

FINAL REPORT ON THE COIA CAMPUS CONCUSSION POLICY SURVEY
Coalition on Intercollegiate Athletics Subcommittee on Concussions
March 31, 2014

Introduction and rationale

In December, 2013 COIA's Steering Committee initiated a project to survey current practices of intercollegiate sports concussion management at the 61 institutions with COIA member senates. This effort was motivated by a growing faculty concern about the short- and long-term effects of sports-related concussions in student-athletes. The basic goal of the project was to enable faculties, through their elected senates, to fulfill basic due diligence obligations on an important student safety issue.

The COIA Steering Committee felt strongly that university faculty and their elected senates should assess the basic policies and procedures for concussion management on their campuses in order to determine if they were reasonably aligned with national practices. However, since faculty have little knowledge of what local and national policies and procedures look like, it was important to provide a simple online summary of current practices, perhaps with some exemplary leading models, that could be updated periodically to provide senates a quick checklist for their review. Because the Steering Committee itself had little expertise in this respect, it appointed a Subcommittee on Concussions which consulted Dr. Brian Hainline, NCAA Chief Medical Officer, and with his help developed a brief questionnaire to survey current practices.

The project had the following goals:

- To provide up-to-date online information on general current practices, including examples that the NCAA sees as exemplary;
- To provide access to this online concussion management data to athletics departments who wish to compare their practices to peer schools;
- To assist the NCAA and its Sports Science Institute in their efforts to improve sports-related concussion management in student-athletes;
- To provide practical guidance to faculty senates on ways to partner with FARs and athletics departments in fulfilling a basic due diligence obligation to be informed about campus responses to the issue of sports related concussions.

It was not a goal of this project that faculty or senates become experts in concussion management, or that they prescribe policy in any way. There are many areas of faculty governance where faculty committees or senates receive routine annual reports on issues outside the expertise of their members of the senate because shared responsibility for the welfare of the university requires periodic attention to a wide range of issues. Student safety is one important area of concern at all institutions, and this extends to the health and well-being of student-athletes.

Methods

Our questionnaire was distributed to the chairs and COIA representatives of COIA's 61 member senates (a number which has since grown to 63). Because the questions were not likely to be

answered by the senates themselves, completing the surveys required the cooperation of campus FARs or members of the athletics department.

As of the date of this report, the Subcommittee has received 29 completed questionnaires, many of which were accompanied by detailed supplementary documentation. In addition, four senates attempted to respond, but were not able to obtain the necessary information: three reported that their athletics departments declined to participate, and one senate reported that its campus Health Service, where concussion policy is formulated and managed, declined to participate. Altogether, then, 33 senates attempted to respond fully, a total response rate of 54%.

Of the remaining senates, 15 indicated an intent to respond at some point, four replied that time would not permit a response during the current term, and one senate declined to participate because of doubt that this was an appropriate activity for COIA. Seven senates did not reply to COIA's request

The findings of our subcommittee are presented below under the following headings:

- I. General overview
- II. Discussion of individual question responses
- III. Recommendations for senates
- IV. Project assessment and next steps

Appendix I: COIA sports-related concussion questionnaire: Compiled responses

Appendix II: Summary of presentation by Dr. Brian Hainline, NCAA Chief Medical Officer

Appendix III: NCAA concussion-related policy, legislation, and best practices

Appendix IV: [Attached spreadsheet] Tabulated responses to COIA sports-related concussion questionnaire

I. General overview

We will begin with a few general observations about the survey results, and then consider responses to individual survey questions. A full tally of all responses is provided in Appendix I, and an Excel spreadsheet that provides concise restatements of responses to all questions from each of the 29 questionnaires accompanies this report as Appendix IV. These restatements have stripped all identifying features from responses, which, in some cases, were very detailed and specific to the campuses involved.

