Regular Meeting

UNI FACULTY SENATE MEETING

11/11/13 (3:30 p.m. – 5:05 p.m.)

Mtg. #1744

SUMMARY MINUTES

Summary of main points

1. Courtesy Announcements

Faculty Senate Vice-Chair **Kidd** called the meeting to order at 3:30 p.m.

Press present included MacKenzie **Elmer** from the Waterloo-Cedar Falls *Courier***.**

Provost **Gibson** offered thanks to all veterans on this Veterans Day.

Faculty Chair **Funderburk** noted that he attended a very good Cabinet meeting this morning which also included a visit to UNI-CUE but that there was nothing substantive to report otherwise this time.

Vice-Chair **Kidd**, chairing the meeting in the absence of Chair **Smith**, only reminded Senators that, if 3 items on the docket were accomplished today, there would be no need for a special meeting on December 2, 2013.

2. Summary Minutes/Full Transcript

Minutes for 10/28/13 were approved as submitted (**Terlip/Peters**).

3. Docketed from the Calendar

No items up for docketing today.

4. Consideration of Docketed Items

1213 1109 Consultative Session with Athletic Director Troy **Dannen**
**Discussion completed.

1210 1106 Changes to Policy Process (regular order) (**Gould/Nelson**)
**Not considered today.

1211 1107 Proposed changes to Policy #3.06: Class Attendance and Make-Up Work (regular order) (**Nelson/DeSoto**)
**Not considered today.

1212 1108 Request for Emeritus Status, Merrie **Schroeder**
**Not considered today.

5. Adjournment
Time: 5:05 p.m. (**O'Kane/Cooley**)

Next meeting:

December 02, 2013
Curris Business Building 319
3:30 p.m.

Full Transcript follows of 97 pages, including 3 Addenda.

Regular Meeting

FULL TRANSCRIPT OF THE
UNI FACULTY SENATE MEETING
November, 11, 2013
Mtg. 1744

PRESENT: Melinda **Boyd**, Karen **Breitbach**, Jennifer **Cooley**, Barbara **Cutter**, Forrest **Dolgener**, Chris **Edginton**, Todd **Evans**, Blake **Findley**, Jeffrey **Funderburk**, Gloria **Gibson**, Gretchen **Gould**, David **Hakes**, Melissa **Heston** , Tim **Kidd** (alternate for Chair **Smith**), Syed **Kirmani**, Michael **Licari**, Nancy **Lippins**, Kim **MacLin**, Lauren **Nelson**, Steve **O'Kane**, Scott **Peters**, Marilyn **Shaw,** Mitchell **Strauss**, Jesse **Swan**, Laura **Terlip**, Michael **Walter**
(26 present)

Absent: Gary **Shontz** (1 absent)

CALL TO ORDER (3:30 p.m.)

Vice-Chair Kidd: Ok, I think we can call this meeting to order—maybe. [visiting continues] Is that not loud enough? All right. [louder] So, I think we can call this meeting to order. Is that loud enough? I've got 3 kids. I can actually do this. [joking from others about using his "dad voice"; murmuring finally lessens] So, anyway I'm sorry that we can't have Chair **Smith** with us here today. He has to attend a funeral for his father-in-law. So, you guys have me. Let's see what happens.

COURTESY ANNOUNCEMENTS

CALL FOR PRESS IDENTIFICATION

Kidd: So we'll start off, I think, with call for press identification. [MacKenzie **Elmer** from the *Courier* self-identified]. Thank you. Anyone else? [no one else heard] All right.

COMMENTS FROM PROVOST GLORIA GIBSON

Kidd: Then, do we have any opening comments from Provost **Gibson**?

Gibson: I'd just like to thank all veterans for their service. I would like to encourage everyone to attend—there's a whole host of activities this week, so I would like to encourage you to attend as many of the programs as you can. And every graduation I'm honored to ask our service men and women to stand to be acknowledged, and one of the things that I say is that "Freedom is not free." And we have people that pay a very heavy price for our freedom. So, I would just encourage everyone to take a moment and thank a veteran and attend as many of the programs this week on campus as you can. Thank you.

Kidd: Thank you. That was very kind.

COMMENTS FROM FACULTY CHAIR JEFFREY FUNDERBURK

Kidd: Faculty Chair Funderburk?

Funderburk: I'd say that we had another very good Cabinet meeting this morning, the third one, so I was in attendance. The Chair was not able to be there. I won't bore you with the presentation I gave them about the shared governance on campus—an outline of that—but I think they're very effective, good meetings still. Unfortunately, there would have been some policy things that we would have wanted to report on, but UNI Attorney Tim **McKenna** was unable to be there because he was sick today, so I don't think there was really anything from the Cabinet meeting to report to you that's of note. It was a very good meeting and a visit at UNICUE. That would be all.

Kidd: Ok, thank you.

COMMENTS FROM FACULTY SENATE VICE-CHAIR TIM KIDD

Kidd: So, I don't really have any comment except for if we get to 3 items today, then we don't have to be here on December 2nd. So with that in

mind, I'd like to start off with this consultative session with the Athletic [quiet interruption] Oh, the Minutes. I don't have that.

BUSINESS

MINUTES FOR APPROVAL

Kidd: Should we do some Minutes? Do we approve the Minutes for October 28th?

Terlip: So move.

Peters: Second.

Kidd: All right. Sounds good. Any discussion? [none heard] No, ok. Then I assume this passes. [Secretary **Terlip** coaching parliamentary procedure for **Kidd**'s first opportunity to lead the Senate.] Oh, call for a vote? Shall we vote? [light laughter around] All in favor? [ayes heard all around] [more coaching by others] Opposed? Abstentions? Let's not do that. All right. Thank you. [laughter around] Minutes are approved, I suppose.

CONSIDERATION OF CALENDAR ITEMS FOR DOCKETING

Kidd: So, now we have no Calendar Items for docketing.

NEW BUSINESS

Kidd: Do we have any new business? [none heard] That's good.

CONSIDERATION OF DOCKETED ITEMS

DOCKET 1109, CONSULTATIVE SESSION WITH ATHLETIC DIRECTOR TROY **DANNEN**

Kidd: Now, can I do this? All right. So now we are going to begin with the Item #1109, Consultative Session with Athletic Director Troy **Dannen**, and I believe head trainer Troy [*sic*, Don] **Bishop** is here, and also Senator Todd **Evans** will be speaking. First, do you have any opening comments, Athletic Director **Dannen**?

Dannen: Well, first I appreciate the opportunity to come and talk to you. This is my 6th year on campus as Athletic Director. Of course, I was an alum, so I've been here for a while. This is my 5th opportunity to come and meet with you. Normally, I have a little bit of a presentation to make. I think today because we know a lot of the requests for discussion have come about concussions to use Todd's [Senator **Evans**] expertise and Don's [**Bishop**, Head Athletic Trainer] and to the other side of Don is Dawn **Jacobson**, who I don't know if you are officially the Associate Head Trainer, but does a lot of work with us as well. So I brought the experts.

You know, UNI is unique among its peers in that our Sports Medicine is not an Athletic Unit. It's an Academic—solely an Academic Unit. We provide GA's [graduate assistants]. We provide equipment costs, but—but it's—it's faculty, and it's not managed by Athletics. In fact, there isn't even a dotted line to Athletics. Jean **Berger**, the senior woman administrator [Senior Associate Athletic Director] is here. Jean is—is the day-to-day liaison with Sports Medicine in our office, and Justin **Schemmel**, from our office is also here. He's the Assistant Athletic Director for NCAA Compliance and handles some other internal things. So, if we get into any of the NCAA policies or practices, we've got that expertise. And then perhaps when they're done, there's 3 or 4 things that I might highlight that have been either in the news or other items that I think I want to get out in front of you and then whatever questions—this is usually a pretty good question and answer session for me, so—and I appreciate that. But thank you for the opportunity.

Kidd: All right. Thank you for coming. So, I suppose we can begin with the presentation?

Evans: I gotta stand. I can't talk sitting down. And I'm setting my timer. Again, I promise an hour and a half tops. [laughter all around] Thank you for the opportunity. I'm going to set these on my chair here. My name's

Todd **Evans**. I'm the Division Chair of the Athletic Train—or I'm the Chair of the Athletic Training Division. This is my 11th or 12th year going on here, and I appreciate the opportunity to speak on this topic, you know, not just about concussions, but about injuries in general. I'm going to talk about some of the general stuff first, and then I'm going to turn it over to Don **Bishop**, our Head Athletic Trainer. Don's been here for 12, 13 years?

Bishop: Thirteen.

Evans: Thirteen? So, I've been here for 12. Man, that makes me feel old. But we're just going to share what concussions are, talk about the information in the media right now, and then Don specifically—he's going to talk about how we take care of our athletes. You know, we can't answer specific questions about specific athletes, because, you know, they're protected. Their medical information is private, but we can share some anecdotes and hopefully answer questions when it's all said and done. [see Addendum 1 to these Minutes for Power Point Slideshow by slide number throughout discussion.]

So now, starting with—what we're going to do, again, is explain how we provide Athletic Training Services for our athletes. [see Slide #2] The focus is on concussions right now. And that's just a hot topic, not necessarily for us, per se. Granted, we're learning new stuff by the day, but I'll show you some examples of how this has been the topic of concern for us for years going back. We'll look at some facts, how it compares to other injuries, some things that are coming down the road that we just can't answer yet, but they certainly warrant some consideration, and then we'll answer your questions. And I'm going to try to get done within 5, 10 minutes tops, combined. We'll see about that. [having trouble getting the remote to engage] I'm going to have to walk toward the front.

[see Slide #3] Ok, you know, as healthcare providers, we are housed under the School of HPELS in part of the College of Education. That's unique in a sense that there's definitely a sort of—not a disconnect, but some separation. Our athletic trainers who provide the coverage and the healthcare to our athletes here, they don't have to worry about some of the things you've read about. I think I shared with everybody some stories about athletic trainers having their jobs placed in question because of

decisions they made in the best interest of the athletes. That's not ever going to happen here. Never has, never will. So we can hopefully be proud of that fact.

[see Slide #4] Speaking on concussions specifically—speaking about concussions specifically, there we go [remote finally engaged], and I highlighted a "new" [see Slide #5], you know, the CDC put out a report to Congress about Mild Traumatic Brain Injury. Traumatic Brain Injury constitutes any kind of injury that involves the brain. Typically, we're looking at permanent disability and possibly death. Mild Traumatic Brain Injury—and we could probably put that in quotes as well now, knowing what it is we know—constitutes things such as concussion where the injury is transient. And I put this up as "new," because this report was released—oh, this is going to be rough—there we go [again remote difficulties] 2003, so that's been 10 years since this information has come out alone, so it's really not a "new" topic, but some of the issues coming forward that you see coming from professional sports, specifically, are in the media now, so it's generated a lot of attention.

And I'm just going to walk to the front. [still having trouble with the remote working] I apologize for this small text. [see Slide 6] It's not to show that we can put lots of information on the screen, but, you know, some of this is just to share with you what we have available to you. We can't share everything with you. You'd be up here for 3 hours talking about concussions, but I'm going to cite some of the research that's been published through our profession which is Athletic Training, and our organization is the National Athletic Training Association.

Back in 2004, we released our first position statement, and some of the interesting facts—and again I copied and pasted—was that, you know, back in 1968 there were 36 confirmed deaths in football specifically from brain and cervical spine injuries, and that fell to zero in 1990. Since then, there's been approximately 5 deaths per year, so the point there is that we can take injuries out of the game, if we address them properly. The problem was when they went to these rule changes, they kind of focused on—at least in my opinion—they focused on not just eliminating head contact, but, you know, you can't—you shouldn't lower your head. That is how you injure your cervical spine. Some of the things that brought about these

changes, you know, were rule changes, player education, implementation of equipment standards. But now we look back and see some of the issues, you know. Rule changes, again, they stop dropping their head when they making contact specific to football injuries. Perhaps instead of saying this isn't—you know, don't lower—hit what you see, well, just don't use your head period. There are videos I have sitting over there which were going to be my props that say, you know, "Don't hit with your head." And this goes back to 1992. So, under no circumstances, is it safe for anyone to use their head as an initiating point of contact, even if you're wearing a helmet, which goes with some of the new equipment information that we have that we'll discuss with you later.

So, again, this goes back to 2004, and the common definition for a concussion [see Slide 7] is "a clinical syndrome characterized by an immediate and transient (short-lived) impairment of neurological function due to mechanical forces." So this goes back to 1966, and it was associated with the term "Mild Traumatic Brain Injury" [mTBI]. But there was really no universal agreement on the definition, which seems kind of odd to have a condition that's so prominent yet no readily agreed-upon definition. So there was some concerns about this definition, and a consortium was gathered, and they decided that, you know, we should kind of tweak that definition because it's not completely accurate and completely broad enough to cover the topic. It doesn't have to be—for example, they came up with content such as [see Slide 8] it doesn't have to be a blow to the head. It can be a blow to the body anywhere to cause this trauma to the head. It may cause an immediate and short-lived impairment, but it might not cause an immediate impairment. It can come later. They may cause neurolog—neuropathological changes. And what I've highlighted here is that, you know, it's—it reflects a functional disturbance rather than a structural injury, and this only goes back to 2004. And now we're starting to think, you know, we need more information about the structural integrity of the brain being injured when there's a concussion. That's information that's out there now, that's, you know—again, it's kind of changing by the day. But the structural injury, the structural integrity, is a, you know, a focus of future consideration here. Loss of consciousness, it used to be loss of consciousness, and Don [**Bishop**] and Dawn [**Jacobson**] can agree, and my other colleagues here, it was all about: if you lose consciousness, that's the most severe concussion there is. No, that has

nothing to do with severity, nothing whatsoever. So the definitions and how we assess these has changed and evolved. And under normal, conventional imaging you don't see any change in the brain, and, you know, that has changed as well, because there's now a different type of non-conventional imagining that actually can show some changes going on in the brain following concussive impact.

[see Slides 9 and 10] I've put some slides in from the CDC. There's a lot of information about Traumatic Brain Injury. To put in context, it seems as if—and these, of course, kind of changed—that most injuries that result in a hospital visit from Traumatic Brain Injury—and that could be, you know, death or any other hospitalization, anything where it's documented, without necessarily addressing the seriousness—you know, falls and motor vehicle accidents depend—no matter which site you see, are consistently the top two reasons why people seek healthcare for brain trauma. Then we have assaults and then unknown other and struck by and against. Somewhere here that's where, you know, sports participation falls for the cause of head trauma.

Another report by the CDC in 1999 [see Slide 11] indicates that's, you know, sports and recreation represents about 10% of head trauma, and that's not organized sports participation. If you look at the statistics, it's riding bikes. Riding bikes seems to be the most dangerous thing that you can do from a recreational standpoint that leads to head injury. Football is up there, depending on the age group, and then you have things such as playground safety. I'm trying to think of a few of the others. You know, baseball falls in about, you know, the 9th or 10th rate of death because of the amounts of people that are actually participating in these activities.

[see Slide 12] My profession, our Journal released a whole, entire issue dedicated on the epidemiology of injuries across 15 sports. We were changing our data collection process, so it was time to kind of act as a clearinghouse and present this information. I had the wonderful opportunity to serve as a guest editor for this special issue—I had to get that in there. I was hoping somebody would ask, "What's a special editor?" [laughter all around and joking] I guess my point really is that we've got some expertise here, and I'm really proud that I was a part of this. And so it has every sport—well, 15 sports where there was data collected. It breaks

down every injury, and every one of the chapters' publications, they're identical. So it's a nice, easy read. Chapter 1's the Methods. The next 12 chapters are all about the different sports, and then the next couple chapters are summaries and where we go from that.

[see Slide 13] I know, very small, but at the end there's a summary, a summary chapter [table] that talks about ankle sprains, ACL injuries, and concussions, and I'll make the concussion information blow up here [see Slide 14]. So what you see are, you know, the injuries—well, where the injuries occurred, how frequent they were, the per cent of all injuries in that sport, the rate that you see per 1000 exposures. Now for injuries related to Athletics, we can calculate exposures because we know when we're on the field. So in this—in most sports epidemiology worlds, one exposure means one athlete stepping on the field at one time. The unfair part of it is, you know, a punter, for example, in football has one exposure if he steps out and punts, but so does the quarterback who's out there a lot longer. So it's not a perfect system, but keeping track of the minutes and seconds on the field is very, very difficult. But this is how it's done, so now you can compare it across many different studies. This is the way epidemiology in sports is typically collected.

