6%	3.9%	2.8%	7.3%	2.9%	1.3%	1.8%	18.4%	2.3%
ConcussionWise (Sports Safety International)	3.6%	2.8%	5.4%	2.8%	8.0%	3.4%	5.4%	1.5%	5.8%	2.6%
Other	15.3%	6.9%	18.2%	6.1%	19.1%	4.8%	24.6%	7.1%	19.1%	6.1%
<i>Attended a state-approved training*</i>	89.5%	96.4%	86.7%	98.0%	84.0%	97.4%	82.1%	96.5%	85.7%	97.0%

Most frequent "other" responses: speaker/training provided by a local health agency/clinic/hospital, ImPACT Concussion Training, athletic trainer provided training, and training at coaches clinic.

*Any of the four trainings noted above.

Among those who participated in concussion training, 85% or more (varying by training) indicated that the concussion training improved their ability to recognize the signs and symptoms of concussions. Note the small number of respondents for some of the trainings (Figure 11).

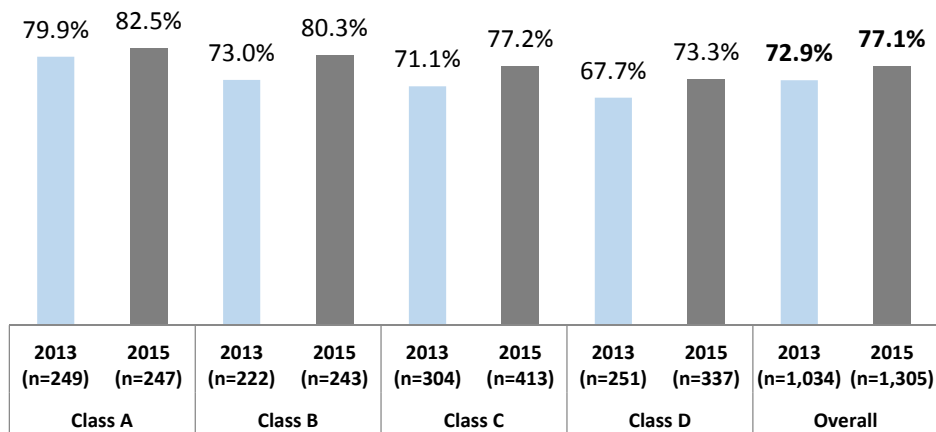
Figure 11. Concussion training improved ability to recognize the signs and symptoms of concussions among concussion training participants by training participated in



The Nebraska Concussion Awareness Act

The percentage of respondents who indicated that their school has provided any education or training on the components and requirements of the Nebraska Concussion Awareness Act increased from 72.9% in 2013 to 77.1% in 2015. Respondents from larger schools (i.e., Class A and B) were slightly more likely to have received such education/training compared to respondents from smaller schools (i.e., Class C and D) (Figure 12).

Figure 12. School has provided any education or training on the components and requirements of the Nebraska Concussion Awareness Act by class of school



Respondents were asked to identify from a list of five components those that pertain to the Nebraska Concussion Awareness Act. All five components are part of the law. There were slight improvements from 2013 to 2015 on the correct identification of the components of the law (Figure 13).

Figure 13	Correct identification of the components of the Nebraska Concussion Awareness Act* by class of school									
	Class A		Class B		Class C		Class D		Overall	
	2013 (n=249)	2015 (n=247)	2013 (n=222)	2015 (n=243)	2013 (n=304)	2015 (n=413)	2013 (n=251)	2015 (n=337)	2013 (n=1,034)	2015 (n=1,305)
Concussion education training must be made available to all coaches on how to recognize symptoms of a concussion, and how to seek proper medical treatment.	94.8%	97.2%	89.6%	97.9%	91.8%	96.1%	92.0%	96.1%	92.2%	96.2%
Athletes and parents must be provided with information about concussions prior to an athlete's participation in school sanctioned sports on an annual basis.	82.7%	87.4%	81.1%	91.8%	86.8%	91.3%	87.6%	86.9%	84.8%	88.7%
An athlete suspected of having a concussion must be removed from participation and may not return until evaluated by an appropriate licensed health care professional.	90.4%	93.5%	91.0%	96.3%	92.4%	95.4%	89.6%	94.7%	91.0%	94.8%
An athlete removed from participation for a suspected concussion must receive written and signed clearance from an appropriate licensed health care professional and from the athlete's parents prior to returning to play.	81.1%	84.6%	82.0%	90.1%	88.5%	91.0%	91.6%	92.6%	86.2%	89.8%
Schools must have a policy outlining the protocol for students returning to the classroom after sustaining a concussion (2015 only)	-	87.4%	-	89.3%	-	87.7%	-	83.4%	-	86.4%

*Respondents were asked to identify which, if any, of the four components are contained in The Concussion Awareness Act. The percentages given are for the percent who identified the component as part of the law. All five components are contained in the law.