Our general observations include the following:

- All responding programs seem to have reasonably well formulated protocols for sports-related concussions. There are some local variations, but no programs appear to be critically problematic. On the whole, it appears our athletics programs have taken this issue seriously – the headline news is good!
- Programs seem to be compliant with NCAA-legislated requirements, although they have followed NCAA best practice guidelines to varying degrees. Some programs feel their protocols are more stringent or appropriate than NCAA guidelines

- There is considerable variation in the sources used to develop policy, the specific techniques used for baseline testing of student-athletes, the design and reach of coaches' education, the designation of supervisory responsibility for monitoring student-athletes with diagnosed concussions, use of electronic medical records systems, or regular review of policies and protocols. These may be areas where the NCAA best practice guidance may need to be revised or strengthened, although local variation is not necessarily a sign of problems.
- There is a notable absence of any unified system of concussion data collection among these FBS programs that could facilitate research for improved concussion management.
- Almost no programs are using sensors to monitor for concussions during practice or competition. The reasons for this are not entirely clear, but issues of cost and questions about the adequacy of correlation between existing impact measures and actual observed injuries could be factors.

II. Discussion of individual question responses

FOR COMPLETE DATA ON RESPONSES, SEE APPENDIX I
AND ACCOMPANYING EXCEL SPREADSHEET.

1. *Do we rely on the NCAA Sports Medicine Handbook as the best practice guide for managing sports-related concussion?*
 - a. *If not, why not?*
 - b. *Do we utilize any supplemental best practice guides?*
 - c. *Do we have a formal baseline assessment pre-season?*

All but one school consult the *Handbook*, and the one exception indicated it was aware of the NCAA best practices and preferred to rely on a different protocol that is in part the basis for the *Handbook* guide. The array of additional guides that schools consult suggests a diligent effort to be well informed. Dr. Hainline, in his presentation to COIA (see Appendix II), stressed that because of our imperfect understanding of concussions, current guides are generally consensus-based, without the scientific authority of research-based standards. The faculty concern should probably focus on simply having assurance that local medical staff is involved and that the protocols adopted are based on its best medical judgment.

Baseline testing at each season's start is essential to concussion diagnosis and return-to-play judgments. A potential area of concern for baseline testing is that athletes may purposefully underperform in order to lower the threshold for return-to-play after a concussion incident. Dr. Hainline felt that some tools are better designed for ensuring that such underperformance is detected. The BESS protocol, in which an athlete performs basic balance exercises under trained observation, may be a better way to detect a false result than a computer read-out based assessment, such as that provided by using the ImPACT device. Our results suggest an overall overreliance on ImPACT technology, which can be easily supplemented by the virtually cost-free BESS protocol. Dr. Hainline also expressed a view that the recently developed King-Devick

test, employed by one school, may be particularly effective. These issues will likely be addressed in new NCAA online resources that Dr. Hainline is developing.

A minority of responses specified the range of sports for which baseline testing is required. The NCAA *Handbook* is clear in its list of sports considered at-risk in terms of concussions. The range of listed sports may reflect differences among schools in the particular sports available, or it may reflect the fact that some schools are not following *Handbook* guidelines. It is important to understand that although the largest number of documented concussion incidents occurs in football, there are, in fact, over twenty NCAA sports with significant concussion risks, some of which have a per athlete incidence comparable to football (e.g., women's ice hockey, lacrosse, soccer).

2. *Is the designated Team Physician(s) responsible for formulating program-wide policy on sports related concussion?*
- a. *If not, why not?*
 - b. *If not, then who is responsible?*

The responses to this question suggest that policies are being designed by appropriately trained personnel with knowledge of sports medicine, which means a physician, athletic trainer, and/or an undefined sports medicine “team.”