[see slide 15] So, again, making this bigger and bigger so you can see it, so now we have frequency, per cent of injuries, and rates per athletic exposures, and so I'll shift this over to the left [see slide 16], so now I'll put some arrows that kind of indicate which sports were leading. Women's ice hockey is the leading cause of head injuries. It's got the greatest risk. The interesting thing is, and Don's [**Bishop**] going to share this, female's—women's sports, females for some reason or another seem to be at greater risk for head injuries. I don't know why that is, but that's consistently come out. The next leading one is Spring football. Then we have men's ice hockey and women's soccer and then, you know, the traditional Fall football. And this combines practices and games. Obviously, the risk of any injury is much greater in games than it is for practices, but, you know, all throughout this reporting, the risk of concussion in football is up there. There's no secret that it's a risk, and that seems to be the sport that it's associated with the most, but there are concussions in every sport. Football gets the attention, but it's all the sports that we as athletic trainers are concerned with.

[see Slide 17] If you look at how this has changed over time, if you want to talk about a common injury, look at ankle sprains. It's a great area for research because you're always going to have a lot of people spraining their ankle, and they tend to be relatively transient, but there's a lot of issues with that as well. But this isn't about ankle sprains. Then we have concussions, and then we have ACL injuries. Now, as you see this information spike, and this is just talking from what I see, you see it rising. Is football getting more dangerous? Is sport getting more dangerous? Absolutely not. It's just getting better reported. That is wonderful news for us as healthcare professionals. We want to see concussions being reported. In fact, the next reporting of this information, concussions, they're going to spike tremendously. And what we hope to see then is that it come back down because now people are addressing them. They are being recognized. They're not being called *dings*. They're being called *concussions*, and there's a specific protocol to withhold athletes, because we know, if you're suffering from a concussion, you are at greater risk from not only a second concussion, but perhaps a more severe injury down the road. So, again, I wish I had a crystal ball, but the next reporting of this data is probably going to show that concussions are now much higher than previously reported because they're not occurring more, they're just being reported properly, and for us that is wonderful news.

[see Slide 18] The issue that we see, the big issue with concussions, is that, you know, first we weren't sure what they are. Now we know that it's the brain entering a metabolically-altered state. There's a neuro-metabolic vascular regulation system in the brain that's much more complicated than I can describe in the few moments that we have here, but it gets altered. When there's an injury, there's a change in the brain. And when that occurs, we know that there's a recovery period, and when that recovery period is taking place, the brain is vulnerable. That is *second impact syndrome*. Don't go back and play, and don't let yourself, don't let anyone, your kids, our athletes, don't let anybody be exposed to a second concussion when they're recovering from the first concussion. *Post-concussion syndrome*, that's kind of a—I don't want to say it's a vague definition, but anything that happens after a concussion is considered post-concussion syndrome, but you have a much greater chance for lingering dysfunction, if you suffer a second impact, a second concussion while

you're recovering from the first. So our approach is to try to minimize the exposures for athletes recovering from their first concussion.

[see Slide 19] Changes in practice. Things that changed dramatically from when I first came into this professional back in '92. We don't say things like *dings* anymore. A concussion is a concussion. Saying *dings* minimizes the fact that it's a true injury. Nobody has a *ding*, you know. It's no longer funny to see a guy run to the wrong sideline or the wrong huddle. I've had athletes in the high school setting who forgot plays that they took part in during a game, and they'll never remember those. That meant that that athlete got hit and his brain wasn't, you know—the tape recorder was playing but it wasn't recording the new information. It's much more serious if they forget, you know, who their parents are and what's going on before the game actually occurred. And that's kind of scary when you see that happen to an athlete. So, other changes. Grading severity. Grading severity of a concussion really can't take place until after it's gone. It's all about how long the symptoms persist. You can have what you would seem to be—seem to perceive as being the mildest concussion, but if it lingers for 6, 7, 8 weeks from just a headache, that's a severe—that's a much more serious injury than we first thought. Before it was all about what we saw immediately. Now, it's about how long it lingers. If you get knocked out—I've seen guys get knocked out, jump up—in fact, I had two intramural athletes when I was working at Penn State as the athletic trainer for intramurals, I had to have 2 athletes sign the document saying that they're not going to get in the ambulance, and it's not my fault. Like, "I think you should go to the ambulance. You were unconscious. You weren't talking for 5 minutes. You were asleep on the field." And they refused to go by ambulance because they felt fine. And I'm starting to think maybe there's something about addressing these things immediately, because I've also had kids who had headaches for 7 weeks, and at first I thought it was a very minor concussion. So all you have to do is watch and monitor and see what goes on. And there's definitely something to what we've learned over the years.

[continuing with Slide 19] How we test in recognized concussions has changed dramatically, and that's what Don [**Bishop**] is going to address and explain how we do it here. But now we have to ha—we know we—baseline testing is critical. You got to know where we started before you start

retesting people. Return to participation, let's call that *return to exposure for future injuries*. You can't let them go back until they're recovered. We base that upon the tests that we deliver to the best that we know how. There are some new imaging opportunities on the horizon. There's ways now to actually get scans of the brain to see if it's recovered.

[see Slide 20] And then finally enforcing rules. Now this next slide, not just rule changes but enforcing the rules. I watched the game this weekend, being from Pittsburg I won't tell you which game I watched, but a university player, who is their best defensive player, struck another team's quarterback with his helmet, and he was ejected. That wouldn't happen previously. This is new. If you watch games now, guys are getting ejected consistently. So what they're kind of saying, at least in the NCAA, is, "If you aren't going to protect yourself, then you can't play, because you're putting other people at risk." What we can't necessarily control are the line of scrimmage contacts that we see, and that's another topic for discussion, but the quote that came out that I love—I'm like, "Oh, perfect timing for this." The coach protested vehemently, but he said after the game, the officials told him they're following "the letter of the law," like, you know, they're calling penalties the way it was written. So this, again, isn't necessarily new. It's just being enforced much more strictly. And then it went on to say, "For the first time, the NCAA has mandated that players who target the helmet will be ejected." Hit the head, you're supposed to be ejected, and we're seeing that more and more. Don [**Bishop**], how many—there have been UNI players who've been ejected this year?

Bishop: Seems like it's 2.

Evans: At least 2, and, you know, that's good. That's protecting that player. "If you're not going to protect yourself, then you can't play this game," and that's kind of the message. "And you're going to hurt somebody else."

[see Slide 21] How we make decisions. We make evidence-based decisions. We have to base our decisions upon our experience, the values of the player who are our patients, the new information that's out there, and anything else we accumulate that would seem to indicate or allow us to provide the best case possible. What we constantly have to incorporate,

the current research, and we have to filter out the noise. For example, back in 2002, heading the soccer ball was the rave. Soccer was causing head injuries. There were head injuries related to soccer, but a couple pieces of research got put out there, and they were flawed, but it became "heading is bad." Soccer heading—"heading is bad." So then you had things like this [see Slide 22]. You know, "Why put shin protection above head protection?" And "Soccer is the only sport that encourages your child to use his or her head to hit the ball." And then you have images here with, you know, ladies in pigtails and these headbands. What they also found is that these headbands don't allow force to be deflected, so whatever hits that head with the soccer ball, the brain is going to absorb the force. So they actually were more dangerous. Kind of like the foam helmets that they were putting on football helmets, the foam packs. When you have 2 plastic objects that glance off of one another, that's very different from having a thick padded thing to absorb all the contact, so again we have to be very careful with what we do based upon what we hear and see. Probably more than 5 minutes, but I'm going to let Don [**Bishop**] take over.

Bishop: [passing out handout UNI Sport Concussion Policy and Concussion Fact Sheet; see Addendum 2] What we'll do is—we have handouts. Pass one of these around. This is our Concussion Policy. [see also Slide 23] This is actually our Policy here at UNI that we use for Sports Medicine and Athletic Training Services. And this is what we follow. Every year we do update these policies. Our Policies and Procedures Handbook for Athletic Training and Sports Medicine is, oh, close to 100 pages, and it covers everything possible, and concussions is part of it. And like Todd [Senator **Evans**] said, I've been here 13 years, and we've always had a Concussion Policy, and it's drastically changed within the last, oh, 5 years. So it's been quite customized. So, the key thing for us, with Athletic Training, is—with the Division of Athletic Training is we want to protect our athletes and provide the best quality healthcare possible. That's our #1 priority. And like Todd said, we don't report to the coaches. The High—the Chronicle of Higher Ed. had an article out this Fall talking about those athletic trainers getting released from their institutions because they butted heads, and we're pretty proud of the fact that that won't happen here. We feel a little bit safer, and that gives us that authority and that ability to really look at and take care of our athletes. The key thing, like Todd said—and I'll repeat a few things Todd said, and I'll try not to be too repetitious, so you can get

on with your meeting, but the key thing is we want to minimize and reduce that risk of Second Impact Syndrome. That's the key thing, so that's—that's the key thing that we're looking at.

[see Slide 24] So, the next slide says, "What is a concussion?" And Todd talked about it quite a bit. The reason I put this up here is there's a bunch of different definitions of what a concussion is. And it's amazing. Physicians, researchers, they can't come to a consensus on an exact definition of a concussion. So this is definitely something that's being researched heavily. The media is really involved with this now, especially with all the CTE that's coming out, all that research and information about CTE [Chronic Traumatic Encephalopathy]. This Fall PBS aired a documentary, *League of Denial*. There's a new book as well titled *League of Denial* that's out there. And then just recently two more NFL players have been said to have CTE symptoms or signs of having CTE. So, this is definitely the rage right now, and it's very out there in the media, and it's something that we're very, very aware of, and we're watching very closely as athletic trainers and very involved with that research as well. So, these are all different definitions that we use and look at, and the debate is out there. And there's also a debate whether a Traumatic Brain Injury, a TBI, is actually the same as a concussion. So there is a lot of differences and lot of debate going on still as we speak.

[see Slide 25] The Guidelines that we follow—basically the guidelines, it's changing rapidly like Todd said. Evidence-based is what we're looking at for our guidelines, and as you get into our protocol, and as I start talking about our protocol, this is all based upon these evidence-based guidelines and what we know from the research and following NCAA protocols a well. And Todd has already mentioned about the imaging. Once that concussion does happen, if you go through a CT or an MRI, what we're looking for there is really we're going to find if there's a brain bleed—if there's bleeding within the brain. Otherwise, that's not going to show us a concussion. If they do a functional MRI, which is very expensive and very rare to find, that would show us something, and they're just finding that that research out there about the functional MRI, but overall CTs, MRIs, EEGs, all those things will not tell us if somebody has a concussion. We can only base a concussion diagnosis by the symptoms. So UNI's Concussion Policy Definition that you'll see in our Policy [see Slide 26] is actually based upon the NCAA's

actual definition of a concussion, so that's what that's based upon. And I'm not going to read that to you. You can read that for yourself. The key thing about our definition and our Policy is itself is we expect to as far as all of our student-athletes they need to be educated and informed about concussions about the risk, what are the signs and symptoms of a concussion. They need to sign off on a form saying they've read the NCAA information about concussions, they're educated about it, and they understand that and they sign off on that. As athletic trainers, we also try to educate our coaching staff as well about concussions. We talk to them about concussions. We try to educate them as well, and once we do have a concussion, we meet with that particular coach or the coaching staff, and we talk about what's expected out of the timeframe about what the protocol's going to be for return to play and so forth. So we hope to educate both the coaches and the student-athletes very thoroughly as far as our Concussion Policy goes.

[see Slide 27] Now, Todd mentioned concussions it's not just the male thing. It's not just the football thing. It's a female thing as well. In fact, there're some studies that are actually showing that females do experience a higher number of concussions, and they take longer to recover from concussions. And that's something that's being researched. Genetics can be involved. Obviously, the size of the skull and the brain and the way that sits can possibly be involved, so there's lots of different things—the chemical make-up, all those things are being looked at. So female athletes definitely is there. Upon average 3-5% of all sport and recreation injuries that we see are from concussions, and Todd kind of mentioned about those numbers already. So those are all key things. Obviously, female soccer, that's a sport that we're very, very concerned about, and we do see some numbers. And I'll share with you some numbers as well, because I believe that was asked by somebody on the Faculty Senate as well.

[see Slide 28] So, the diagnosis and treatments have changed like I mentioned. The CTE, that's something that is very out there. Dr. Robert Cantue is one of the leading neurosurgeons that's very involved in CTE research. This is a quote from him that I came across, and I can't remember from where, but all concussions are not created equal, and we as athletic trainers realize that. All concussions are not created equal, but parents have become paranoid about concussions and connecting the dots

with CTE, and that's wrong. The dots really are about head trauma. So, in other words, he's at the point where we don't know if concussions do actually lead to CTE. Definitely there's some links to it. However, I know for instance Boston University is studying CTEs. They've—the last I knew, they had 46 NFL brains, and 45 of the 46 had CTE, so one did not. So, why didn't that 1? So they're trying to figure out why that is. So, this is still fairly early in that research and something we're paying very, very close attention to. And as we get into the updated technologies, it's something that we hope that we'll be able to find a point where once somebody does have a concussion, we'll be able to have tests to show us when they are getting to that CTE to prevents CTE, or if they've had a CTE, because that's something we definitely want to prevent and not have somebody go through.

[see Slide 29] So the NCAA Policy on Concussions. The NCAA says a university must have a concussion management plan, which we do here at UNI. It also states students—student-athletes exhibiting concussion signs must be removed from play and seek examination from medical personnel, which is what we do with our protocol. If they're diagnosed with a concussion, they cannot return to play that day, which is something we do here at UNI, of course, as well. Medical clearance is determined by a physician, which is also in our Policy as well. They must provide educational materials to the student-athletes, which is what we do here at UNI. And student-athletes must sign a statement, and we do that as well as already mentioned.

[see Slide 30] So, when a concussion occurs at UNI, what happens? Again, this is small print. The Policy is right in front of you, so what happens when they have a concussion here at UNI, or they exhibit signs of a concussion? And I'll just quickly go through what we do. When in doubt—we teach our staff, when in doubt, when there's any doubt at all, if they may have suffered a concussion, we are going to sit them out immediately. We are going to go through an evaluation process. The concussion assessment [see slide 31]—what we do is when they come in as new athletes here at UNI as transfers or freshmen, we go through a baseline testing. They do what we call an Impact Test. It's a computerized test that tests 7 different areas, cognitive to reaction time to tracking ability to memory. It's very extensive, and we do a baseline on all of our athletes. So, once they do

have a concussion, we can go back and compare their tests as well with that baseline. The day after the injury, so once they have had a concussion, we will do a sideline assessment test, take them out when we know that they've been concussed. We have them meet with our physicians. If we deem it's a serious nature where we want to get a CT or an MRI to make sure there is no bleeding involved, we'll do that as well. Once we release them, we'll release them with a home instruction sheet, make sure they're released with somebody at their apartment or their dormitory as well that's aware of what's going on. The next day after the injury, 24 hours after the injury, they'll come in, and we'll do a symptom check list, basically to see if they have any symptoms or not. If they do, then we'll keep track of that as well. Once the athlete becomes asymptomatic, they are showing no more signs or symptoms or a concussion, that's when we get into our Policy, and we will retest them on their impact testing, and then we will go through a progressive 5-step exertional testing protocol [see slide 32].

So once they are symptom-free, each of these steps are what take them through, and each of these steps cannot be performed—you can't go from one step to the 5th step on the same day. You have to have 24 hours in between each step. So our first step, we're going to take them through light aerobic exercise to increase their heart rate. So we'll have them bike or walk for 20-30 minutes to try to elevate their heart rate to see if it produces any symptoms. After they go through that session, we'll meet with them, go through their—it's basically a quick scat test, so to speak, and see if there's any symptoms. They'll come in the next day, and we'll check for symptoms again. If they have none, we go to moderate aerobic exercise. And basically this is 20-30 minutes of exercise at about 70-85% of their maximum heart rate. So, we get that heart rate going a little bit harder, exerting them, and we again check them for symptoms, and then we'll take them through another Impact Test. If they pass that step, 24 hours later we'll go to sport-specific training with no contact. So they'll go through a non-contact session of practice essentially. Again, once they've passed that session and they have no symptoms, we'll take them the next day to a full contact practice. We'll actually have them have contact to make sure that they do not get any symptoms. The whole time they're getting that contact, we're right by their side making sure everything's good. If they were to have symptoms at any point, they would start this whole process over, ok? So, it's very time-intensive. The last step is return

to normal competition, normal play. So, each athlete that has a concussion, this process—it depends on each situation. Sometimes it may take 6, 7 days. Sometimes it might take 80-90 days. We're not sure. Each concussion is different, and we treat them as such.

[see Slide 33] Some numbers for you, just so you're aware. In 2011-2012 for that school year, we had 16 total concussions here at UNI that were reported to us or diagnosed by our staff. Six were in football; 3 were in wrestling; 3 women's soccer; 1 in men's basketball, men's track, women's track, and volleyball. Last year, for last year we had 22 total. Now you notice the numbers went up? And that was interesting, but we feel like that number's going up: #1 athletes are starting to self-report; #2 we think they're more educated, and so we're going to start seeing these numbers like Todd mentioned. So football last year had 9, and on average—the scale, they were withheld from competition anywhere from 6 to I believe that says 86 days. So, again, wide variety. Each case is different.