From 2013 to 2015 there were modest improvements in the percentage of respondents who perceive the Concussion Awareness Act as effective or highly effective and the percentage who indicate that the law has helped their coaching ability (Figures 14 and 15).

Figure 14	Perceived effectiveness of the Concussion Awareness Act in allowing a student with a concussion to recover completely before returning to play by class of school									
	Class A		Class B		Class C		Class D		Overall	
	2013 (n=248)	2015 (n=246)	2013 (n=218)	2015 (n=243)	2013 (n=304)	2015 (n=412)	2013 (n=248)	2015 (n=337)	2013 (n=1,025)	2015 (n=1,302)
Effective or highly effective	91.9%	95.1%	90.8%	95.9%	86.8%	92.2%	87.0%	93.5%	89.1%	93.1%
Neither ineffective nor effective	7.7%	4.1%	8.7%	3.3%	11.8%	6.3%	11.7%	5.3%	10.0%	5.6%
Ineffective or highly ineffective	0.4%	0.8%	0.5%	0.8%	1.3%	1.5%	1.2%	1.2%	0.9%	1.3%

Figure 15	Impact of the Concussion Awareness Act on coaching ability by class of school									
	Class A		Class B		Class C		Class D		Overall	
	2013 (n=248)	2015 (n=246)	2013 (n=218)	2015 (n=243)	2013 (n=304)	2015 (n=412)	2013 (n=248)	2015 (n=337)	2013 (n=1,025)	2015 (n=1,302)
It has helped	37.5%	44.7%	33.0%	45.7%	28.3%	39.6%	23.4%	41.8%	30.7%	41.8%
It has helped, but there have been some difficulties added to my position as a coach	19.0%	19.5%	24.3%	24.7%	29.9%	22.3%	31.9%	25.2%	26.3%	22.4%
It has neither helped, nor hindered	36.7%	28.9%	32.6%	26.3%	34.5%	32.0%	36.3%	27.3%	34.9%	29.3%
It has hindered my ability to coach	1.6%	1.6%	3.7%	0.0%	2.6%	2.7%	2.8%	2.1%	2.6%	1.7%
Not sure	5.2%	5.3%	6.4%	3.3%	4.6%	3.4%	5.6%	3.6%	5.4%	4.8%

Respondents were given the opportunity to provide comments in response to how the Concussion Awareness Act has helped or hindered their ability to coach. Following is a representative selection of comments broken down by those indicating how it has helped and those indicating how it has hindered (Figure 16). It should be noted that the majority of respondents see the value in the Concussion Awareness Act (see Figures 14 and 15 above). Those who perceive hindrances as a result of the law were more likely to provide more in depth open-ended comments.