3. *Do we follow the NCAA Sports Medicine Handbook's "Best Practices for a Concussion Management Plan" with regard to coaches?*
- a. *What education and training about sports-related concussion is required for coaches?*
 - b. *Who ensures that coaches receive this education?*
 - c. *Do we educate all coaches, or only coaches involved in contact-collision sports?*

Responses concerning coaches' concussion education indicated substantial variation in approaches to the education delivered, the medium of delivery, and the range of coaches for whom education is required. The general trend is to have the education delivered in the interactive setting of a meeting, with a medical staff member providing information directly to coaches. In some cases, it appears that materials alone are distributed, with only a signed acknowledgment by coaches, and in at least two cases there appears to be no set protocol for coaches' education. One area of uncertainty is cases where materials are identified as “powerpoints”; this could be shorthand for a meeting, or software files delivered electronically. Some schools limit concussion education to coaches in sports with greater concussion risk.

Coach education appears to be an area where clearer guidance could improve practice. Dr. Hainline is addressing this issue through new NCAA online tools. This appears to be a topic where faculty senates might usefully press for bringing standards up to NCAA recommended levels. The issue does not concern any technical expertise, only the assurance that efforts are being made to ensure that education is regular and effective.

4. *What type of education is provided to student-athletes pre-season?*
- a. *What is the communication protocol for student-athletes and parents post-concussion?*

The NCAA has certain minimal standards for athlete education on concussions, including:

“An annual process that ensures student-athletes are educated about the signs and symptoms of concussions. Student-athletes must acknowledge that they have received information about the signs and symptoms of concussions and that they have a responsibility to report concussion-related injuries and illnesses to a medical staff member.” (See Appendix III, Section 1 (a).)

Most schools have a much more robust educational protocol, with the overwhelming majority holding educational meetings. (In the case of students, as opposed to coaches, we felt it more likely that “powerpoints” would be delivered in an interactive session, rather than by email, and tabulated responses on this basis.) In a few instances, schools appear only to meet the NCAA minima, and in one case, where education is specified only for entering student-athletes, the minimal requirements under NCAA legislation do not seem to be met. This is another area where faculty may feel it appropriate to insist on more robust protocols.

The responses to the sub-question were highly variable and difficult to collate into well-defined response categories. Post-concussion communication is an area that must ultimately involve case-by-case judgments, and the range of answers may reflect differences in “typical” cases that respondents imagined. The NCAA recommends that athletes released after a concussion incident be monitored by whoever may be an appropriate, natural care giver, such as a roommate or, for athletes living at home, a parent, consistent with HIPAA guidelines, and this is explicitly reflected in some responses. On reflection, the sub-question on post-concussion communication should have been more specifically worded.

5. Who evaluates student-athletes suspected of having a sports-related concussion, both during and after competitions?

a. Do these individuals have documented sports-related concussion training?

This question also generated highly varied responses. Most answers did not distinguish clearly between sideline evaluation and referral personnel; responses that did not make this distinction may be addressing sideline evaluation alone, but we cannot be certain.

The essential issue is the importance of having trained medical personnel on the sidelines to make an immediate assessment concerning potential concussion injury independently, without involvement by the coaching staff. Survey responses indicated that, with only one exception, coaches are never in a position to influence sideline return-to-play decisions. This may also be true for the one exception, which answered this question assuming a situation where no medical staff or trained assistants are present,

Among the points Dr. Hainline made in his COIA discussion of the issue of evaluation was that the ideal person for evaluation may be a Certified Athletic Trainer (ACT) or Team Physician with specialized training in sports concussion, rather than a neurologist without such training (see Appendix II). Most schools indicated that their sideline evaluators did have such training.

A recent [New York Times report](#) (10/31/13) noted that a number of schools now have a neurologist trained in sports concussions acting as or working together with the football Team

Physician. The presence of these neurologists, who attend all home and away football games, seems to reflect a particularly proactive model for responding to the concussion issue. We did not, however, see specific mention of this practice among our survey respondents.

6. *Who is responsible for monitoring student-athletes who have suffered sports-related concussions?*

Responses to this answer were fairly uniform, indicating that the ATC and/or Team Physician were principally in charge of this role. A number of institutions specified that monitoring was a daily routine during recovery, and that it involved active self-assessments by injured athletes, using SCAT protocols, which include written responses concerning a variety of symptom indicators. Like Question 5, responses included mention of the role of roommates or others who are provided information and act as informed monitors, always in parallel with monitoring medical staff.