Volleyball, we had 1 concussion last year, and it was non-sports related. A television hit her in the head. So, ok? But we still had to treat her, and she had to follow our protocol. So that took her about 6 days to return to play from that. Women's soccer had 4 concussions last year, ranging from 8 days to 210 days of being withheld from competition or activity. Men's basketball had 2 last year. Unfortunately, this was to the same individual. They were about 2 months apart, and on his second one, this particular athlete decided that the risk of permanent problems to his brain was too great. He is a great student, and he decided just to be a student-athle—a student. He's still associated with the team but not participating in sports. Women's basketball had 1 for 19 days that was withheld. Wrestling with 3, and they were 6-90 days. Softball 2, 8-10 days of being withheld.

So far this year, from 2013 our numbers are at 16, ok? And we're only in November. So, again, we feel like this number is probably going to go up again, and definitely our athletes are more educated. Football has had 9 to this point this year, and they have been withheld 6-16 days. One currently is undergoing the protocol, so we don't have his numbers as far as how long it's taken him to recover. Men's basketball has had 1, which was a 7-day withheld. Soccer had 2 this year. Swimming and diving has had 2. Women's basketball has had 1, and softball has had 1. So those are our

numbers for this year. So—and I'm not sure if that's surprising to you or not, but that's what we've seen and we're reporting.

[see Slide 34] Other time loss injuries at UNI. I believe somebody asked this question as well. Just to give you an idea of what we're seeing. My staff, we consider a time-loss injury something that lasts one month or longer that keeps them out of competition or activity. So, football had—this is from last year up to today. Last year, football had 25 individuals, 25 injuries that kept them out of at least 1 month of activity or longer. Wrestling had 13. Soccer had 7. Men's basketball 6. Women's basketball 9. Swimming and diving 2. Softball 2. Track and Field 3. Now, this is not counting concussions, ok? This is strictly taking concussions out of the equation, ok?

[see Slide 35] Now, what we're looking at is the different current developments that are out there. What can we do? What things are out there for us to do? Just 2 weeks ago, our—the NETA, International Athletic Trainers Association as well as the American Academy of Pediatrics came out with a recent study saying no helmets, no helmet brand can actually prevent or not basically limit a concussion. So we know that. So last year Virginia Tech came out with a rating of different helmets in prevention of concussion, and just so you know, here at UNI we use only the top 2, but after this study came out, we find that, well, it doesn't even matter anyway, but we wanted to be as proactive as possible and make sure we're using the best helmets as possible. Well, now we know, well, that probably didn't do us much. It also stated custom mouthguards has nothing with—cannot prevent concussions as well. And that was something we were doing as well, thinking that was there. So, we did—and it's funny; Todd and I did find a particular mouthguard that actually advertises, this is a little quote from their website, this particular mouthguard, that "it protects the teeth as well as helping reduce the shock that might affect concussions." So these companies are out there advertising that their product's going to prevent a concussion or limit your chance of concussion, and we're finding that's not true at all whatsoever. Other things that we're trying to do is improve the neuropsychological testing, which is the Impact Testing that we're using. There's other types of neuropsychological tests that are out there for getting baseline data, but that is all pretty new in being accepted and being researched as we talk.

[see Slide 36] And then the advances in imaging, and one of those advances in imaging is the functional MRI. This shows an uninjured brain and a concussed brain with the functional MRI. It just—the image is a little bit different. So these images and these things—this is the cutting edge that's coming out. Boston University is very, very involved with CTE research. UCLA is very, very involved as well, and we're really paying a close attention to what they're doing and what they're finding. So it's—it's quite interesting for us as allied health providers.

[see Slide 37] CTE, I'm not going to get into a lot of CTE, but this is what we're seeing a lot in the media right now, and just so you know, this is—go to Wikipedia's definition of what a CTE is. It's a form of encephalopathy. It's a degenerative disease. And typically what we've always thought is you can only find it from basically postmortem, dissecting the brain, taking slides, staining it, and studying those slides. And that's what they're doing at Boston University. Way back they used to call this dementia pugilistica after the boxers—I can't even say it. DP is what we always refer to it. We like to abbreviate everything. So, this is something that's—it's out there and that's a concern, and we're really looking and paying close attention to as far as what's going on with CTE.

[see Slide 38] That's all I've really got for you at this point, so we'll take questions, if you have any. Yes?

Nelson: The question I have is for a student-athlete who may have concussion symptoms, do you have the ability for them to get classroom accommodations, because some of it's going to affect their learning?

Bishop: That's a good point, and that was something I was going to mention in our Policy. We do notify the academic people with Athletics as well, when we feel like this is a situation where it is going to affect their ability #1 to go to class or their ability to do the work, so we do work with those people in academ—Athletics Academics, Stacia [**Greve**] and Kara **Park**.

Dannen: And do you want to follow-up on that [to woman in audience]?

Berger: Yeah, our academic people would just touch base with the student learning disability center [Disability Services] here on campus and work with them to notify the professors of any accommodations or the injury that had taken place. So you really hear from that office as opposed to Athletics.

Kidd: Sorry, but could you identify yourself for the Minutes?

Berger: Oh, I'm sorry. Jean **Berger** from Athletics [Sr. Associate Athletic Director].

Kidd: Thank you.

Evans: If I can just follow that up, you know, anybody that has—any student that has a concussion, I think—if they—this is a great opportunity to say, "Well, you know, from a classroom standpoint, just bring us a note from the doctor, because you need to go see a doctor. If you're having these issues, you need to get this assessed. This isn't, you know, something that we should ever be treating lightly. There is no such thing as a 'ding.'" And, you know, we always—I always believe a student if they come in saying they had some kind of head trauma, but I tell them, "Well, you need to get a note from a doctor, and we'll help you. Otherwise, you're—you have no healthcare intervention whatsoever." That's part of our concern.

Kidd: Senator **MacLin**.

MacLin: Given that multiple concussions are a serious issue, as you guys have noted, as student-athletes come in, is there any record or at least a request for information from a student about their high school concussions that they may have suffered?

Bishop: We take full medical histories on everything—orthopedically to concussions; so, yes, we do.

MacLin: Ok, so a second one, even if it was the first one here, if it was a second in their, you know, personal physical history, that would be noted and monitored.

Bishop: Correct. Yep, and we note that, and if it's a sport, say, that is not a high rate where we typically wouldn't necessarily—say, it's a golfer. We don't do Impact Testing on them for a baseline. We would baseline them automatically, if they had that history as well.

MacLin: Ok. Thank you.

Kidd: Senator **Peters**.

Peters: I had two questions. One is just a clarification. The Policy says that the trainer or a coach could pull them out of practice or pull them out of a game, if they have some indication that they may have had a head injury. Can a trainer do that? Can a trainer overrule a coach there? I mean, can

Bishop: Definitely so, and the reason it says "or a coach" is because we educate the coaches, and we want them to pull them out, because obviously if, you know, we have, say, 5 certified athletic trainers at a football practice, it's still hard to keep track of 100 guys on the field, and so if a coach were to happen to see something's not quite right with somebody, we expect that coach to pull them out, come and get one of us upper staff.

Peters: And then, so then the other question I had was that I came across a news report from last year where the, I think it was the Cedar Rapids *Gazette* had gotten ahold of data on injuries, concussions from I think it was maybe 11-12, and found that when they looked at all 3 Regents' Universities, there were twice as many concussions from practice as there were from games. And that's included in the numbers you reported. So, in other words, of the numbers you reported, about 2/3 of them happen in practice, about 1/3 of them happen in games. So, and that's understandable, because there's more contact hours, right? So, however many hours of practice for every hour of game time, that makes some sense. Is there anything—have—do you look at, I was going to say practice practices, but practice routines?

Bishop: Oh, definitely so.

Peters: To figure out ways to minimize contact during practice when they know the Ivy Leagues, for example with football they severely limit full contact practices now? Maybe there's situations in other sports?

Bishop: [agreeing vocally through **Peters**' last turn at talk] Sure. Yeah. Definitely so. We do give advice to our coaching staff. If we do see some trends or if we have some concerns of that nature, I totally agree. We don't dictate to the coaches how to practice, but we can give them advice in those situations, yeah.

Kidd: Senator **Strauss**.

Strauss: I had a question or two. First of all, I want to compliment the presentations. It comes across to me as a very professional approach to dealing with injuries, particularly this potentially deleterious one to our student-athletes. I just—I pulled a report down from Fox News. It's dated, November 6th, talking about a young man named **Kollmorgen**. Is that how you pronounce? He's quarterback for our team? Is that correct? And I know you have to be careful

Bishop: Yeah, we have to be very careful.

Strauss: when speaking about injuries, but the fact is this article says he's suffered his second concussion of the season, and based on what I've read—I've read some of this research, but I'm no means an expert—it suggests that even though we go about this very professionally and have all these protocols, it's not an exact science yet. I know we do the best we can. And it also suggests—it suggests that if we sent a player back too quickly predisposed to a second injury, so perhaps you can't speak to it, but it would suggest on the surface that either lightning struck twice or Mr. **Kollmorgen** was sent back too quickly.

Bishop: If—again, I went through the protocol. They have to go through all those protocols. They have to be asymptomatic, and we have to really get their symptoms and signs. If they've passed our protocol, that's all we can be based on.

Kidd: Yes, Senator **Nelson**.

Nelson: I have a concern about the student possibly underreporting their symptoms. They may have a strong desire to return to full play

Bishop: Correct.

Nelson: and might try to hide symptoms. Do you have strategies or ability to identify symptoms even when the student might be trying to hide them?

Bishop: Well, definitely. That's why we're at the practices, and that's why we're there on site. Definitely so. And that's why we try to educate the coaches as well, because we want to, and we educate all the student-athletes as well. So, there might be a situation where a student-athlete does have a concussion, and they're trying to hide it, and one of their teammates will say, "He's not acting right. There's something wrong." And they're grab us. In, fact, a couple of games ago for football, the team we were playing, they had an athlete knocked out on the field, and later on that athlete went back to play. This is the team we were playing, and our athletes actually said something to our staff, saying, "That's not right. They're not following our Policy. That kid has to have a concussion. How did they let him in?" So, we feel kind of good that we're seeing—we feel like we're educating our athletes better and better each year, and like I mentioned, that's why some of the numbers that we're concerned to see go up, because I think they are being educated. And it's very important.

Evans: And there's evidence, external research, all kind of evidence that there's the research evidence. You know, we're not research—you don't read a research article and then apply it to practice, so we have to filter and make clinical decisions, but concussion is notoriously been underreported for several reasons. A. They don't understand what they are—that's why, you know, we've tried to get rid of words like *ding* as well. Saying someone's got a *ding* indicates there's some minor form of a concussion that you can go back and play with but this other kind of concussion you can't, and athletes, you know, notoriously hide the fact that perhaps they have a concussion because they know they're going to be held out of practice now, so it's changing. We're seeing the way athletes perceive—at least our football players in talking to Travis Doobee (??) and seeing the increase in reporting of concussions makes us believe that they're getting

the message. The seriousness is—it's enough that there's no secret about the serious nature of concussions now. And just to go a step further, we can't comment on specific athletes here at the table, so I'd prefer if we do not comment and bring up names of specific athletes. That's not fair

Strauss: I'm just bringing up—it's on the public record, and I understand

Evans: We can't comment upon that, and we're not going to do that, so

Strauss: Can I?

Kidd: Yeah, Senator **Strauss**, go ahead.

Strauss: These—I understand in 2010 the NCAA requested that universities put together policies and procedures to inform student athletes of the dangers of concussions, and there's also several suits going on right now, some of them in mediation, against the NCAA for not properly educating students. So I have a quick question. This training sheet and that check-off sheet, in what context is that given to the athletes? Is it—is there a class that's held? Or is it, "Here, look over this and sign it" or something in between?

Bishop: It's typically given—it's always given right at the team meeting at the start of the year. So, they go through different things, different educational things, whether it's NCAA compliance to, you know, everything. And then we also go through that as well during physicals, so, yeah.

Strauss: So there's a concerted effort on your part to really talk to these kids about brain pathology and brain morphology and the impact of these injuries potentially long-term. For example, this young man whose name I just mentioned has had 2 concussions this season, from what I read, with these data if he were to go out and have a third concussion, he might face a lifetime of depression, perhaps long-term cognitive difficulties, and those are the types of things that are communicated to any player?

Bishop: Definitely, and once they're into our protocol as well, when we're meeting with them and they're going through their testing, we talk about those things with these athletes.

Strauss: Let me add one final question. Football is a big endeavor. It's got more student-athletes than perhaps any other sport. There's more money involved. There're more physical facilities involved, and you could even argue it's an industry. And the raw material for the industry are young student-athletes, and when I look at the total number of injuries, and not injuries per contact time but total number of injuries both concussion-wise and also physical-wise, this is for Mr. **Dannen**, how—how do we justify as a university endeavor that type of rate of injury for this public entertainment endeavor? What is the cost-benefit here? And, you know, how do we look ourselves in the mirror as an institution seeing what we're doing to these young people for our entertainment? That's my rhetorical question for you.

Dannen: Rhetorical question doesn't have an answer then, correct? [light laughter around]

Strauss: Perhaps it does.

Dannen: Football years ago reinvented itself for playing rules with a preponderance of knee injuries. The block below the waist was eliminated from the game and it virtually eliminated—didn't eliminate knee injuries, but the numbers went way, way, way, way down. Football is in a position now, I think, from a public mandate, that it needs to reinvent itself, and as Todd mentioned, from a playing rule standpoint, it's started to do that. Certainly from awareness standpoint, we're doing things that—they said I've been here 6 years, we're doing things that 6 years ago we never considered doing, and so it has to reinvent itself.

Kidd: Yeah, do you have a question back there?

Thompson: I'm Frank **Thompson**. I'm from the Finance Department. In 1988 I did a research grant for the Epilepsy Foundation, and so in the course of doing that particular piece of research I did come in contact with the cause of a lot of what might be called *convulsive disorders* in terms of brain trauma. Now, what is interesting about brain trauma is that repeated brain trauma can lead to long-term problems. We certainly see that with

respect to the NFL players who after many years of playing in the NFL maybe 20 to 25 years later then they wind up with significant problems.

The difficulty that we face, I think, at the University is how you go about identifying an injury in terms of its significance and how many a person has had. In the literature, when we look at seizures, there's what's called an *absence seizure*. It's one in which an individual for a period of maybe a second, maybe 20 seconds, maybe 30 seconds, maybe 15 seconds is somehow not able to be cognizant of their surroundings. Now, when you're talking about these protocols, those—these—none of these protocols take into account an absence seizure. They talk about specific major concussions, which would be major brain trauma, but there's nothing in here that relates to that type of trauma which could occur repeatedly in the course of a game or spring training, which later might, 20 years or 30 years, produce dementia or produce some of the problems that we're seeing today.

One of the problems I think that the University faces, the other side of what I do, is risk management. And risk management refers then to the types of things that relate to negligence, and if it's found that the University is negligent in terms of a standard of care—and we're talking about athletes here—that could be found maybe 10, 20 years down the road that we didn't do enough to protect players, then that becomes a huge liability risk to the University, and certainly we're starting to see that with respect to Penn State. It would be interesting to know whether the University has, in fact, gone to an insurance company to see whether an insurance company would, in fact, provide them with insurance company—with insurance company's coverage against this kind of liability risk. I suspect that the answer would be that they wouldn't, because of a large risk exposure. But it's important, I think, to look at under-reported concussions and nothing in here would deal with that under-reported concussion when we're talking about absence seizures. So, I'd be interested in knowing what you've done in terms of that issue.

Evans: You want me to take that? I would love to talk with you after this meeting and get an update, because the concept of an absence seizure is not something I'm familiar with, but I'd love to get more information, and if that's something we could put in place.

Thompson: Well, have you talked to any neurologists about these protocols and all this?

Evans: Yes, absolutely neurologists are involved in these protocols. [**Dannen** and **Bishop** saying "yes", too.]

Thompson: Well, they would be familiar with these, yes.

Evans: And they're not suggesting that we choose this emphasis.

Bishop: And they haven't suggested that this is—a neurologist has the Policy, so

Evans: But that doesn't mean we can't do it. We're always looking for more information also.

Strauss: I have one final question.

Kidd: Senator **Terlip** was first, please.

Terlip: Yeah, I know as you talked about the one basketball player who decided to remove himself after suffering a couple of concussions, do we have any policies for the players' own good? What is someone has repeated concussions, and they're cleared to play? Do we have a policy that says "that's not a good idea" and we take them out? Or do we have any policy across the board for that kind of situation?

Bishop: If they're cleared to play, they're cleared to play. I mean, that's all we can do.

Terlip: But we know from the evidence you've presented, I guess my question is, if they've had 3 or 4 concussions, we still don't do anything about that?

Bishop: No, they're educated about that process, and that's something that—the decision they have to make for themselves. So, for instance, the

basketball player, he was educated because he had a history of concussion in high school, and because of that

Terlip: I guess that

Bishop: During that process, he was educated about the long-term possibilities, what's going to—what can happen. And that's where he made that decision for himself.