Figure 16	Selection of open-ended comments: Has Nebraska’s Concussion Awareness Act helped or hindered your ability to coach? (2015 only)
How it has helped...	
<ul style="list-style-type: none"> • Where a parent may question why his/her student was pulled from a contest. This gives a coach solid footing to back up his/her decision to hold a player out. • It helps our coaches become more aware of the signs of a head injury and keeps our athletes as safe as possible. • Just simply knowing what to look for if I am suspicious of an athlete having this condition. • Impact testing has helped determine if a student has had a concussion. It also helps determine when the player is ready to return to play. • It allows me to not just keep an athlete out because I feel they need to be seen by a doctor but because it's the law. It gives me the support I need to keep my athletes safe despite those students and parents that are willing to be unnecessarily dangerous with their athlete's health. • It provides a standard protocol to follow when an athlete is suspected of having a concussion. This helps to take some of the pressure off of me as a coach trying to determine if the athlete should continue. It also gives the parents a time line so that they understand why their athlete may not be back in action yet, it is not a choice the coach can make anymore. • Definitely made me more aware and increased concern for the safety of players. • The course made me aware of the signs to prevent further complications. • It has given specific guidelines that are more universal. This helps all coaches be more consistent and cautious. • There is no guesswork involved. The student must have a medical exam and pass the concussion test before they resume practice and competition. • It helps by allowing us as coaches to focus on a student/athletes’ health first and foremost. • The one positive change I see is less parent argument when a player is removed from competition. • Parents can't argue about whether their son/daughter should be playing as much. • It has taken pressure off of coaches in terms of deciding when a student is ready or not. The decision is not ours to make (which is good). The decision is not in the hands of the athlete or the parents, so they can't pressure a coach to let the student athlete return to action. 	
How it has hindered...	
<ul style="list-style-type: none"> • We've had multiple situations in which an athlete complained of having a headache and was not able to "pass" the concussion test and begin the reentry process for weeks after simply saying he had a headache. This has happened during two-a-days and the headache was likely due to dehydration. One time the athlete even complained about a headache before any contact drills had taken place when we were in just helmets. He was out for several weeks and was unable to hit his baseline on the computer test. The test seems to be a poor assessment. • If anything it has hindered my coaching due to the lack of knowledge and communication between doctors, trainers, parents, admins, and coaches. With my experiences, I have had athletes who aren't sure if they had a concussion or doctors just call a headache a concussion. It is not very clear to diagnose a concussion and all parties involved struggle to understand for sure. Some kids use a 	

headache as an excuse as a concussion, some kids try to come back too soon from something that was actually a concussion. This is a difficult topic and the media has sensationalized it too much in my opinion. I feel doctors diagnose on the side of caution, which is good, but it is a struggle for some parents, kids, and coaches to understand, while other parents and kids use a headache as an excuse to sit out weeks of activities. Because of all of these variables coaching in this era has become much more difficult. I appreciate safety and am glad our kids are taken care of, but as a coach I have had to adapt.

- The hindrance lies in confusion from parents, i.e. mom thinks the kid is fine, and wonders why she can't sign off on his return.
- Doctors interpret this differently. We had one student go to one hospital...they wouldn't allow that student to go back to a game, until they signed off. Another hospital said they said they can do the return to play protocol and that was it. After that protocol was complete, they said they didn't need to see the student again. Whereas the other hospital did want to see them after the return to play protocol was completed and signed off. Everyone needs to be on the same page and this needs to be clearly defined.
- It's for the best and I believe in it, but it makes it difficult to always field the best team because we're doing what's best for the safety of our athletes.
- It does make it more difficult as a coach when an athlete is struggling to pass the final steps of the protocol and you need them back to compete. The most difficult part is when the athlete is showing no symptoms of the concussion anymore but they just can't pass the baseline test.
- Now we run into the kids that don't want to practice so they say they got their bell rung and feel dizzy. Now you have to pull them and now they have to be seen by a doctor and they're out for a week, and their families can't afford the doctor's appointment, so they just stop playing football.
- You just never know. It is a scary thing, you think you are doing the right thing but you can miss something and it could get real messy. For what little we get paid we could lose our job and livelihood if we miss a concussion.
- There are many kids who use a "concussion" as a get out of practice card. We need to take concussions very seriously, and anyone who is determined to have one should not be on the field. However, many kids know what the symptoms of a concussion are, and they will go to a doctor and tell them that they are having those symptoms. On the other hand, kids will also hide symptoms from the doctor and others. It is very difficult as a coach to make sure that the students who need treatment get the right treatment and those who don't are meeting team expectations.
- It is said that, 'a little information is a dangerous thing'. That is the case with the situation with the public and parents concerning concussions.
- Every little bump and bruise is not a concussion. By overhyping concussions, we have made kids hypochondriacs.
- Parents and athletes will hide less severe symptoms because they are afraid of being removed from activities for an extended period of time.
- Sometimes students will hit their head and have a headache, automatically people assume that it was a "concussion" when we have had a few instances where there were no signs of a concussion, but since it was an "injury to the head," students were pulled from activity for longer than necessary.
- I believe we need to figure out what professionals will clear players as more and more doctors are not clearing players due to liability reasons.
- I believe we have students taking advantage of the system.

Removal of Athletes from Play

The vast majority (94.8%) of respondents in 2015 indicated that they know of their school's policy on removal and return to play for athletes with suspected concussions. This represented a slight increase from the 90.7% of 2013.