7. *Do we follow the return-to-play protocol in the NCAA Sports Medicine Handbook?*

- a. *Do we have a return-to-classroom protocol for student-athletes who suffer sports-related concussion?*

The *Handbook* seems to be used as a standard or a minimal standard by virtually all of the 24 programs that responded to this question, though some of the “Yes” responses included qualifiers specifying that their protocol was “based on” and “equivalent to” the *Handbook* guidelines. One institution said it followed its own protocols but did not specifically indicate that they substantially differed from the *Handbook*. As for the school that indicated that return-to-play was managed on a case-by-case basis, Dr. Hainline has made the point that all return-to-play and return-to-classroom management must involve case-by-case judgments that cannot be captured in a single protocol. However, in terms of practices that meet basic standards, we believe that a significant level of justification would be required for a program to operate without any formal return-to-play protocol serving as an established framework within which individual case decisions were made by various ACTs, team Physicians, and other medical staff.

The majority of schools reported no formal return-to-classroom protocol and this is an area that we believe should be of concern to faculty. Because concussions are so individualized in their consequences and cognitive deficits may persist for weeks or months, providing individualized information to instructors and noting the importance of being alert to signs of ongoing problems seems an important element in a student-athlete’s recovery plan. Some schools indicated that even though they lacked a formal protocol, advisors and instructors were nevertheless notified as a matter of course. Other schools gave no indication that this was routine practice. Individual faculty senates should consider working with the athletics department or health service to create protocols that serve the interests of students and faculty, without infringing on medical autonomy or HIPAA regulations.

8. *Is our electronic medical record/database for sports-related concussion (and other injuries/illnesses) connected to Datalys?*

- a. *If not, why not?*

The NCAA is working with the Datalys corporation to create a college sports injury databank as a resource for research and to inform policy development. It is obviously in the interest of all

NCAA programs that this effort succeed. However, only about one quarter of programs responding to the survey report injuries through Datalys. The reasons given include dissatisfaction with Datalys as an electronic medical records (EMR) system, incompatibility with the EMR system already employed, and limited resources. Dr. Hainline addressed this issue in speaking to COIA, and his theme was that there was probably a misunderstanding of the role Datalys was playing in this case. For the NCAA initiative, Datalys is serving not as a stand-alone EMR system, but as an adjunct system for the sole purpose of sports injury reports that could be communicated to it through other full-service EMRs, and flexibility in issues of compatibility and cost is a feature of its relationship with the NCAA. (See Appendix II for more detail.)

9. *Do we utilize any helmet-sensor or skull-based sensor devices for monitoring the quantity and quality of head hits in football practice and games?*
 a. *Do we utilize sensors in any other contact/collision sports?*

Only two schools responded affirmatively to these questions. The reasons seem, in part, to be skepticism about the quality of information sensors provide and concerns about costs. Given the value that good physical data on impacts would provide, it would be an advantage to all programs to assist developing this technology, if possible. One avenue that might be useful would be better information sharing with the NCAA and among schools to increase awareness of the positive and negative experiences of schools that have previously or that now use sensors, and communication among sports medicine staffs tracking research and development of these devices.

10. *How do we monitor and assess our own performance in following program-wide policy?*
 a. *Specifically, how do we monitor that we follow the NCAA Concussion Policy and Legislation?*

There was wide diversity among responses; however, two basic approaches seem to dominate: one involves formal annual reviews by medical individuals or committees including medical personnel, and the second involves ongoing self-assessments in the context of specific case reviews. In some cases, outside consultants have been used, and one school cited the role of the faculty senate and campus athletics board in reviewing such policies. Only one school responded that no policy governed the self-assessment process, though four others did not respond to the question and another response indicated that an approach was under development. There may certainly be multiple ways in which programs can approach this issue. However, it does seem important that any program be able to articulate the manner in which it assesses the success of its policies and practices, if only to remove any doubt about its commitment to self-assessment in concussion management.