Terlip: But as the University, we choose not to let players play for all sorts of reasons. Why don't we have a policy like that?

Evans: I'll take a shot at that one. I don't like to see "the one, the two, three you're done" because then it doesn't address the actual severity of the specific concussion. What about the guy—the athlete, girl or guy—that has one severe concussion that has a difficult time recovering, and they have a 3-month, you know, symptom period? That, in my opinion, is worse than 2 or 3 minor concussions from which they recover quickly. So, saying there's a specific number, and putting any number next to it for anything where there are people who want to return to their participation status, becomes problematic. But, so it

Terlip: Well, but maybe a number is not the right way to do it. I'm just asking, do we have any kind of policy which, in fact, and we know some of these—sometimes students don't make the right long-term decisions? What do we do as an institution is my question?

Dannen: Well, I realize—from my standpoint, because there has been not just the basketball player but in—for other injuries, students have been counseled, "Here is—here are our options for you." However, for any individual in our Department, including coaches, to contradict the medical advice I think is a very dangerous path for us to go down, either direction. If the medical advice is, "You should not play," I certainly don't want a coach saying, "You should." If the medical advice is "You can play," it's equally inappropriate for a coach to counter that medical advice. Now, there are kids who have been cleared to play, concussions included, that the coaches decided not to play.

Terlip: Yeah, I don't doubt that.

Dannen: As a—but, yeah, yeah

Terlip: But I'm asking if we had a policy.

Dannen: Yeah, but that's been on a case-by-case basis and not—not mandated, because frankly I don't know who the mandate would come from, if—if the medical professional has cleared a student to play.

Terlip: Well, some of the stuff I read suggested if there's no enforcement or no penalty, they're going to keep playing or wanting to play.

Evans: Well, it's almost a catch-22 for us. The imaging coming down the road, so to speak, that's slowly arriving, that could be part of the answer as in if there's an issue you need to at least have this imaging, the functional MRI, something to convince us that your brain is recovered. But, again, if they are medically cleared and that is our criteria—if we can say somebody can't go back because of this, then once they meet that criteria, they should be allowed to return. If it's—we possibly could put something in place, but we don't have that right now because we don't know how to do that. We don't know how to say, "Ok, yeah, you have to stop. You had 3 concussions, but your brain's ok. You had 1 really long concussion, but you're ok to return, but because you had 3 small ones, you're not." So it's—it's challenging.

Terlip: Yeah, I don't know what the rules would be, but I—yeah, so that's fine.

Kidd: Thanks. Senator **Peters**.

Peters: There are others who had their hands up who I meant.

Kidd: Oh, do they? Ok. I'm sorry.

Peters: I'll pass.

Jepsen: My name is Lisa **Jepsen**. I'm the NCAA Faculty Representative in the Department of Economics. I am not a policy-in-place per se, but I did want to speak to some of the issues that you've raised about the severity of injuries and perhaps some of the influences that could be detrimental to a young person's long-term future, so I did want to let Faculty Senate know that if there is a situation in which a student athlete's academics are potentially being compromised by an injury, I am going to be involved. And so, again, I'm not a policy, but I'm a resource. I meet with that student, and I focus on academics. And so I let them know about the resources that are available to them academically, and I also just try to be someone with whom they can discuss their future. One—for example, one of the things I will ask them is, "Outside of athletics, what are your career goals? Where do you see yourself in 5 years?" So I try to speak to them and try to focus at least for our discussion on their long-term academics and how to get them to achieve those things, and I really hope that I can provide an outside resource. Since I do not report to the Department of Athletics, I can be an outside resource. And Troy and Don will tell you I can be a forceful outside resource in encouraging them to focus on their academics. So, we do have some safeguards in place, and I hope that I am one of those safeguards.

Kidd: Thank you. Senator **Peters**.

Peters: I'm good.

Female voice: Marilyn [Senator **Shaw**] had something.

Kidd: Oh, I'm sorry. Go ahead.

Shaw: Would we ever recommend if a student had a multiplicity of injuries that they not participate, that they choose to do something different than athletics?

Bishop: Definitely so. Definitely so. And it does happen.

Evans: It's not always head injuries. You know, the more likely scenarios are, you know, knee injuries that—and a lot of times, without getting specific, looking at my colleague down the table here, it's ath—it's athletes

bringing injuries that they've had elsewhere that come here, and you know, they want to continue to play. They're cleared, but they're given advice. And, I gotta say this, you know, as we're talking about these athletes, I wish we could put names on them, because they're people. They're individuals that Don [**Bishop**]and Dawn [**Jacobson**] interact with on a daily basis, and they're not going to do anything to let, you know, their—their kids go out and hurt themselves, if they don't feel they're ready. On one hand, you know, we're bound by what we have from the scientific standpoint to support what we do and protect them, but, you know, we can't play both sides of the field, so to speak, or both sides of the coin. But, you know, there's people connected to that, and they take that very, very seriously.

Kidd: Ok. Senator **Peters**.

Peters: A student, whether it's a head injury or another injury, if they stop playing, do we still honor their scholarships?

Bishop: Yeah, there's something—if they were to end their career, so to speak, is that your question?

Peters: Yeah.

Bishop: Yeah, there's something that's called "being medically disqualified." And basically they'll stay on scholarship.

Peters: Thank you.

Kidd: Senator **Strauss**.

Strauss: As a result of *League of Denial* and all the press stories, there've been some players coming out, like Tony Dorsett, saying, "I'm experiencing these difficulties." My final question is do we have any evidence whatsoever—we've been playing football here at UNI for quite a long time—of our former student athletes expressing concern about cognitive difficulties, depression, or erratic behavior? Do we have any evidence of from—you know, looking out longitudinally?

[some joke about a coach, laughter all around]

Strauss: In all seriousness….

Dannen: To my office, none.

Strauss: Is it prudent to try to ascertain that? Or is that a stone left unturned better left unturned? I know that's a hard question.

Dannen: Yeah.

Evans: Can I take a shot at that one? I mean, why then just—well, first of all, why just the athletes that participated? But then you could say, "Well, we're the ones putting them out there. We're providing this environment." A lot of—well, there has to be some kind of baseline to go back to, and we don't have that baseline data. You know, it's relatively new. The tests have changed. And so we have to compare the baseline information that they left with, and then you have to factor in drug use, alcohol use, motor vehicle accidents. There's so many different things over time.

Strauss: Yeah, lifestyle issues.

Evans: You know, I think the one thing—and after seeing this, and Don and I have talked about this, doing just a closer job talking with them when they're leaving. You know, there's so many issues about when their athletic career ends, about the calories they take in. I mean, they're not doing what they used to. And football players who weigh a couple, 300 pounds, they can eat a lot while they're participating, but it's not so good to carry that kind of weight later. So, I think we can improve how we counsel. You know, "If you have these issues, this is what you should do. You know, this might not be normal. It happens to everybody or it can happen to anybody, but if you see these things, this is—these are steps you should take," and at the very least, you know, kind of adjust our exit counseling to match up with what we know currently, and you know, that's definitely an area where I think we could improve and set a trend, if not be the trend on it.

Edginton: We have far more students participating in our intramural program, campus recreation programs, than the intercollegiate athletic programs. Do we have any comparable statistics on

Evans: We do. We have graduate students who are working with the club teams and the intramural—you know, the recreational teams. And, you know, it goes back to what I mentioned before. I saw so many concussions working with intramural athletes, and it was flag/touch football. There were no helmets. And we have GA's working now with our UNI rec. sports, and I went—I thought of the idea late. I went to them. Hopefully, they are going to be able to provide their recordkeeping and how many injured they see. But they, you know, anytime there's sports, yes. They see injuries, and they've seen concussions, and in the strangest possible ways they've seen concussions when they don't expect them to occur.

Kidd: All right. Are there any more questions on the concussion aspect of this?

Strauss: Thank you.

Kidd: Yeah, thank you.

Dannen: Thank you for your questions and interest. That's—makes us happy that there's such interest in this topic, so it helps support what we're trying to do.

Kidd: Just to open it up, are there any questions on any other issues for the Athletic Director? Yes.

Thompson: Yeah, I did—I continued as you probably saw to track expenditures for the Athletic Program. And so I have brought along today the Fiscal Year End as of June 30th, 2013, Report [see Addendum 3]. Now these are audited statements that means then that the CPA wound up at the end of the year looking at what the income was in the Athletic Program, and we had revenues of $7,923,751. That was the revenue. And then over on Page 2, I'll wait until people [have passed the handout around]—probably every other one. I did 15, and I'll probably run out. But we had revenues then of $7, 923,751 against expenditures of, on the 2nd page, $12,399,463.

The difference between revenue of about $8 million versus expenditures of a little over $12,000 provided a loss in Athletics of <$4,475,711>. The General Education Funding support at the end of the year was $4,198,513, which appears to be no different really than the previous year, but there is a major change with respect to this statement and last year's statement. I want to call your attention to the bottom of this second page where it says "Revenue Over (Under) Expenditures and Transfers" and they've got a number here of $249,654, and then they add that to "Total Net Position" as of July 1st, which was the beginning of last year of $698,351, which means that at the end of the year in July the Athletic Budget ended with a Total Net Position of negative <$948,006.04>. So that means then that this Athletic Budget is carrying over into the next Fiscal Year a deficit of about <$950,000>, up from the previous year of around <$690,000>. Thank you.

Kidd: [to **Dannen**] Would you like to respond to this?

Dannen: No.

Kidd: Is there any other questions?

Dannen: There are a few things now, if—ok, I know we ran long on concussions and very much appreciate the chance to delve into that to the depth that we did. There are three or four things that I wanted to point out just by way of information that I normally give you.

First, Lisa [**Jepsen**], as Faculty Representative, prepares a report for Faculty Senate. She chairs the Intercollegiate Athletic Advisor Committee [*sic* Intercollegiate Faculty Advisory Council], which basically is to faculty governance—day-to-day faculty governance into the Athletic Department. I think Forrest [Senator **Dolgener**] is this group's [Faulty Senate] representative on that Board. Lisa's report I think went to Jerry late last week, so I don't know if it made it to everybody, but it's a very comprehensive report, both from a financial from an academic standpoint.

There are just two or three things in it that I wanted to highlight if you haven't already seen them. One is grade point average. There are 433 student-athletes in the Department this year. That number varies a handful year to year. Grade point average, the two semesters last year were 3.06

and 3.05. That compared to 3.00 and 3.04. For the last 9 consecutive semesters, the student-athlete's grade point averages have met or exceeded the student body's. I bring that up only because it—those 9 semesters coincide with a Policy that was implemented, and it's unique to UNI versus our peers. And it mandates—basically a Mandatory Class Attendance Policy. If a student misses for an unexcused absence a third time in any one class, they become subject to suspensions from practice and ultimately suspensions from competition, just for failing to attend class. That Policy in and of itself has bumped our grade points a full tenth—almost 2 tenths. And if you look anecdotally at the kids who have the worst grade points and struggle the most in our Department, we don't have any 3.5 kids who miss class. We have a lot of 2.5 kids and below that run afoul of this Policy. So it's really helped not so much on the top end, but it's brought our bottom end up significantly.

The other thing I would say—the RAI [Regent Admission Index], an important message our coaches take on the road to recruit kids every year is finding kids that belong at the institution not that belong in your athletic program or your team. In theory, if they do not participate one day, will they graduate from UNI? We start with—by looking at the RAI and its special admits. Anything under a 245 is a special admit. In Athletics, 8% of the kids come in under 245. The general study body is at 13%. If those 2 numbers ever invert, I need to be called out on it, and our coaches will be called out on it. We have for at least 6 years now been under the student special admit rate. That's an important factor, and at schools like—that have been in trouble academically institutionally, their special admits have been exceeding the student body, and that is a red flag. And Lisa [**Jepsen**] tracks that very closely.

And I would also point out our retention rate. The student body retention rate is 83%, 82.9. Athletics is 97.8. So we've done a good job with retention.

I want to break down that 433 number for you very quickly. This year 286 are in-state kids; 147 are out-of-state kids. Of the 433, 23% are ethnic minorities. I talk about the role Athletics has in the diversity of campus.

That is significantly heavier, of course, than the rest of campus, that rate of 23%.

I always like to talk about the misnomer that if you're a student-athlete, you're on scholarship. Of the 433, 103 are on a full scholarship. Full scholarship is room, board, tuition, and fees and books. So 103 out of the 433. One hundred and ninety-eight get a piece, anywhere from some get books, anywhere up to 80 or 90% of a scholarship. And 132 of the 433 are full walk-ons.

I like to look at, because it's easy for me—I know the General Fund Transfer is a significant question every year. The 4198 [$4,198,000], and it's budgeted the same number this year, is the low water mark since Fiscal 03. It's not going to zero tomorrow, but it's stepped down from 5.5 [$5,500,000] the day I got here. The tuition dollars that are returned to the institution—and this has always been a number I've looked at—when we dropped baseball, there were 33 kids that played baseball here. Thirty of them transferred. Nine kids of the 33 were getting aid, and so I've always assumed that if something went away, 90% of those kids go somewhere else to fulfill their opportunity to participate.

The tuition dollars that are paid—I'll break it down in a couple of different ways. This is just tuition. This is not room, board, fees, books. Of those 433, some have full, some have partials, the Athletic Department itself pays $2.5 million back to the institution in tuition. The long-term financial model that I've been trying to get the Department moving toward, which includes some transfer to student fees, gets the General Fund number down under that $2.5 [million]. In essence, I'm trying to look at it as a net zero. What I really want to get to is the point where take that 90% of the $2.5 [million], if Athletics went away and we used the 90%, 90% of the $2.5 [million] is close to $2.2 [million]. So, if we get to $2.2 [million], that probably is a true reflection of a net zero. Institutional subsidy versus a payback to the institution in the form of tuition back into the General Fund. So, Athletics pays $2.5 [million], and I'm giving you round numbers here. The partial—the kids are getting a piece—they themselves are paying about $700,000 in tuition. In those walk-ons, walk-ons 132, 112 of them are in-state kids, 22 are outs. The total tuition those kids are paying is about $1.2 [million]. So, of the 433, are paying $4.5 million re—from a source, whether it be

institu—whether it be the Department, whether it be their own source of funds, are paying $4.5 [million] to the institution in tuition. So as we look at the subsidy that we receive, I always like to look at the amount of money that's being returned to the General Fund in one form or another.

I guess the last—the last from a financial piece—in 2011, going back to 2010, of course, the Board of Regents approved a model that President **Allen** took which capped Athletics spending at 2.4% of the General Fund by Fiscal '15. This year, assuming everything goes according to Hoyle, and there are no reversions later in the year, and given what our Budget expectations are, we'll meet the 2.4% this year, a year ahead of schedule. That plan anticipated then following the 2.4% wherever that went with the General Fund amount of the Department. In 2011, a year after that happened, we proposed to the students a plan to start transferring—transferring basically the subsidy of the institution of student fees plus the General Fund support. While not increasing that, we proposed that we start increasing the fees, decreasing the institutional subsidy at the same time. Again, no change in the total net, but basically changing the source of that. We're proposing that because frankly about 19—18, 19 years ago, everybody else in the country, at our level, made that move, and it would have been at the crisis before the crisis in higher education funding that that—UNI did not make that move. So, we're trying to step in that direction. The last 2 years, that's been approved. That's—we have at least in the plan that was originally proposed, we have 6 more years of that to be voted on on an annual basis. The key take-away is any growth in the Budget from Athletics is not coming from institutional allocation, whether that allocation is student fee or whether that allocation is General Fund right now. Any growth is coming from whatever we can generate.

When we generate through donors, and frankly 2 years ago I think we were #1 in the country in the amount of donor dollars that came in to Athletics, at our level, the FCS level. I look at the MAC [Mid-American Conference] schools a lot because in some ways their aspirational from an athletics standpoint. Each of the last 4 years we've generated more donor dollars than every MAC school but one. So we're generating pretty good money from our donors. We get a lot of support. Ticket sales—we have a lot of room to grow, from a ticket sales standpoint. Marketing, our marketing revenues are in the top 5 percentile in the country for a lev—a school of

our level. So we're generating from that standpoint. We have to sell more tickets, and we have to engage our donors. That's the future of funding for the Athletic Department. That is what our staff is spending about 75% of every day doing right now.