Figure 17	Knowledge of school's policy on removal and return to play for athletes with suspected concussions by class of school									
	Class A		Class B		Class C		Class D		Overall	
	2013 (n=248)	2015 (n=246)	2013 (n=218)	2015 (n=243)	2013 (n=304)	2015 (n=412)	2013 (n=248)	2015 (n=336)	2013 (n=1,024)	2015 (n=1,300)
Yes	96.0%	99.6%	94.5%	98.4%	90.8%	93.9%	81.9%	92.3%	90.7%	94.8%
No	2.4%	0.4%	1.8%	0.8%	1.6%	1.0%	2.4%	1.5%	2.1%	1.3%
N/A - no school policy	0.4%	0.0%	0.9%	0.0%	2.3%	1.9%	4.4%	0.6%	2.1%	0.8%
Do not know if school has a policy	1.2%	0.0%	2.8%	0.8%	5.3%	3.2%	11.3%	5.7%	5.2%	3.2%

Nearly three-fourths of respondents in both survey administrations indicated that they have coached an athlete who ever suffered a concussion or had been suspected of suffering a concussion while playing the sport they coached (Figure 18).

In 2015, among those who have coached an athlete who suffered a concussion or was suspected of suffering a concussion...

- 89.0% have personally removed an athlete from play due to a suspected concussion (Figure 19).
- 26.6% reported knowledge of an athlete they coached not reporting their concussion symptoms in order to continue playing (Figure 20).
- 43.1% reported that an athlete they coached has resisted being removed from play due to a suspected concussion (Figure 21).
- 11.9% reported that the parents of an athlete with a suspected concussion have tried to stop them from removing their child from play (Figure 22).
- 22.7% reported that the parents of an athlete with a suspected concussion have tried to have their child return to play without a doctor's clearance (Figure 23).

These responses are largely comparable to 2013.

Figure 18. Percentage of respondents who have coached an athlete who ever suffered a concussion or been suspected of suffering a concussion while playing the sport they coached by class of school

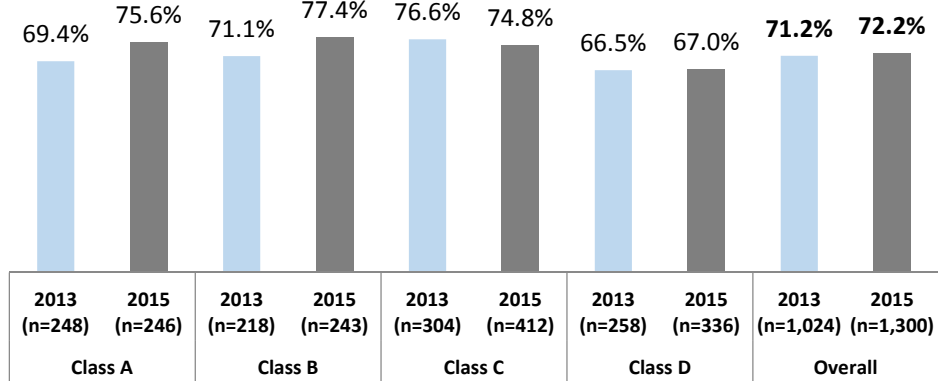
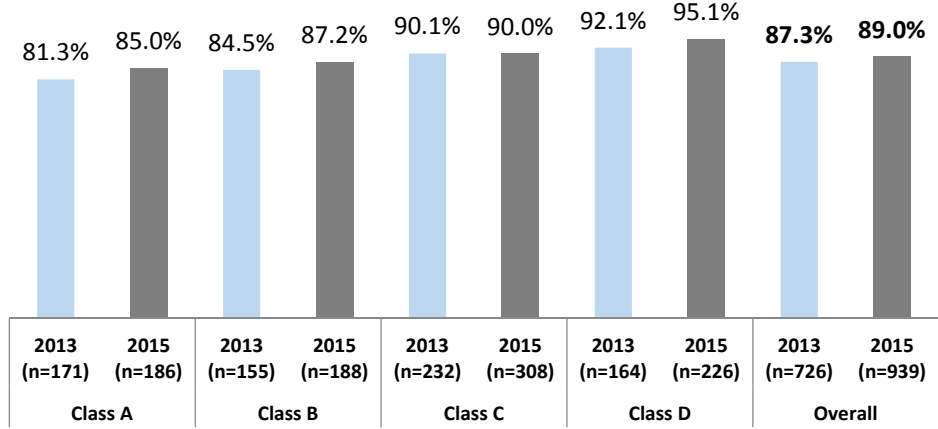
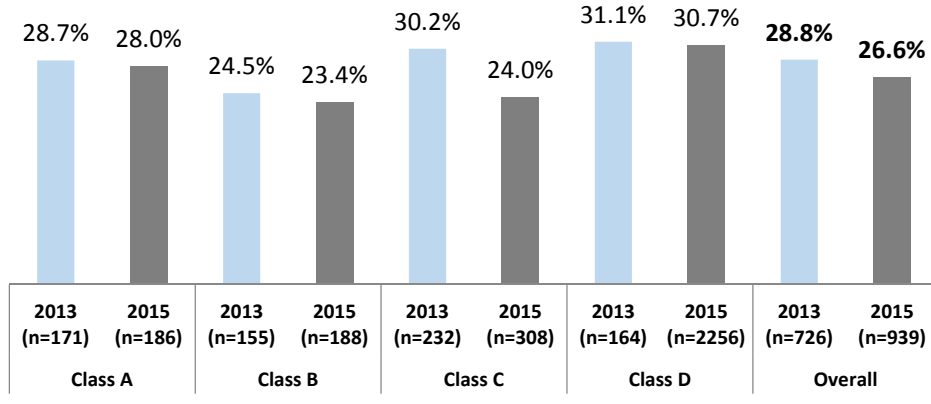