Relatively few programs responded directly to the question of how they monitor for compliance with NCAA policies and legislation, and it is simply not clear how closely sports medical staff attends to these issues as an ongoing process. Ideally, the new online resources that the NCAA is developing under Dr. Hainline's guidance will make it more convenient to periodically track developments in NCAA policies and recommendations.

III. Recommendations for senates

1) Review of current institutional concussion management policy. For senates at schools that have participated in this survey, we recommend that members of the senate, preferably in consultation with the FAR, review the questionnaire submitted to COIA to assess whether there are areas of concern, bearing in mind that questionnaire responses may not have described policies and practices fully. We recommend equally that senates note areas where their athletics departments, health services, or sports medicine faculty may be providing innovative leadership. These questionnaires can serve as a baseline for ongoing routine assessment.

We encourage senates at schools that did not participate in the survey to request that their athletics departments complete the COIA questionnaire, or a locally designed equivalent. If the COIA questionnaire is used, we would appreciate it if they were conveyed to us for addition to this database, unless that might discourage participation by the athletics department.

2) Updates on concussion management policy. One goal of this COIA initiative is to encourage faculty senates to request periodic assurances that their campuses are conforming to acceptable standards in sports concussion policy and management. To make such assurances meaningful, senates need enough information about standard practices to be able to understand and assess basic reports that their athletics departments may provide. The principal function of such an exercise is to ensure that transparency performs its normal role in strengthening attentive conduct, by both the athletics department and the faculty. For these reasons, COIA recommends that, as warranted, a concussion management policy update be part of the annual report on athletics given by the Athletic Director and/or the FAR.

3) Inter-campus communication. We recommend that senates and FARs within conferences share information about approaches to sports concussion policy. The best approach to such inter-campus information sharing is not one seeking to constrain local medical judgments by seeking uniformity, but one that encourages a culture of competitive aspiration to optimize and continually improve protocols.

IV. Project assessment and next steps

With only 29 completed questionnaires, it is not possible to generalize too broadly on what the data imply. We cannot say to what degree participating schools may have self-selected on the basis of confidence in their policies. We also note that schools completed the questionnaires in very different levels of detail, some writing long paragraphs with references, others completing the entire form in just a few dozen words. It should also be borne in mind that COIA's membership is limited to the FBS, and the survey only reflects conditions in that NCAA subdivision. However, within this framework, there was balance among the responding schools: 16 questionnaires were returned from schools belonging to the "Big 5" conferences, which generally include the largest FBS programs, while 13 were returned from schools in other conferences.

Despite some limits inherent in the survey, it appears to have been quite effective in certain respects. COIA undertook this initiative because there appeared to be a gap in knowledge of

current sports concussion policy and practices across campuses with intercollegiate contact sports programs. In his March 1 presentation to the 2014 COIA annual meeting (see Appendix II), Dr. Hainline analyzed a preliminary version of this report and indicated that the information was indeed new and significant. He stated that the NCAA would immediately respond to the survey results by developing new online tools to assist in more effective concussion education for coaches and student-athletes, a process which is now already underway.

COIA Concussion Resource Website: From the standpoint of COIA and its membership, the concussion survey provides a tool to help faculty senates assess policy on their local campuses, and the information we have collected has the potential to allow programs to become aware of superior practices on other campuses that may serve as models for improvement. To fulfill the potential value of this survey in this respect, COIA plans to develop an online concussion resource section of its website, where information about current concussion policy practices is made available and periodically updated. In addition to the results of this survey, the site will include such information as policy and protocol documents collected from FBS athletics programs willing to share these publicly, as well as information from the NCAA and other sources.