We, when I got here the institution contributed 60% of our Operating Budget. Today the institution—and the Operating Budget frankly isn't that much different today than it was when I got here. Today the institution is contributing 46% of it. It's baby steps, and I understand it. And I understand I'm going to catch grief every place I turn because of that General Fund subsidy. If I could wave a magic wand and take the $21 million from the Big 10 network, I'd do it in a heartbeat. Our league right now is looking at re-doing its television deal. The league, the net is $100,000 split 10 ways. The new television deal is not going to be a financial panacea for us. We—and I'm—I'll use this analogy—probably have used it every year that I've been here. In the pond there are 3 ducks. One duck's an Iowa duck. One duck's an Iowa State duck. And one duck's a UNI duck. Our job is to make—and I think it is our job institutionally—is to make our duck look just like the Iowa duck and the Iowa State duck, when under the water the ducks are remarkably different. And sometimes it's easy to compare the 3 ducks because they look the same on the outside. We don't look the same under the water. The Iowa duck kind is pretty graceful right now. The Iowa State duck does like this [hands paddling]. And our duck is going like this [hand flapping frantically] [light laughter around]. But our goal is to continue to make the ducks look as good as they can on top of the water, regardless of what we're doing underneath.

Last thing from a financial standpoint, and I appreciate all the time, the item of the day, I suppose, from an attention standpoint is the scoreboard. I want to explain to you the thought process. I want to explain the history. One of the things I learned from—I think the second day I was in the job, [Senator] Chris **Edginton** pulled me into his office, and he said, "You have no chance on this campus unless you become entrepreneurial." And so I've kind of taken that as a—I don't know if it's a goal, a guideline, or a mandate. The Blackhawk Gaming Association, the opportunity to apply for grants from the Gaming Association we've taken advantage of. This is now the 4th time. We run the grant—any grant request we run through Christi **Twait**, Grants and Contracts or whatever that office is called now

[Sponsored Programs]. We run it through. And if the University sends it on, it sends it on. The 3 grants we've had have been for new turf for the Dome. They've been for a ticket office on the south side of the McLeod and an elevator to make the east side of the McLeod handicap accessible, and they've been for a point-of-sale system, basically a card swipe system for the concessions. The 4th one is for the scoreboard. Those are 3 capital projects, now a 4th capital project, that meet one of the primary criterias, which is there is an economic development component that we're able to sell as a part of the grant, an economic development to the community. We had a safety issue with the turf. There's no question the turf grant helped the high school football play-offs signing a contract extension to being here. It's no question it brought the Shrine Bowl to town. Those are the things that we take back to the Gaming Association. The video board and the scoreboards in the UNI-Dome were installed in 1986 at a cost of $400,000, all State money at the time, by the way--$400,000 for those boards. Every week we replace scoreboards, and every week there's about 10 of them—or light bulbs, and every week there's about 10 of them burnt out, because the system is failing. We're going to have to replace those boards whether we like it or not and an opportunity (1) to look for a way to subsidize that and (2) how do we generate more money? If we're going to spend money, we need to generate more money. And the opportunity of the day to generate money are the video boards. So that's the thought process and why we asked for the grant. Blackhawk Gaming Association will consider it. If the grant's accepted, given already donor commitments, I would anticipate the boards will cost, from the General Fund, all of zero. Now, let's go back to '86 when we put those boards in. It was $400,000 of the General Fund, so we're trying to do what I think we're being tasked to do, is find other ways to get our job done outside of asking the institution to support it.

So, with that, I appreciate the time.

Male voice: We're about over?

Kidd: Quick question?

Gorton: And I have to go as well. Mr. **Dannen**, I really appreciate your comments, and I'm sure after all this time when talking with faculty about

the Athletics Budget, you understand that the concern that the Senate or that the United Faculty and other faculty have about this isn't because we're opposed to sports or athletics. I always say, "I'm a Browns fan. You know, you gotta be a real sports fan to be a Browns fan nowadays." [light laughter around] So—and before that I was an Astros fan. [more laughter]

But here there are real concerns, and I know that you appreciate those, and you know it is true that the portion of money going to Athletics from the General Education Fund is in decline, and that's good, right? But on the other hand, you know, money from student activity fees are actually increasing, according to the financial reports. And really more concern than that in some ways is financial from the Foundation. Part of the reason why—part of the reason why I would suppose that the General Education Fund number was going down, the drain from the General Education Fund is going down, is because the amount from the Foundation has gone up $600,000 in 2011 to 2012. So that's money from the Foundation that's not available to support the University in other ways, I would suggest. So—and the final thing I would say, and, again, not being against sports or being against athletics, but, you know, from 2003 to 2012 Athletics salaries increased 41%. Faculty salaries increase half that, less than half that, 18%. And so, you know, we're in a period of time at the University where we're cutting programs, where we're losing faculty jobs, and, you know, as a University we have to be very focused, very concerned about matching our resources to our real priorities, and the real priorities for a University are education, teaching, research, and not Athletics. So, I guess you've already answered one of my questions, because the question I was going to ask was, "Do you anticipate any structural change to the Athletic Program at UNI that would be less of a resource drain on the institution?" But really my sense of your answer is the answer to that would be "no."

Dannen: Well, I think that the one wild card right now in college athletics is governance. The NCAA is reinventing itself, much like I think there's questions on our campus, much like there's questions any—governance. So I think the—the whole Division 1 model, I look for it to change in the next 12-18 months. I don't know what that has anything to do with the answer to your question, but I do

Gorton: Well, it does in a way.

Dannen: I do think that's a—that's an issue out there. They—the Foundation money, frankly, we've generated a lot of money into the endowment that's paying off a piece of chunk—a chunk of change that didn't exist 5 years ago, and those are gifts that are earmarked to Athletics. The other mandate that I've had from both Presidents is that any increase in any salary in Athletics that is above the institutional-mandated salaries en masse be generated pub—or privately. And so any—any significant coaching salary changes that we've had, which basically are to get coaches to market, we've had to generate that through private sources. And so that—I would tell you, and this is not my area of expertise, in the Foundation, but money that is donated to Athletics is not necessarily money that would have been donated to anything else. It may have been, but it's a matter of we are beating on doors, and we are asking for people to support it privately. So we do not have to support it publically.

Kidd: All right, and thank you very much. More discussion can happen after the meeting.

ADJOURNMENT (5:05 p.m.)

Kidd: I'm sorry I've ran over time. And is there a motion to adjourn.

O'Kane: So move.

Kidd: Second?

Cooley: Second.

Kidd: All right. [kidding among everyone about saying "aye"]

Submitted by,

Sherry Nuss
Administrative Assistant/Transcriptionist
UNI Faculty Senate

Next meeting:
Date: 12/02/2013
Curris Business Building 319
3:30 p.m.

Follows are 3 addenda to these Minutes.

Addendum 1 of 3

2013 Faculty Senate Concussion Power Point Presentation

Slide 1

Slide 2

Our Purpose:

- Explain Health care delivery for UNI athletes
- Focus on Concussions:
  - Facts
  - Frequency and comparisons to other injuries
  - Our policies
  - Future considerations
- Answer your questions

(all in 10 -15 minutes)

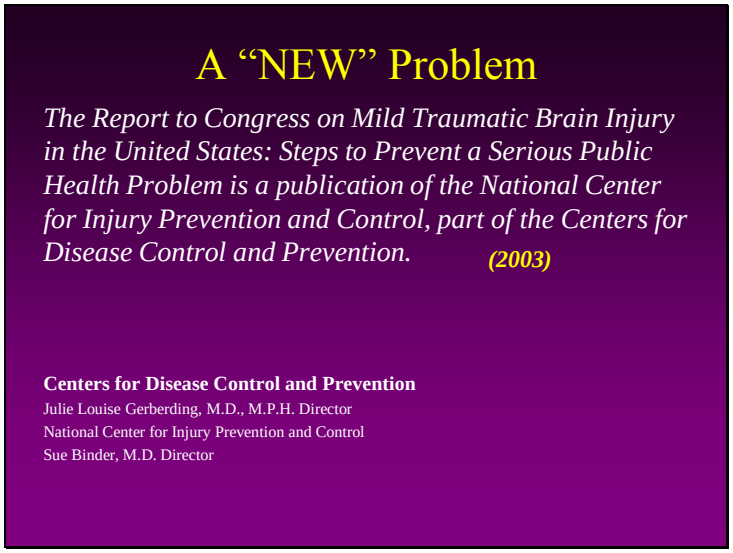
Slide 3

UNI Athletic Training & Sports Medicine Services

- Health care for UNI athletes is provided directly by the UNI Athletic Training Staff
  - Members of the Division of Athletic Training
    - School of HPELS
      - College of Education

Slide 4

Slide 5


A "NEW" Problem
The Report to Congress on Mild Traumatic Brain Injury in the United States: Steps to Prevent a Serious Public Health Problem is a publication of the National Center for Injury Prevention and Control, part of the Centers for Disease Control and Prevention. (2003)
Centers for Disease Control and Prevention
Julie Louise Gerberding, M.D., M.P.H. Director
National Center for Injury Prevention and Control
Sue Binder, M.D. Director

Slide 6

National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion (2004)

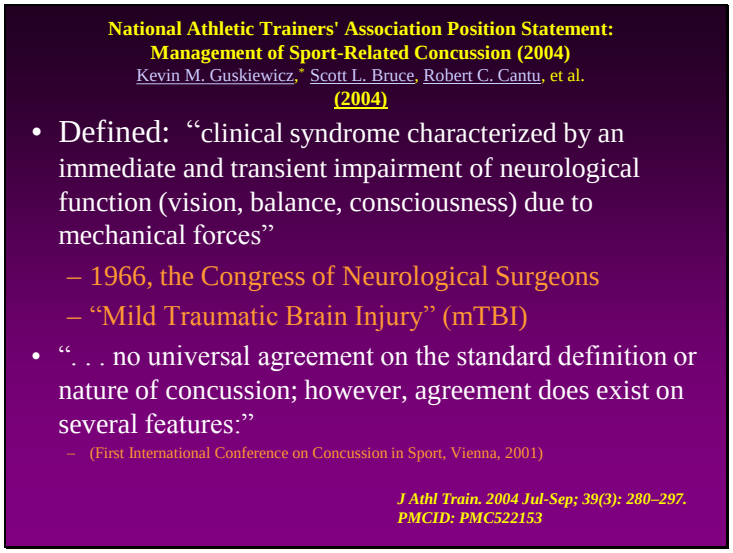
Kevin M. Guskiewicz,* Scott L. Bruce, Robert C. Cantu, et al.

(2004)

- " . . . the research-based recommendations made for football between 1976 and 1980 resulted in a significant reduction in the incidence of fatalities and nonfatal catastrophic injuries. In **1968, 36** brain and cervical spine fatalities occurred in high school and collegiate football. The number had dropped to **zero in 1990** and has averaged about 5 per year since then. This decrease was attributed to a variety of factors . . . :"
  1. *Rule changes, which have outlawed spearing and butt blocking
  2. Player education . . . consequences of not following the rules
  3. *Implementation of equipment standards
  4. Availability of alternative assessment techniques
  5. Marked reduction in physical contact time during practice sessions
  6. A heightened awareness among clinicians of the dangers involved in returning an athlete to competition too early
  7. The athlete's awareness of the risks associated with concussion."

J Athl Train. 2004 Jul-Sep; 39(3): 280–297.
PMCID: PMC522153

Slide 7


National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion (2004)
Kevin M. Guskiewicz,* Scott L. Bruce, Robert C. Cantu, et al.
(2004)
• Defined: "clinical syndrome characterized by an immediate and transient impairment of neurological function (vision, balance, consciousness) due to mechanical forces"
– 1966, the Congress of Neurological Surgeons
– "Mild Traumatic Brain Injury" (mTBI)
• ". . . no universal agreement on the standard definition or nature of concussion; however, agreement does exist on several features:"
– (First International Conference on Concussion in Sport, Vienna, 2001)
J Athl Train. 2004 Jul-Sep; 39(3): 280–297.
PMCID: PMC522153

Slide 8

National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion (2004)

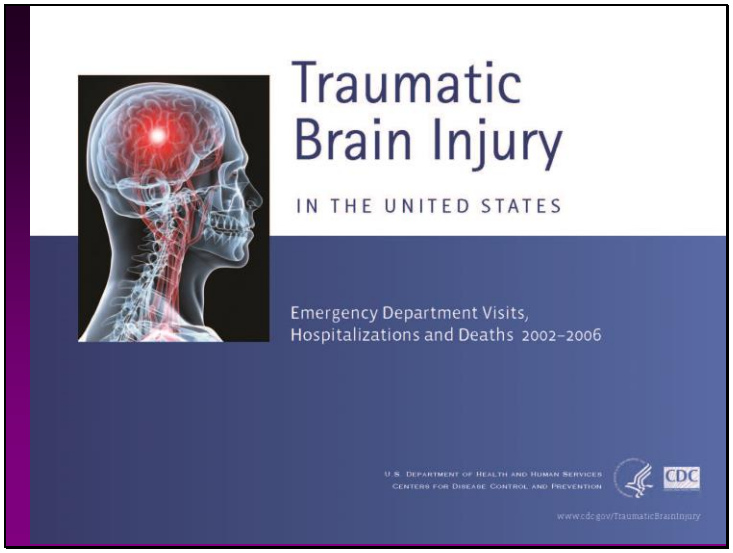
Kevin M. Guskiewicz,* Scott L. Bruce, Robert C. Cantu, et al.

(2004)

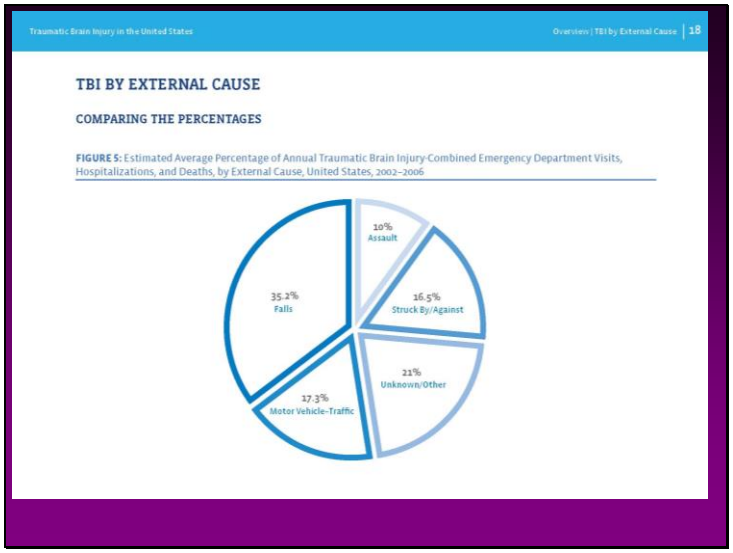
- May be caused by a direct blow elsewhere on the body
- Concussion may cause an immediate and short-lived impairment
- *Concussion may cause neuropathologic changes;
  - however, symptoms largely reflect a functional disturbance rather than a structural injury.
- Concussion may cause a gradient of clinical syndromes that may or may not involve LOC.
- *Concussion is most often associated with normal results on conventional neuroimaging studies.