Figure 19. Percentage of respondents* who have personally removed an athlete from play due to a suspected concussion by class of school



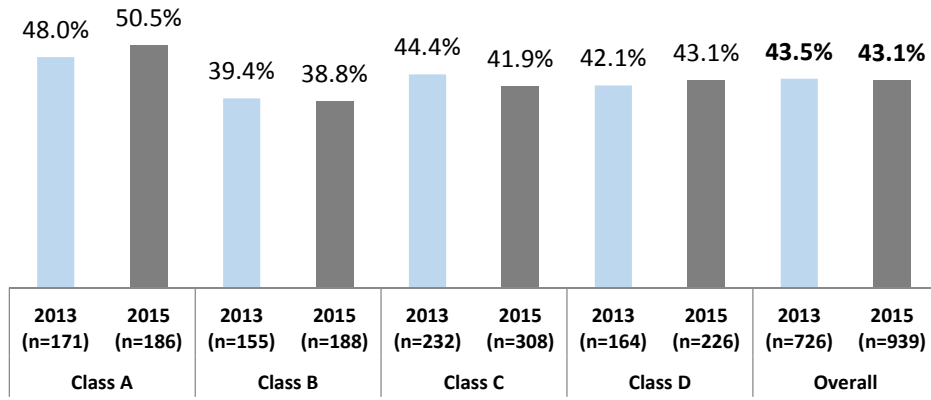
*Among those who have coached an athlete who ever suffered a concussion or was suspected of suffering a concussion while playing the sport coached by the survey respondent.

Figure 20. Percentage of respondents* who know of an athlete they coached that did not report concussion symptoms in order to continue playing by class of school



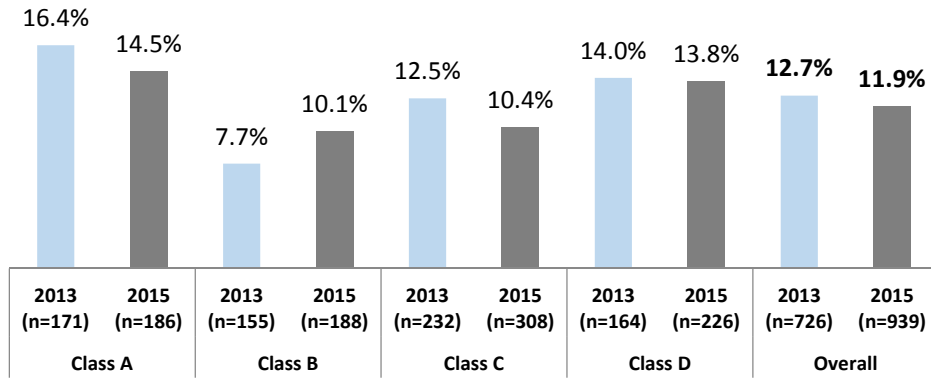
*Among those who have coached an athlete who ever suffered a concussion or was suspected of suffering a concussion while playing the sport coached by the survey respondent.