COIA has *no* plan to propose best practices in sports concussion management. That is a sports medicine issue, not a faculty governance issue. However, we do plan to develop best practice recommendations with regard to:

- 1) areas of sports concussion policy that have direct bearing on academics and faculty: in particular, elements of return-to-classroom protocols that concern education and notification of advisors and instructors;
- 2) faculty senate due diligence procedures in the area of campus concussion policy and management.

We expect these to be elements of COIA's online resource page.

In addition, the COIA concussion resource website will contain a broad range of information and resources on concussions including links to the NCAA's new online resources for concussion education, targeted for both coaches and student-athletes.

COIA Concussions Subcommittee

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APPENDIX I

**COIA Sports-Related Concussion Questionnaire
Compiled Responses
(29 surveys returned; supplemental materials consulted)**

1. Do we rely on the NCAA Sports Medicine Handbook as the best practice guide for managing sports-related concussion?

Yes: 25
Not primarily: 4
No: 1

a. If not, why not?

Rely on in-house guide: 1
Z'12 is a superior resource: 1*

b. Do we utilize any supplemental best practice guides?

We use other guides as supplements: 18**

Other guides noted:

- **Z / Z'08 / Z'12: 8**
- **AMSSM: 5**
- **ACSM/NATA: 6**
- **AAN: 4**
- **AMA: 1**
- **Other or unspecified: 6**

We follow in-house research unit: 5

We do not use supplemental guides: 4

No response: 2

c. Do we have a formal baseline assessment pre-season?

Yes: 29 (Assessment tool specified: 20; Multiple tools specified: 14)

No: 0

Assessment tools specified:

- **ImPACT: 18**
- **SCAT: 9** (SCAT2: 2; SCAT3: 5)
- **BESS: 6**
- **SAC: 1**
- **SC: 1**
- **NeuroCom: 1**
- **Biodex SD: 1**
- **King-Devick: 1**
- **Local: 1**

Sports for which baseline testing implemented specified:

* Key to abbreviations for protocol sources and baseline assessment tools appears on the accompanying spreadsheet.

** The *Handbook* indicates its primary bases are Z'12, AMSSM, and AAN. Links are provided on spreadsheet.

- **All sports: 1**
- **At-risk/contact sports** (range unspecified): **5**
- **All indicated by NCAA *Handbook* Best Practices: 2**
- **Fewer than indicated in *Handbook* Best Practices: 1**

2. *Is the designated Team Physician(s) responsible for formulating program-wide policy on sports related concussion?*

Yes: 16

Yes with others: 10 (ACTs 8; Dir. Sports Med. 2; Assoc. AD for Sports Med. 1)

Significantly involved: 1

Sports Medicine team responsibility: 2 (presumably includes Team Physician)

a. *If not, why not?*

b. *If not, then who is responsible?*

(These sub-questions did not apply to any school responding)

3. *Do we follow the NCAA Sports Medicine Handbook's "Best Practices for a Concussion Management Plan" with regard to coaches?**

Yes: 21 ("But could be improved": 1)

No: 3 (*Handbook* has been consulted: 2; Considering consulting *Handbook*: 1)

No response: 5

a. *What education and training about sports-related concussion is required for coaches?*

In-Person Presentations/Workshops: 13

Powerpoints or Handouts only specified: 8

Informal; case by case: 2

None: 2

Not "required": 1**

Unclear: 1

No response: 2

b. *Who ensures that coaches receive this education? [Some schools gave multiple answers]*

ATC: 11

Team Physician: 2

Director of Sports Medicine / Sports Medicine Staff: 5

Assoc. AD or other Athletics Dept. Staff: 6

Compliance: 3

Only signed acknowledgment required: 1

Unsure: 1

No formal process: 1

N/A: 1

No response: 4

* See Appendix III, "Best Practices for a Concussion Management Plan," Section 5 (a).