J Athl Train. 2004 Jul-Sep; 39(3): 280–297.
PMCID: PMC522153

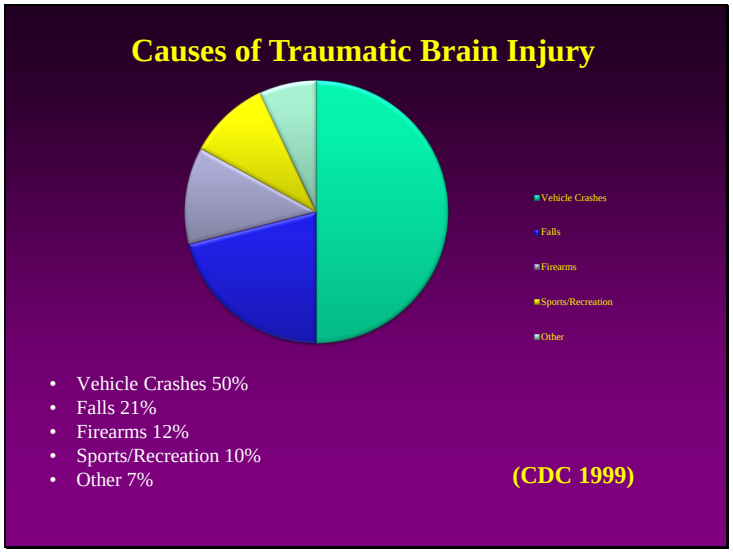
Slide 9


Traumatic
Brain Injury
IN THE UNITED STATES
Emergency Department Visits,
Hospitalizations and Deaths 2002–2006
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
CDC
www.cdc.gov/TraumaticBrainInjury

Slide 10


Traumatic Brain Injury in the United States
Overview | TBI by External Cause | 18
TBI BY EXTERNAL CAUSE
COMPARING THE PERCENTAGES
FIGURE 5: Estimated Average Percentage of Annual Traumatic Brain Injury-Combined Emergency Department Visits, Hospitalizations, and Deaths, by External Cause, United States, 2002–2006
10%
Assault
16.5%
Struck By/Against
21%
Unknown/Other
17.3%
Motor Vehicle-Traffic
35.2%
Falls

Slide 11


Causes of Traumatic Brain Injury
Vehicle Crashes
Falls
Firearms
Sports/Recreation
Other
• Vehicle Crashes 50%
• Falls 21%
• Firearms 12%
• Sports/Recreation 10%
• Other 7%
(CDC 1999)

Slide 12

JOURNAL OF ATHLETIC TRAINING

Official Publication of the National Athletic Trainers' Association, Inc — Volume 42, Number 2, April–June 2007

NCAA Special Issue

Section Editor: Jennifer M. Hootman, PhD, ATC, FACSM
Guest Editors: Tracey Covassin, PhD, ATC; Todd A. Evans, PhD, ATC

Introduction

National Collegiate Athletic Association Injury Surveillance System Commentaries: Introduction and Methods ... 173

Original Research

Descriptive Epidemiology of Collegiate Men's Baseball Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 183

Descriptive Epidemiology of Collegiate Men's Basketball Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 194

Descriptive Epidemiology of Collegiate Women's Basketball Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 202

Descriptive Epidemiology of Collegiate Women's Field Hockey Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2002–2003 ... 211

Descriptive Epidemiology of Collegiate Men's Football Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 221

Descriptive Epidemiology of Collegiate Women's Gymnastics Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 234

Descriptive Epidemiology of Collegiate Men's Ice Hockey Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 241

Descriptive Epidemiology of Collegiate Women's Ice Hockey Injuries: National Collegiate Athletic Association Injury Surveillance System, 2000–2001 Through 2003–2004 ... 249

Descriptive Epidemiology of Collegiate Men's Lacrosse Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 255

Contents Continued

Descriptive Epidemiology of Collegiate Women's Lacrosse Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 262

Descriptive Epidemiology of Collegiate Men's Soccer Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2002–2003 ... 270

Descriptive Epidemiology of Collegiate Women's Soccer Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2002–2003 ... 278

Descriptive Epidemiology of Collegiate Women's Softball Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 286

Descriptive Epidemiology of Collegiate Women's Volleyball Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 295

Descriptive Epidemiology of Collegiate Men's Wrestling Injuries: National Collegiate Athletic Association Injury Surveillance System, 1988–1989 Through 2003–2004 ... 303

Summary

Epidemiology of Collegiate Injuries for 15 Sports: Summary and Recommendations for Injury Prevention Initiatives ... 311

Departments

Editorial: Celebrating 25 Years of Making Sports Safer ... 170

Editorial: Public Health Surveillance and the Prevention of Injuries in Sports: What Gets Measured Gets Done ... 171

CEU Quiz Notice ... 169

2006 Outstanding Manuscript Awards ... 169

Call for Abstracts ... Cover 3

Authors' Guide ... 320

168 Volume 42 • Number 2 • June 2007

Slide 13

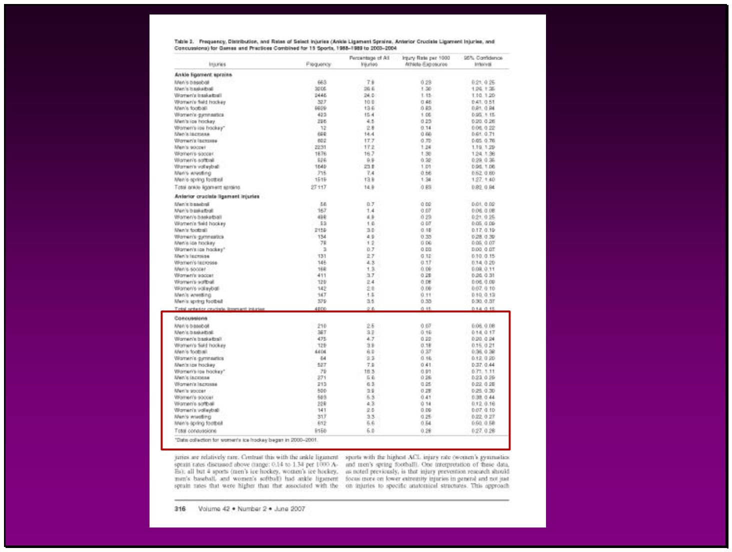


Table 3. Frequency, Distribution, and Rates of Select Injuries (Ankle Ligament Sprains, Anterior Cruciate Ligament Injuries, and Concussions) for Games and Practices Combined for 15 Sports, 1988–1989 to 2003–2004

Injuries	Frequency	Percentage of All Injuries	Injury Rate per 1000 Athlete-Exposures	95% Confidence Interval
Ankle ligament sprains				
Men's baseball	663	7.8	0.23	0.21, 0.25
Men's basketball	3205	26.6	1.30	1.26, 1.35
Women's basketball	2446	24.0	1.15	1.10, 1.20
Women's field hockey	327	10.0	0.46	0.41, 0.51
Men's football	9629	13.6	0.83	0.81, 0.84
Women's gymnastics	423	15.4	1.05	0.95, 1.15
Men's ice hockey	298	4.5	0.23	0.20, 0.26
Women's ice hockey*	12	2.8	0.14	0.06, 0.22
Men's lacrosse	698	14.4	0.66	0.61, 0.71
Women's lacrosse	602	17.7	0.70	0.65, 0.76
Men's soccer	2231	17.2	1.24	1.19, 1.29
Women's soccer	1876	16.7	1.30	1.24, 1.36
Women's softball	526	9.9	0.32	0.29, 0.36
Women's volleyball	1649	23.8	1.01	0.96, 1.06
Men's wrestling	715	7.4	0.56	0.52, 0.60
Men's spring football	1519	13.9	1.34	1.27, 1.40
Total ankle ligament sprains	27 117	14.9	0.83	0.82, 0.84
Anterior cruciate ligament injuries				
Men's baseball	56	0.7	0.02	0.01, 0.02
Men's basketball	167	1.4	0.07	0.06, 0.08
Women's basketball	498	4.8	0.23	0.21, 0.25
Women's field hockey	53	1.6	0.07	0.05, 0.09
Men's football	2159	3.0	0.18	0.17, 0.19
Women's gymnastics	134	4.9	0.33	0.28, 0.39
Men's ice hockey	78	1.2	0.06	0.05, 0.07
Women's ice hockey*	3	0.7	0.03	0.00, 0.07
Men's lacrosse	131	2.7	0.12	0.10, 0.15
Women's lacrosse	145	4.3	0.17	0.14, 0.20
Men's soccer	168	1.3	0.09	0.08, 0.11
Women's soccer	411	3.7	0.28	0.26, 0.31
Women's softball	129	2.4	0.08	0.06, 0.09
Women's volleyball	142	2.0	0.09	0.07, 0.10
Men's wrestling	147	1.5	0.11	0.10, 0.13
Men's spring football	379	3.5	0.33	0.30, 0.37
Total anterior cruciate ligament injuries	4800	2.6	0.15	0.14, 0.15
Concussions				
Men's baseball	210	2.5	0.07	0.06, 0.08
Men's basketball	367	3.2	0.16	0.14, 0.17
Women's basketball	475	4.7	0.22	0.20, 0.24
Women's field hockey	129	3.9	0.18	0.15, 0.21
Men's football	4404	6.0	0.37	0.36, 0.38
Women's gymnastics	64	2.3	0.16	0.12, 0.20
Men's ice hockey	527	7.9	0.41	0.37, 0.44
Women's ice hockey*	79	18.3	0.91	0.71, 1.11
Men's lacrosse	271	5.6	0.26	0.23, 0.29
Women's lacrosse	213	6.3	0.25	0.22, 0.28
Men's soccer	500	3.9	0.28	0.25, 0.30
Women's soccer	593	5.3	0.41	0.38, 0.44
Women's softball	228	4.3	0.14	0.12, 0.16
Women's volleyball	141	2.0	0.09	0.07, 0.10
Men's wrestling	317	3.3	0.25	0.22, 0.27
Men's spring football	612	5.6	0.54	0.50, 0.58
Total concussions	9150	5.0	0.28	0.27, 0.28

*Data collection for women's ice hockey began in 2000–2001.

juries are relatively rare. Contrast this with the ankle ligament sprain rates discussed above (range: 0.14 to 1.34 per 1000 A-Es); all but 4 sports (men's ice hockey, women's ice hockey, men's baseball, and women's softball) had ankle ligament sprain rates that were higher than that associated with the sports with the highest ACL injury rate (women's gymnastics and men's spring football). One interpretation of these data, as noted previously, is that injury prevention research should focus more on lower extremity injuries in general and not just on injuries to specific anatomical structures. This approach

Slide 14

Table 2. Frequency, Distribution, and Rates of Select Injuries (Ankle Ligament Sprains, Anterior Cruciate Ligament Injuries, and Concussions) for Games and Practices Combined for 15 Sports, 1988–1989 to 2003–2004

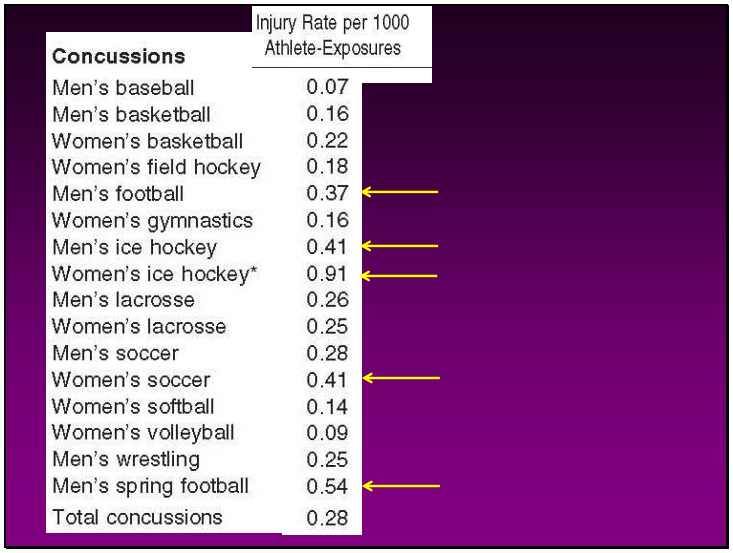
Injuries	Frequency	Percentage of All Injuries	Injury Rate per 1000 Athlete-Exposures	95% Confidence Interval
Concussions				
Men's baseball	210	2.5	0.07	0.06, 0.08
Men's basketball	387	3.2	0.16	0.14, 0.17
Women's basketball	475	4.7	0.22	0.20, 0.24
Women's field hockey	129	3.9	0.18	0.15, 0.21
Men's football	4404	6.0	0.37	0.36, 0.38
Women's gymnastics	64	2.3	0.16	0.12, 0.20
Men's ice hockey	527	7.9	0.41	0.37, 0.44
Women's ice hockey*	79	18.3	0.91	0.71, 1.11
Men's lacrosse	271	5.6	0.26	0.23, 0.29
Women's lacrosse	213	6.3	0.25	0.22, 0.28
Men's soccer	500	3.9	0.28	0.25, 0.30
Women's soccer	593	5.3	0.41	0.38, 0.44
Women's softball	228	4.3	0.14	0.12, 0.16
Women's volleyball	141	2.0	0.09	0.07, 0.10
Men's wrestling	317	3.3	0.25	0.22, 0.27
Men's spring football	612	5.6	0.54	0.50, 0.58
Total concussions	9150	5.0	0.28	0.27, 0.28

*Data collection for women's ice hockey began in 2000–2001.

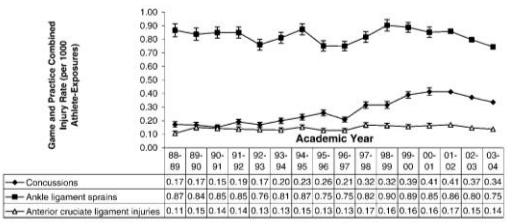
Slide 15

Injuries	Frequency	Percentage of All Injuries	Injury Rate per 1000 Athlete-Exposures
Concussions			
Men's baseball	210	2.5	0.07
Men's basketball	387	3.2	0.16
Women's basketball	475	4.7	0.22
Women's field hockey	129	3.9	0.18
Men's football	4404	6.0	0.37
Women's gymnastics	64	2.3	0.16
Men's ice hockey	527	7.9	0.41
Women's ice hockey*	79	18.3	0.91
Men's lacrosse	271	5.6	0.26
Women's lacrosse	213	6.3	0.25
Men's soccer	500	3.9	0.28
Women's soccer	593	5.3	0.41
Women's softball	228	4.3	0.14
Women's volleyball	141	2.0	0.09
Men's wrestling	317	3.3	0.25
Men's spring football	612	5.6	0.54
Total concussions	9150	5.0	0.28

Slide 16


Concussions
Injury Rate per 1000 Athlete-Exposures
Men's baseball 0.07
Men's basketball 0.16
Women's basketball 0.22
Women's field hockey 0.18
Men's football 0.37
Women's gymnastics 0.16
Men's ice hockey 0.41
Women's ice hockey* 0.91
Men's lacrosse 0.26
Women's lacrosse 0.25
Men's soccer 0.28
Women's soccer 0.41
Women's softball 0.14
Women's volleyball 0.09
Men's wrestling 0.25
Men's spring football 0.54
Total concussions 0.28

Slide 17



	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04
Concussions	0.17	0.17	0.15	0.19	0.17	0.20	0.23	0.26	0.21	0.32	0.32	0.39	0.41	0.41	0.37	0.34
Ankle ligament sprains	0.87	0.84	0.85	0.85	0.76	0.81	0.87	0.75	0.75	0.82	0.90	0.89	0.85	0.86	0.80	0.75
Anterior cruciate ligament injuries	0.11	0.15	0.14	0.14	0.13	0.13	0.15	0.13	0.13	0.17	0.16	0.16	0.16	0.17	0.15	0.14

Figure 4. Injury rates for select conditions (concussions, ankle ligament sprains, and anterior cruciate ligament injuries) for games and practices combined for 15 sports, National Collegiate Athletic Association, 1988–1989 through 2003–2004. Ankle ligament sprains time trend $P = .58$. Average annual change = −0.1% (95% confidence interval = −0.8, 0.5). Anterior cruciate ligament (ACL) injury time trend $P = .02$. Average annual change = 1.3% (95% confidence interval = 0.2, 2.4). Concussion time trend $P < .01$. Average annual change = 7.0% (95% confidence interval = 5.4, 8.7).

Slide 18

Concussion & the Brain's Response to Trauma

- This "metabolically altered state" is thought to be the associated with :
- Second Impact Syndrome (SIS): suffering a second concussion while still suffering from the dysfunction of previous concussion
- Postconcussion Syndrome: extended cerebral dysfunction, more common with SIS

Slide 19

Concussion: Changes in Practice

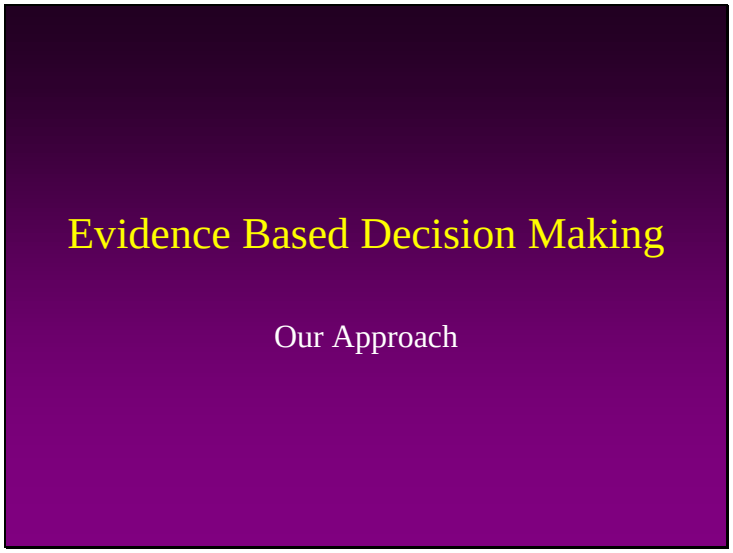
- Education
  - Eliminating “dings” from vocabulary
- Grading Severity: Time matters most!
- Testing/Recognition
  - Baseline testing is critical
  - Return to participation (exposure)
  - New imaging on the horizon
- Rule changes & **Enforcement**: (next slide)

Slide 20

This past weekend:

- "[university 1] received a break in the second quarter when defensive end [player 1], "[university 2's] best pass rusher, was ejected for a helmet-to-helmet hit on [university 1's] quarterback, who remained in the game . . . "
  - [university 2] coach protested vehemently, but he said after the game that the officials told him they were merely following "the letter of the law."
  - "For the first time, the NCAA has mandated that players who target the helmet will be ejected. "
- Read more: http://triblive.com/sports/college/pitt/5018085-74/pitt-dame-notre#ixzz2kLAWjLZZ

Slide 21



Slide 22

Padded Soccer Headbands

- "Why Put Shin Protection Above Head Protection?"
- "Soccer is the only sport that encourages your child to use his or her head to hit the ball." (www.soccerdocs.com/)

Slide 23


UNI Sports Concussion Policy
• The UNI Athletic Training Division is committed to providing quality health care services for all student-athletes.
• Proactive in concussion assessment & management
• Minimize risks and potential long-term impact
• 2nd impact syndrome
• Post-concussion syndrome
• Continuing athletic career following multiple concussions

Slide 24

What is a concussion?