Figure 21. Percentage of respondents* reporting that an athlete they coached has ever resisted being removed from play due to a suspected concussion by class of school



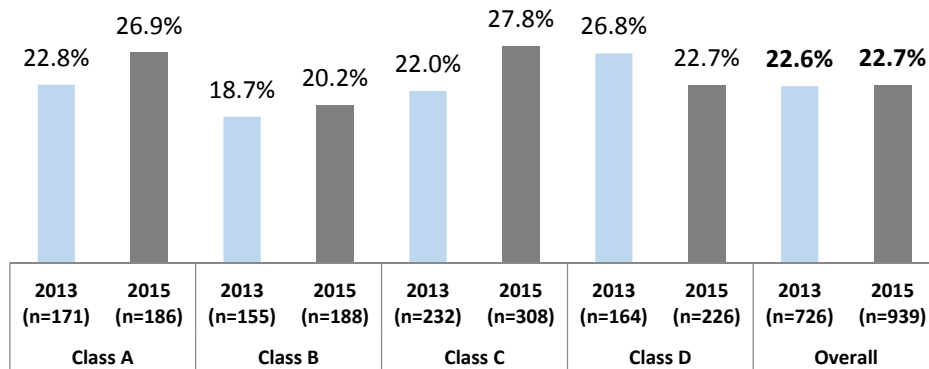
*Among those who have coached an athlete who ever suffered a concussion or was suspected of suffering a concussion while playing the sport coached by the survey respondent.

Figure 22. Percentage of respondents* reporting that the parents of an athlete with a suspected concussion ever tried to stop them from removing their child from play by class of school



*Among those who have coached an athlete who ever suffered a concussion or was suspected of suffering a concussion while playing the sport coached by the survey respondent.

Figure 23. Percentage of respondents* reporting the parents of an athlete with a suspected concussion have ever tried to have their child return to play without a doctor's clearance by class of school



*Among those who have coached an athlete who ever suffered a concussion or was suspected of suffering a concussion while playing the sport coached by the survey respondent.

[PO1]

From 2013 to 2015 there were modest improvements in the percentage of respondents indicating that they always or often receive notification when a student athlete suffers a concussion in either another school sport or a non-school sanctioned activity or club sport. Nevertheless, the rates of notification are relatively low, especially for non-school sanctioned activities or club sports (Figures 24 and 25).

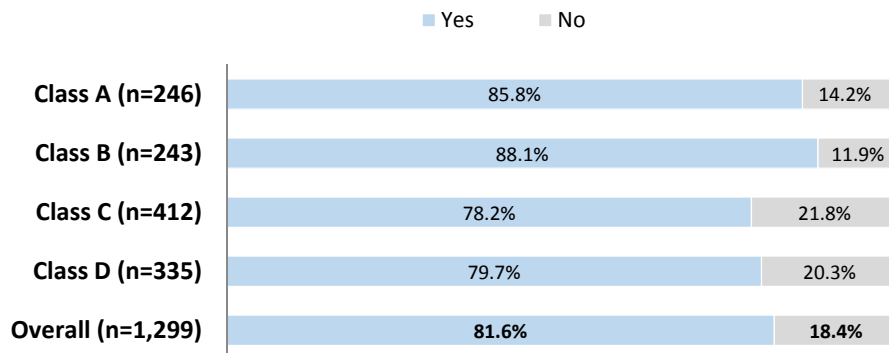
Figure 24	How often notification occurs when a student athlete suffers a concussion in another <u>school sport</u>									
	Class A		Class B		Class C		Class D		Overall	
	2013 (n=247)	2015 (n=246)	2013 (n=216)	2015 (n=243)	2013 (n=301)	2015 (n=412)	2013 (n=246)	2015 (n=336)	2013 (n=1,016)	2015 (n=1,300)
Always	17.0%	30.1%	19.4%	29.2%	28.2%	31.3%	37.8%	44.6%	26.1%	34.1%
Often	14.2%	19.9%	17.1%	19.3%	18.6%	26.0%	21.1%	22.3%	17.7%	21.8%
Sometimes	28.7%	23.6%	27.3%	26.3%	23.3%	21.8%	25.6%	15.8%	25.9%	21.9%
Rarely	21.9%	17.1%	19.9%	14.4%	18.9%	13.6%	8.9%	9.8%	17.4%	13.4%
Never	18.2%	9.4%	16.2%	10.7%	11.0%	7.3%	6.5%	7.4%	12.9%	8.9%