** One survey underscored the word "required" and added N/A, which appeared for 3.b and 3.c as well.

c. *Do we educate all coaches, or only coaches involved in contact-collision sports?*

All coaches: 20
All new coaches: 1
Contact sports only: 4
N/A: 1
No response: 3

Added comments on surveys:

Includes asst. coaches, strength & conditioning coaches: 1
Email contact only, except football: 1
“Attempts are made” for all coaches: 1
All coaches “should be” notified: 1

4. *What type of education is provided to student-athletes pre-season?*

Annual meeting or individual presentation: 20
 • **for contact teams: 1**
Materials and signed acknowledgment only: 4
Unspecified annual education: 1
One-time meeting for new S-As: 1
No response: 3

a. *What is the communication protocol for student-athletes and parents post-concussion?*

Student

Counseling & daily monitoring by ATC, Physician or staff specified: 6
Initial counseling specified: 6
Only provision of information materials specified: 5
Home caregivers (roommate, parents) notified: 4
Case by case: 2
Answer unclear or not germane: 8

Parent

Parent notified: 3 (may assume parent is home caregiver, as in item above)
Notified only per S-A request / if on-site / for severe injury: 12
Notified if S-A is a minor: 1
At physician’s discretion: 1
No parent protocol: 1
Unclear: 1
No mention of parent policy: 6

No response: 2

5. *Who evaluates student-athletes suspected of having a sports-related concussion, both during and after competitions?*

Initial

ATC and/or Team Physician: 16

ATC: 3

Physician: 6

Physician or certified sports management staff, full-time or GA, or coach: 1

Designated physician or teammate: 1

Unclear: 2

Referred to

Team Physician: 7

ACT or Physician: 1

Physician or Medical Director: 1

Coach determines: 1

a. *Do these individuals have documented sports-related concussion training?*

Yes: 21

“In-house” or other concussion training: 5

No response: 3

6. *Who is responsible for monitoring student-athletes who have suffered sports-related concussions?*

ATC: 4

Team Physician and ATC (or “athletic training staff”): 19

Team Physician: 1

Sport Medicine Staff (or “assigned medical personnel”): 5

Roommate or other designated person: 4 (always in combination with medical staff)

7. *Do we follow the return-to-play protocol in the NCAA Sports Medicine Handbook?*

Yes: 18

Yes, and in-house RTP protocol: 6

In-house RTP protocol only: 1

Case by case: 1

No response: 3

a. *Do we have a return-to-classroom protocol for student-athletes who suffer sports-related concussion?*

Yes: 12 (Academic advising unit notification specified: 4)

No: 4 (But academic advising unit notification specified: 3)

Handled on a case-by-case basis: 11 (Academic advising notification specified: 2)

Unclear: 1

No response: 1

8. *Is our electronic medical record/database for sports-related concussion (and other injuries/illnesses) connected to Datalys?*

Yes: 8
No: 20
Unsure: 1

a. If not, why not?

Incompatible with EMR system: 7
May be incompatible with EMR system: 1
Alternative system in use and adequate: 1
Concern with HIPAA violations: 1
Resource limits: 3
Have not yet fully converted to EMR: 1
Unfamiliar with Datalys: 2
Don't know: 2
Willing to add, but incompatible with some EMR: 1
No response: 2 (does not include 8 schools linked to Datalys)

9. *Do we utilize any helmet-sensor or skull-bases sensor devices for monitoring the quantity and quality of head hits in football practice and games?*

Yes: 2
No: 27 (Discontinued: 2; Considering: 1)

a. Do we utilize sensors in any other contact/collision sports?

Yes: 2 (Women's soccer trial study: 1)
No: 25 (Considering now: 2; Considered in past: 1)
No response: 2

10. *How do we monitor and assess our own performance in following program-wide policy? [some responses in multiple categories]*

Cases and management performance reviewed by committee: 4
Cases and management performance reviewed by medical individual(s): 1
Annual review of case management / policy: 10

- **Involves Physicians or ACTs: 5**
- **Involves Sports Medicine or other medical personnel: 5**
- **Involves Risk Management: 1**
- **Involvement unspecified: 1**