- "Complex Pathophysiological process affecting the brain induced by traumatic forces." International symposium on concussion in sports Zurich
- "Trauma-induced alteration in mental status that may or may not involve a loss of consciousness." American Academy of Neurology
- "A traumatically induced transient disturbance of brain function and involves a complex pathophysiological process. Concussion is a subset of mild traumatic brain injury (MTBI) which is generally self-limited and at the less-severe end of the brain injury spectrum." American Medical Society for Sports Medicine
- There is a debate whether or not a TBI is the same as a concussion.
  - Concussions involve disruption of brain function rather than structural damage.
  - CT Scans and MRI tests show no damage.
  - Neurometabolic changes occur with a concussion.

Slide 25

The Guidelines

- No widely accepted evidence-based guidelines for return
- At least 14 different concussion scales have been published since 1973:
  - Widely disparate criteria for:
    - Grading severity
    - Resuming athletic activity
- Physicians and sports medicine researchers do not even agree on the definition of "concussion."
- Previous attempts to objectify the diagnosis of concussion or post-concussive syndrome using multiple concussion scales, computed tomography (CT), magnetic resonance imaging (MRI), and EEG have been unsuccessful.

Slide 26

UNI Concussion Policy Definition

- (NCAA) A ***Concussion*** occurs when there is direct or indirect insult to the brain itself. As a result of this trauma, transient impairment of mental functions such as memory, balance/equilibrium and vision may occur.
  - A concussion will not necessarily result in a loss of consciousness and, therefore, all suspected head injuries should be taken seriously.
  - All UNI coaches and teammates can be helpful in identifying those who may potentially have a concussion, because a concussed athlete may not be aware of their condition or may potentially be trying to hide the injury to stay in a game or practice.

Slide 27

Concussions: Not Just Male; Not Just Football

- In 1988, the safety and related risk aspect of soccer participation was also raised by the American Academy of Pediatrics:
  - Soccer should be viewed as a contact or collision sport.
  - Similar concussion rates existed for football and soccer (Dyment et al., 1988).
- Concussion rates for other sports similar to football
- On average 3-5% of all sport & recreational injuries are head injuries.
- Recent data suggest female athletes sustain more concussions than their male counterparts in the same sports (soccer, hockey, etc.)
  - American Medical Society for Sports Medicine, 2013
- Female athletes:
  - Experience or report a higher number and severity of symptoms
  - Longer duration of recovery than male athletes in several studies (American Medical Society for Sports Medicine, 2013).

Slide 28

How Diagnosis and Treatment Have Changed

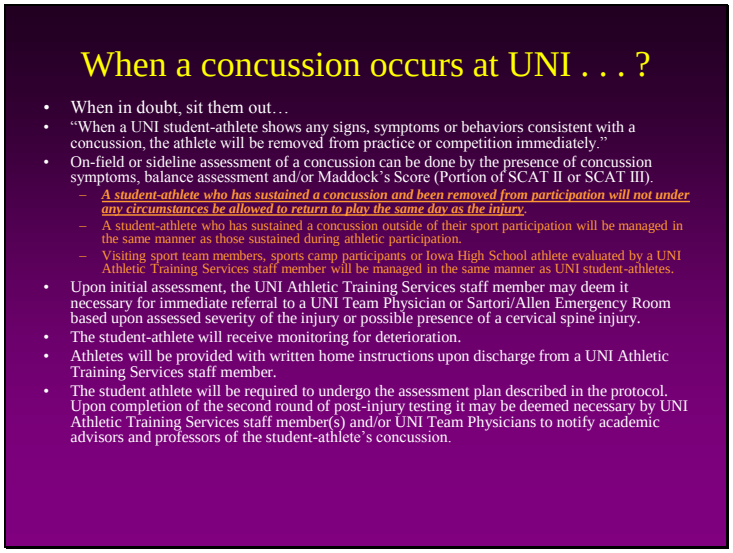
- We are much better today than where we were before
- "All concussions are not created equal. Parents have become paranoid about concussions and connecting the dots with C.T.E., and that's wrong. The dots are really about total head trauma." *Dr. Robert Cantu*
  - **Chronic traumatic encephalopathy (CTE)**

Slide 29

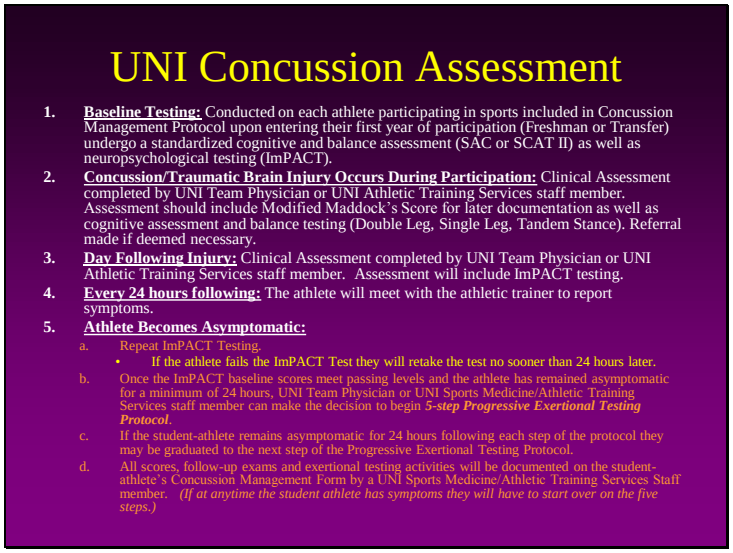
NCAA Policy on Concussions

1. MUST have a concussion management plan
2. Student Athletes exhibiting signs:
   - Will be removed
   - Examined by medical professional
3. If diagnosed, will not return that day
4. Medical clearance determined by a physician
5. Must provide educational material
6. Student athletes must sign a statement:
   - They have been informed/educated
   - Accepting responsibility for reporting their injuries

Slide 30


When a concussion occurs at UNI . . . ?
When in doubt, sit them out…
"When a UNI student-athlete shows any signs, symptoms or behaviors consistent with a concussion, the athlete will be removed from practice or competition immediately."
On-field or sideline assessment of a concussion can be done by the presence of concussion symptoms, balance assessment and/or Maddock's Score (Portion of SCAT II or SCAT III).
A student-athlete who has sustained a concussion and been removed from participation will not under any circumstances be allowed to return to play the same day as the injury.
A student-athlete who has sustained a concussion outside of their sport participation will be managed in the same manner as those sustained during athletic participation.
Visiting sport team members, sports camp participants or Iowa High School athlete evaluated by a UNI Athletic Training Services staff member will be managed in the same manner as UNI student-athletes.
Upon initial assessment, the UNI Athletic Training Services staff member may deem it necessary for immediate referral to a UNI Team Physician or Sartori/Allen Emergency Room based upon assessed severity of the injury or possible presence of a cervical spine injury.
The student-athlete will receive monitoring for deterioration.
Athletes will be provided with written home instructions upon discharge from a UNI Athletic Training Services staff member.
The student athlete will be required to undergo the assessment plan described in the protocol. Upon completion of the second round of post-injury testing it may be deemed necessary by UNI Athletic Training Services staff member(s) and/or UNI Team Physicians to notify academic advisors and professors of the student-athlete's concussion.

Slide 31


UNI Concussion Assessment
1. Baseline Testing: Conducted on each athlete participating in sports included in Concussion Management Protocol upon entering their first year of participation (Freshman or Transfer) undergo a standardized cognitive and balance assessment (SAC or SCAT II) as well as neuropsychological testing (ImPACT).
2. Concussion/Traumatic Brain Injury Occurs During Participation: Clinical Assessment completed by UNI Team Physician or UNI Athletic Training Services staff member. Assessment should include Modified Maddock's Score for later documentation as well as cognitive assessment and balance testing (Double Leg, Single Leg, Tandem Stance). Referral made if deemed necessary.
3. Day Following Injury: Clinical Assessment completed by UNI Team Physician or UNI Athletic Training Services staff member. Assessment will include ImPACT testing.
4. Every 24 hours following: The athlete will meet with the athletic trainer to report symptoms.
5. Athlete Becomes Asymptomatic:
a. Repeat ImPACT Testing.
• If the athlete fails the ImPACT Test they will retake the test no sooner than 24 hours later.
b. Once the ImPACT baseline scores meet passing levels and the athlete has remained asymptomatic for a minimum of 24 hours, UNI Team Physician or UNI Sports Medicine/Athletic Training Services staff member can make the decision to begin 5-step Progressive Exertional Testing Protocol.
c. If the student-athlete remains asymptomatic for 24 hours following each step of the protocol they may be graduated to the next step of the Progressive Exertional Testing Protocol.
d. All scores, follow-up exams and exertional testing activities will be documented on the student-athlete's Concussion Management Form by a UNI Sports Medicine/Athletic Training Services Staff member. (If at anytime the student athlete has symptoms they will have to start over on the five steps.)

Slide 32

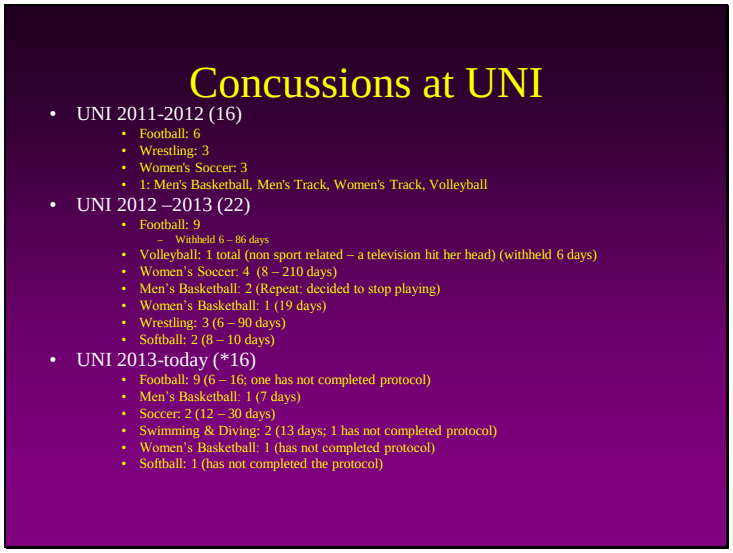
5-Step Exertional Testing Protocol:

- **Will NOT be completed on the same day**
  - Steps must take place **a minimum of 24 hours apart**.

- ***Exertion Step 1: Light aerobic exercise to increase heart rate***
  - Walking or stationary cycling keeping intensity <70% estimated maximum predicted heart rate for 20-30 minutes. No resistance training.
- ***Exertion Step 2: Moderate aerobic exercise followed by exertional ImPact Test following activity***
  - Jogging and running for 20-30 minutes at 70-85% estimated maximum predicted heart rate.
  - Complete exertional ImPACT Test following activity.
- ***Exertion Step 3: Non-contact sport specific training drills***
  - Regular non-contact training drills; aerobic activity at maximum capacity including sprints.
  - May start progressive resistance training.
  - Symptoms will be monitored during and after session.
- ***Exertion Step 4: Full contact practice***
  - Return to full contact practice without limitation(s).
  - Symptoms to be monitored during and after practice session.
- ***Exertion Step 5: Return to normal/full competition***
  - No athlete will return to full activity or competition until they are asymptomatic in limited/non-contact practice, non-limited/full contact practice and cleared by UNI Team Physician or designee (UNI Sports Medicine/Athletic Training Services Staff member).

  - *Based upon recommendations from the International Confernene on Concussion in Sport, Zurich Switzerland 2012 and 2013*

Slide 33


Concussions at UNI
UNI 2011-2012 (16)
Football: 6
Wrestling: 3
Women's Soccer: 3
1: Men's Basketball, Men's Track, Women's Track, Volleyball
UNI 2012 –2013 (22)
Football: 9
Withheld 6 – 86 days
Volleyball: 1 total (non sport related – a television hit her head) (withheld 6 days)
Women's Soccer: 4 (8 – 210 days)
Men's Basketball: 2 (Repeat: decided to stop playing)
Women's Basketball: 1 (19 days)
Wrestling: 3 (6 – 90 days)
Softball: 2 (8 – 10 days)
UNI 2013-today (*16)
Football: 9 (6 – 16; one has not completed protocol)
Men's Basketball: 1 (7 days)
Soccer: 2 (12 – 30 days)
Swimming & Diving: 2 (13 days; 1 has not completed protocol)
Women's Basketball: 1 (has not completed protocol)
Softball: 1 (has not completed the protocol)

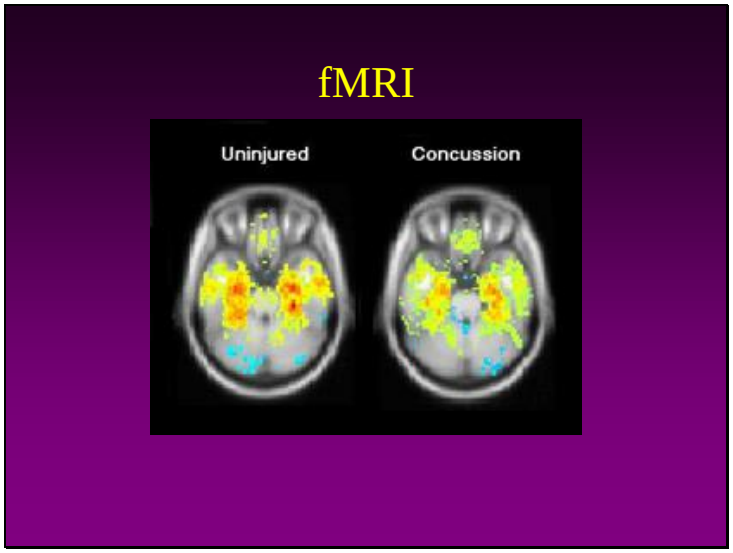
Slide 34


Other time loss injuries at UNI 2012-today
(time loss = 1 month or more)
Football: 25
Ankle: 1
Hand/Finger Fracture: 1
Shoulder Labrum Tear: 4
Knee Meniscus Tear: 3
Knee ACL Rupture: 3
Knee Patellar Dislocation: 1
Knee Patellar Tendon Rupture: 1
Disc Herniation: 1
Orbital Fracture: 1
Hip Musculature Rupture: 1
Foot Fracture/Ligamentous Rupture: 4 (1 non sport related)
Other 4
Wrestling: 13
Knee ACL Rupture: 1
Knee Meniscus: 1
Knee MCL Grade 2+: 3
Shoulder Instability Surgical: 1
Shoulder Labrum Tear: 2
Shoulder Rotator Cuff Tear: 1
Other 4
Soccer: 7
Knee ACL Rupture: 2
Hamstring Strain/Rupture: 1
Ankle: 1
Other 3
Men's Basketball: 6
Hamstring Strain/Rupture: 1
Hand/Finger Fracture: 1
Knee ACL Rupture: 1
Other 3
Women's Basketball: 9
Knee requiring surgery: 7
Ankle requiring surgery: 2
Swimming & Diving: 2
Stroke: 1
Low Back Disc: Herniation: 1
Softball: 2
Low Back: 1
Knee: 1
Track & Field: 3
Foot stress fracture: 2
Hamstring severe strain: 3
Other 2

Current "Developments"

- Equipment does not prevent concussions:
  - Helmets
    - **American Academy of Pediatrics: "No helmet brand can save football players from concussion risk." (October 2013)**
  - *Custom mouthguards
  - *"protecting teeth as well as helping to reduce shock that might affect concussions"*
- Improving neuropsychological testing
- Cumulative impact and CTE
  - Risk "subconcussive" cumulative trauma
- Advances in imaging

Slide 36



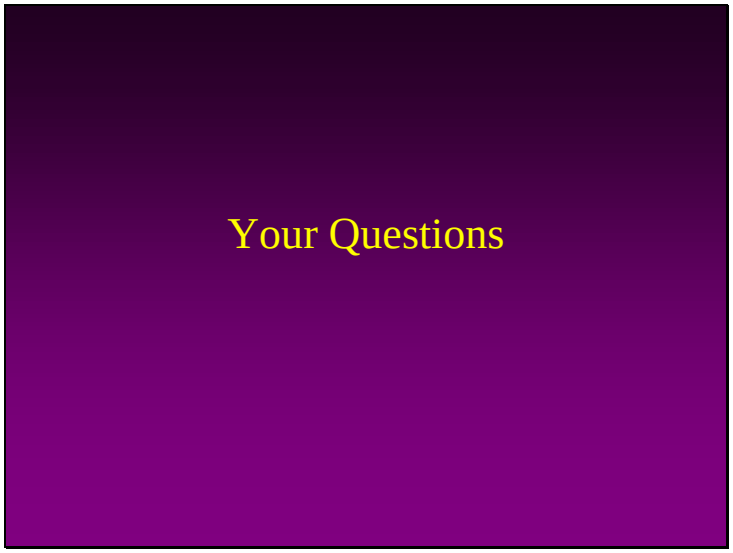
Slide 37

Chronic traumatic encephalopathy (CTE)

- "Form of encephalopathy
  - Progressive degenerative disease
  - **Which can only be definitively diagnosed *postmortem*
  - In individuals with a history of multiple concussions and other forms of head injury.
  - The disease was previously called dementia pugilistica (DP), as it was initially found in those with a history of boxing."