Figure 25	How often notification occurs when a student athlete suffers a concussion in a <u>non-school sanctioned activity or club sport</u>									
	Class A		Class B		Class C		Class D		Overall	
	2013 (n=247)	2015 (n=246)	2013 (n=216)	2015 (n=243)	2013 (n=301)	2015 (n=412)	2013 (n=246)	2015 (n=336)	2013 (n=1,016)	2015 (n=1,300)
Always	3.6%	8.5%	5.6%	11.1%	8.3%	10.7%	11.4%	16.1%	7.4%	12.2%
Often	7.3%	13.0%	12.0%	15.2%	12.3%	16.0%	15.0%	21.4%	11.6%	16.5%
Sometimes	24.3%	29.7%	20.8%	25.5%	24.3%	26.2%	37.0%	28.9%	26.6%	26.9%
Rarely	32.4%	26.8%	37.5%	29.6%	32.2%	32.0%	22.0%	20.8%	30.9%	27.3%
Never	32.4%	22.0%	24.1%	18.5%	22.9%	15.1%	14.6%	12.8%	23.5%	17.2%

Return-to-Learn

A new survey item was added for the 2015 administration pertaining to the return-to-learn protocol used by schools to accommodate students who have sustained concussions as they return to the classroom. This survey item was added due to the amendments to the Concussion Awareness Act mandating such a protocol. Four-fifths (81.6%) of respondents were aware of such a protocol at their school (Figure 26).

Figure 26. Aware of a return-to-learn protocol used by school to accommodate students who have sustained a concussion as they return to the classroom by class of school (2015 only)



Conclusion

Overall improvements in concussion training and education for coaches

From 2013 to 2015 there have been notable improvements in the areas of providing concussion education for coaches, including schools making concussion training mandatory and participation in one of the four state-approved concussion trainings. In 2015, 90.4% of coaches indicated that their school made concussion training mandatory (compared to 76.6% in 2013), and, among those who participated in concussion training, 97.0% reported attending one of the four state-approved concussion trainings (compared to 85.7% in 2013). Overall, 95.5% of respondents in 2015 indicated that they attended some form concussion training, which was a modest improvement from the 91.2% of 2013.

In 2013, smaller schools (i.e., Class C and D) appeared to be behind larger schools (i.e., Class A and B) in many aspects of concussion training and education for coaches. But, the 2015 results indicate that this gap is closing.

Overall positive perceptions of the Concussion Awareness Act

The vast majority (93.1% in 2015) of coaches perceive the Concussion Awareness Act as effective or highly effective in allowing a student with a concussion to recover completely before returning to play. In addition, 41.8% in 2015 indicated that the law has helped their coaching ability. Yet, 22.4% indicated that the law has helped, but some difficulties have been added to their position as a coach. Another 29.3% felt the law has neither helped nor hindered their coaching ability. Generally, coaches perceive the usefulness of the law, but a substantial minority admit that it had made their coaching job more difficult.

In an open-ended question, many coaches acknowledged that the law has given them solid footing to remove a player from play (often against the protests of parents) and has created a standardized protocol that removes the pressure from coaches in determining when a student is ready to return to play. At the same time, some coaches have reported issues of athletes using the heightened awareness around concussions to miss out on practice, or conversely, athletes and parents avoiding reporting symptoms in order to keep the athlete from being removed from play. Other respondents noted difficulties with obtaining a medical clearance.

Coaches continue to face barriers in the proper management of athletes who have sustained a concussion

Among those who have coached an athlete who suffered a concussion or was suspected of suffering a concussion (which was 72.2% in 2015), many barriers were noted to properly managing such an athlete. These barriers include an athlete not reporting concussion symptoms in order to continue playing (indicated by 26.6% in 2015), an athlete resisting being removed from play due to a suspected concussion (indicated by 43.1% in 2015), the parents of

an athlete trying to stop them from removing their child from play (indicated by 11.9% in 2015), and the parents of an athlete with a suspected concussion trying to have their child return to play without a doctors clearance (indicated by 22.7% in 2015). All of these barriers point to the difficult task facing coaches as they attempt to lookout for safety and best interest of their student athletes.