WikipediA, November 11, 2013

Slide 38



Addendum 2 of 3

University of Northern Iowa Sport Concussion Policy:

Guidelines for Assessment, Management and Return to Athletic Participation

The following policy and procedures on baseline testing, subsequent assessment and management of concussions as well as return to play guidelines have been developed in accordance with the University of Northern Iowa Sports Medicine/Athletic Training Services Department Mission Statement to provide quality healthcare services and assure the well-being of each student-athlete at UNI.

PURPOSE:

The University of Northern Iowa Sports Medicine/Athletic Training Services Department recognizes that sport induced concussions pose a significant health risk for those student-athletes participating in athletics at UNI. With this in mind, the UNI Sports Medicine/Athletic Training Services Department has implemented policies and procedures to assess and identify those student-athletes who have suffered a concussion. The Department also recognizes that baseline neurocognitive testing on student-athletes who participate in those sports which have been identified as collision and or contact sports and/or who have had a history of concussions prior to entering the University of Northern Iowa will provide significant data for return to competition decisions. Baseline testing data combined with clinical assessment and a 5-step progressive exertional testing protocol will allow student-athletes to return to play only when their injuries are completely healed and they are physically prepared to return to competition.

CONCUSSION DEFINITION:

A *Concussion* occurs when there is direct or indirect insult to the brain itself. As a result of this trauma, transient impairment of mental functions such as memory, balance/equilibrium and vision may occur. A concussion will not necessarily result in a loss of consciousness and, therefore, all suspected head injuries should be taken seriously. All UNI coaches and teammates can be helpful in identifying those who may potentially have a concussion, because a concussed athlete may not be aware of their condition or may potentially be trying to hide the injury to stay in a game or practice.

SIGNS AND SYMPTOMS OF CONCUSSION:

Certified athletic trainers and athletic training students all need to be aware of the signs and symptoms of concussion to properly recognize and intervene on behalf of the student-athlete.

Physical Symptoms	Cognitive Symptoms	Emotionality Symptoms
Headache	Memory Loss	Irritability
Vision Difficulty	Attention Disorders	Sadness
Nausea	Reasoning difficulty	Nervousness
Dizziness		Sleep Disturbances
Balance Difficulties		
Light sensitivity		
Fatigue		

UNI Concussion Management Protocol

1) **Student Athlete Concussion Statement:** All UNI student-athletes must read the NCAA Concussion Fact Sheet and sign the attached student-athlete statement acknowledging that:

    a. They have read and understand the NCAA Concussion Fact Sheet

    b. They accept the responsibility for reporting their injuries and illnesses to the UNI Athletic Training Services staff.

    ****Student Athlete Concussion Statement will be included in each incoming student-athletes pre-participation exam and recertification exam so that athletes are educated each calendar year****

2) **Obtain Baseline Testing:** The process of concussion management begins with the completion of *baseline testing* for all first year or transfer student-athletes within the sports of Football, Wrestling, Men's and Women's Basketball, Softball, Soccer, Swim (Divers) and Track and Field (Pole Vaulters only) or new student-athletes with any pertinent medical history of concussion(s). Baseline Assessments should include **Neuropsychological Testing: ImPACT** (impacttest.com).

3) **Traumatic Brain Injury Occurs:** When a UNI student-athlete shows any signs, symptoms or behaviors consistent with a concussion, the athlete will be removed from practice or competition, by either a member of the coaching staff or sports medicine staff immediately. On-field or sideline assessment of a concussion can be done by the presence of concussion symptoms, balance assessment and/or Maddock's Score (Portion of SCAT II).

    a. ***A student-athlete who has sustained a concussion and been removed from participation will not under any circumstances be allowed to return to play the same day as the injury***.

    b. A student-athlete who has sustained a concussion outside of their sport participation will be managed in the same manner as those sustained during athletic participation.

    c. Visiting sport team members, sports camp participants or Iowa High School athlete evaluated by a UNI Athletic Training Services staff member will be managed in the same manner as UNI student-athletes.

4) **Referral:** Upon initial assessment of the student-athlete following the sustained concussion, the UNI Athletic Training Services staff member may deem it necessary for immediate referral to a UNI Team Physician or Sartori/Allen Emergency Room based upon assessed severity of the injury or possible presence of a cervical spine injury.

5) **Monitoring and Education:** The student-athlete will receive monitoring for deterioration. Athletes will be provided with written home instructions upon discharge from a UNI Athletic Training Services staff member. It is recommended that said athlete only be discharged to the oversight of a roommate, guardian or someone that can effectively follow the given instructions and provide care to the athlete overnight.

6) **Post-Injury Assessment:** Following a sustained concussion, the student athlete will be required to undergo the assessment plan described in this protocol. Upon completion of the second round of post-injury testing it may be deemed necessary by UNI Athletic Training Services staff member(s) and/or UNI Team Physicians to notify academic advisors and professors of the student-athlete's concussion.

    a. The student-athlete will be re-evaluated at regular intervals as described in this protocol. Once asymptomatic and in possession of assessments within normal baseline limits; final

Return-to-Play decision will reside with the team physician or the physician's designee (UNI Athletic Training Services Staff).

7) UNI Athletic Training Services staff will document the incident, evaluation, management and clearance of all student-athletes who sustain a concussion. Documentation will utilize the Touchworks EMR system to document all incidence of concussion with regularly updated progress notes. The UNI Concussion Management Form will be utilized to document/maintain all follow-up testing data. The form should have baseline data entered initially as well as all follow-up testing data so that information from all testing is managed in one location. This form should be entered into the Touchworks EMR system when the injury is resolved.

Concussion Assessment:

NO STUDENT-ATHLETE SUSPECTED OF HAVING SUSTAINED A CONCUSSION IS PERMITTED TO RETURN TO PARTICIPATION THE SAME DAY AS THE INJURY. UNDER NO CIRCUMSTANCES WILL ANY STUDENT-ATHLETE BE PERMITTED TO RETURN TO PLAY WHILE SYMPTOMATIC FOLLOWING A CONCUSSION.

1) **ImPACT Baseline Testing:** Conducted on each athlete participating in sports included in Concussion Management Protocol upon entering their first year of participation (Freshman or Transfer).

2) **Traumatic Brain Injury Occurs During Participation:** Clinical Assessment completed by UNI Team Physician or UNI Athletic Training Services staff member. Assessment should include Modified Maddock's Score for later documentation as well as cognitive assessment and balance testing (Double Leg, Single Leg, Tandem Stance). Referral made if deemed necessary.

3) **Day Following Injury:** Clinical Assessment completed by UNI Team Physician or UNI Athletic Training Services staff member.

4) **Every 24 hours following:** The athlete will meet with the athletic trainer to report symptoms.

5) **Athlete Becomes Asymptomatic:**

a. ImPACT Testing.

i. If the athlete fails the ImPACT Test they will retake the test no sooner than 48 hours later.

b. Once the ImPACT baseline scores meet passing levels and the athlete has remained asymptomatic for a minimum of 24 hours, UNI Team Physician or UNI Sports Medicine/Athletic Training Services staff member can make the decision to begin ***5-step Progressive Exertional Testing Protocol***.

c. If the student-athlete remains asymptomatic for 24 hours following each step of the protocol they may be graduated to the next step(s) of Progressive Exertional Testing Protocol.

d. All scores, follow-up exams and exertional testing activities will be documented on the student-athlete's Concussion Management Form by a UNI Sports Medicine/Athletic Training Services Staff member.

******If at any point during the above described process the athlete becomes symptomatic the student-athlete will return to step five of the concussion assessment protocol. Upon return to an asymptomatic state, the student-athlete will return to step six of the concussion assessment protocol.***

5-Step Exertional Testing Protocol:

This protocol allows a progressive increase in the volume and intensity of both aerobic and anaerobic demands on a student-athlete who has sustained a concussion. While completion of each step to its listed specifications is of extreme importance, the primary objective is to monitor the student-athlete for the recurrence of any concussion-related symptoms and cease testing immediately if they become present.

The following will **NOT** all be completed on the same day, each step must take place **a minimum of 24 hours apart**.

Exertion Step 1: Light aerobic exercise

- Walking or stationary cycling keeping intensity <70% estimated maximum predicted heart rate for 20-30 minutes. No resistance training.

Exertion Step 2: Moderate aerobic exercise followed by exertional ImPact Test following activity

- Jogging and running for 20-30 minutes at 70-85% estimated maximum predicted heart rate.
- Complete exertional ImPACT Test following activity.

Exertion Step 3: Non-contact sport specific training drills

- Regular non-contact training drills; aerobic activity at maximum capacity including sprints.
- May start progressive resistance training.
- Symptoms will be monitored during and after session.

Exertion Step 4: Full contact practice

- Return to full contact practice without limitation(s).
- Symptoms to be monitored during and after practice session.

Exertion Step 5: Return to normal/full competition

No athlete will return to full activity or competition until they are asymptomatic in limited/non-contact practice, non-limited/full contact practice and cleared by UNI Team Physician or designee (UNI Sports Medicine/Athletic Training Services Staff member).

SUMMARY:

The University of Northern Iowa Sports Medicine/Athletic Training Services Department is committed to providing quality health care services for all student-athletes. As such, the UNI Sports Medicine/Athletic Training Services Department is very proactive in the assessment and management of concussions. To do so will minimize the risks of concussions associated with athletics, and the potential catastrophic and long-term complications from said concussions.

University of Northern Iowa
Student-Athlete Concussion Statement

□ I understand that it is my responsibility to report all injuries and illnesses to my athletic trainer and/or team physician.

□ I have read and understand the *NCAA Concussion Fact Sheet.*

After reading the NCAA Concussion fact sheet, I am aware of the following information:

_____ A concussion is a brain injury, which I am responsible for reporting to my
Initial team physician or athletic trainer.

_____ A concussion can affect my ability to perform everyday activities, and affect
Initial reaction time, balance, sleep, and classroom performance.

_____You cannot see a concussion, but you might notice some of the symptoms
Initial right away. Other symptoms can show up hours or days after the injury.

_____ If I suspect a teammate has a concussion, I am responsible for reporting the
Initial injury to my team's Athletic Trainer.

_____ I will not return to play in a game or practice if I have received a blow to
Initial the head or body that results in concussion-related symptoms.

_____ Following concussion the brain needs time to heal. You are much more likely
Initial to have a repeat concussion if you return to play before your symptoms resolve.

_____In rare cases, repeat concussions can cause permanent brain damage, and
Initial even death.

_____ _____
Signature of Student-Athlete Date

_____
Printed name of Student-Athlete

University of Northern Iowa
Coaches Concussion Statement

□ I have read and understand the *UNI Concussion Management Protocol.*

□ I have read and understand the *NCAA Concussion Fact Sheet*

After reading the NCAA Concussion fact sheet and reviewing the UNC Concussion Management Protocol, I am aware of the following information:

_____ A concussion is a brain injury which athletes should report to the medical
Initial staff.

_____ A concussion can affect the athlete's ability to perform everyday activities, and affect
Initial reaction time, balance, sleep, and classroom performance. You cannot see a
concussion, but you might notice some of the symptoms right away. Other
symptoms can show up hours or days after the injury.

_____ I will not knowingly allow the athlete to return to play in a game or practice if
Initial he/she has received a blow to the head or body that results in concussion-related
symptoms.

_____ Athletes shall not return to play in a game or practice on the same day that
Initial they are suspected of having a concussion.

_____ If I suspect one of my athletes has a concussion, it is my responsibility to
Initial have that athlete see the medical staff.

_____I will encourage my athletes to report any suspected injuries and illnesses to
Initial the medical staff, including signs and symptoms of concussions.

_____ Following concussion the brain needs time to heal. Concussed athletes are

Initial much more likely to have a repeat concussion if they return to play before their symptoms resolve. In rare cases, repeat concussions can cause permanent brain damage, and even death.

_____ I am aware that every first-year student-athlete participating on specified
Initial UNI teams must be baseline tested prior to participation in sport. These tests allow for comparison of symptoms, neurocognition, and balance if the athlete were to become injured.

_____ I am aware that athletes diagnosed with a concussion will be assessed at regular
Initial time intervals following a concussion . Athletes will begin a graduated return to play protocol following full recovery of neurocognition and balance determined by baseline concussion testing and symptoms.

_____ _____

_____

Signature of Coach Date Printed name of Coach

University of Northern Iowa Athletic Training Services

Post-Concussion Home Instruction Sheet

Name:_____ Date:_____

You have recently sustained a concussion and will need to be observed carefully over the next 24 hours.

It is OK to:	There is no need to:	***DO NOT:***

• Use Tylenol (Acetaminophen)
• Eat a light meal
• Go to sleep
	• Stay awake
	• Wake up every hour
		• Drive
		• Consume alcohol
		• Perform exercise
		• Consume:
		  ○ Ibuprofen
		  ○ Advil
		  ○ Any NSAID product

Special Recommendations:

_____

_____

_____

Watch for any of the following

Worsening Headache	Stumbling/Loss of Balance
Vomiting	Weakness In One Arm/Leg
Decreased Level of Consciousness	Blurred Vision
Dilated Pupils	Increased Irritability
Increased Confusion	

If any of these problems develop call your athletic trainer immediately:

Athletic Trainer:_____

Phone:_____

You need to be seen for a follow-up exam at _____AM / PM

at:_____

CONCUSSION: A FACT SHEET FOR STUDENT-ATHLETES

Schedule 8

STATEMENT OF CHANGES IN NET POSITION

INTERCOLLEGIATE ATHLETICS

For the Year Ended June 30, 2013

Revenues and Other Additions:	
TTII Allocations	$ 1,855.13
General Income - Athletics:	
Student Activity Fee Allocation	1,491,225.00
Foundation Support	1,134,114.37
NCAA Support	912,482.13
Miscellaneous	342,031.14
Events Parking	12,600.00
Promotions and Marketing	1,099,951.62
Event Operations	233,057.59
Football	1,695,836.25
Basketball-Men	873,256.68

Wrestling	21,705.65	
Track-Men	6,052.61	
Soccer-Women	881.31	
Basketball-Women	18,527.10	
Volleyball-Women	49,961.14	
Track-Women	6,032.62	
Softball-Women	24,181.26	
Total Revenue and Other Additions		$ 7,923,751.60
Expenditures and Other Deductions:		
Athletics Administration	704,372.26	
General Expense - Athletics:		
Salaries and Wages	382,995.62	
Administrative Overhead	143,629.98	
Conference Assessments	45,300.00	
Other	270,078.49	
Athletic Training	241,080.42	
Promotions and Marketing	228,492.57	
Event Operations	436,116.64	
Athletic Pep Band	34,705.07	

Sports Information	189,641.65
Men's Sports:	
Football Expense	1,614,087.41
Football Scholarships	1,223,977.50
Basketball Expense	1,587,001.75
Basketball Scholarships	279,704.15
Wrestling Expense	405,125.72
Wrestling Scholarships	175,482.26
Track Expense	315,239.00
Track Scholarships	225,300.41
Golf Expense	52,326.31
Golf Scholarships	13,543.15

Schedule 8 (continued)

STATEMENT OF CHANGES IN NET POSITION

INTERCOLLEGIATE ATHLETICS

For the Year Ended June 30, 2013

Expenditures and Other Deductions: (continued)

Women's Sports:		
Basketball Expense	698,342.06	
Basketball Scholarships	301,090.30	
Soccer Expense	200,832.33	
Soccer Scholarships	188,182.85	
Volleyball Expense	525,371.02	
Volleyball Scholarships	221,830.50	
Track Expense	293,703.51	
Track Scholarships	220,723.34	
Softball Expense	321,306.33	
Softball Scholarships	203,196.94	
Tennis Expense	79,799.42	
Tennis Scholarships	121,278.09	
Swimming Expense	145,278.92	
Swimming Scholarships	144,783.13	
Golf Expense	62,316.27	
Golf Scholarships	103,227.73	
Total Expenditures and Other Deductions		12,399,463.10
Revenue Over (Under) Expenditures		(4,475,711.50)

Transfers:		
From Other Funds	119,245.42	
General Educational Fund Support	4,198,513.00	
To Other Funds	(91,700.99)	
Net Transfers		4,226,057.43
Revenue Over (Under) Expenditures and Transfers		(249,654.07)
Total Net Position - July 1		(698,351.97)
Total Net Position - June 30		$ (948,006.04)