Assessment ongoing through monitoring of specific cases: 9
Documentation and testing: 1
Policies and procedures self-evaluated and with consultants: 1
Faculty senate and campus committees assist monitoring: 1
No policy: 1
Unclear: 1
No response: 4

a. *Specifically, how do we monitor that we follow the NCAA Concussion Policy and Legislation?*

Annual review: 4

Track changes / ensure conformance with NCAA policy: 5

Policy is based on NCAA guidelines: 1

Compliance monitors for ongoing conformity to NCAA policy: 1

Sports medicine and athletic administration monitors for NCAA compliance: 1

Local practices endorsed by NCAA: 1

Follow requirements for collecting S-A signed forms: 1

No response: 13

APPENDIX II

Summary Notes on Presentation of Brian Hainline, MD, NCAA Chief Medical Officer “The NCAA and COIA: Building a Bridge for Better Understanding” March 1, 2014 COIA Annual Meeting, University of South Florida

[The following summary, prepared by COIA, appeared in the COIA Annual Meeting Report]

Dr. Hainline began his talk with a brief description of the NCAA Sport Science Institute, and followed with a description of the types of health issues that are most pressing when it comes to student athletes. In addition to concussions, drugs (both performance enhancing and recreational, including prescription drug abuse) and mental health concerns are among the most important, and the SSI has created initiatives on both these issues: its Doping and Mental Health Task Forces.

Injuries that are associated with overuse and over-conditioning are a critical area where athletics program administration can make a difference. The key people in ensuring that these injuries are minimized are ATCs: certified athletic trainers. However, the role of the ATC is often under-appreciated and under-rewarded, and pressures from others in athletics programs can hamper their effectiveness. Dr. Hainline also described some of the functions of the Team Physician, and noted that beyond the importance of specialization in areas such as neurology or orthopedics, it is extremely important that physicians have a certification in sports medicine.

One major principle for success in the integrity of athletics health decisions is to design programs to create a conflict of interest-free environment.

Concerning the central issue of concussions, Dr. Hainline explained the limits of current medical knowledge, describing the term's vagueness of definition, which focuses on functional features, rather than on the wide variety of physical damage that may be involved. In terms of diagnosis, concussions present no biomarkers, and protocols governing their treatment are based on consensus rather than research outcomes. He also reviewed data concerning which sports place athletes most at risk, and characteristic differences in gender-specific patterns of concussion history in young athletes. One of the key things for coaches and other athletics personnel to be aware of is that many athletes arrive in college with a history of injury that will affect both their performance and their well being.

Among the things Dr. Hainline suggested faculty give some thought to with regard to concussions, the most important was to help develop good return-to-classroom protocols that would make sure that faculty were notified when students had concussion issues, and well enough informed to play appropriate roles in ensuring that students return to academic work was well managed, especially since concussion symptoms, including PTSD-type features, can persist for long time periods in some cases. Ultimately, return to academic work after concussions must be managed on a case by case basis, like return to play decisions, but there should be best practice policies that guide all involved. The COIA survey indicates that few schools have yet developed any formal return-to-classroom policies, and faculty can work with athletics

departments to ensure that adequate communication with academic advisors and instructors is a part of such policies as they develop.

Turning to the COIA questionnaire on concussions, Dr. Hainline made a detailed analysis of the results collected so far. He noted that based on the sample we have, programs seem to be handling concussion management appropriately in most respects. Most programs are generally following NCAA Medical Handbook guidelines and other appropriate consensus documents, but Dr. Hainline stressed that the state of knowledge was constantly changing and required close monitoring. New NCAA best practice guidelines will be coming soon, and Dr. Hainline noted at several point that the results of the COIA survey had altered his perception of what information those guidelines should convey. One example would be clearer standards for coaches' education about concussions.

Another example was the use of baseline testing, on which schools provided more detailed information than most other survey questions. Dr. Hainline noted that the survey indicated an over-reliance on computerized baseline testing (ImPACT), which creates a digital record, rather than observational testing (BESS), where trained observers assess skills such as balance. The latter type of test, although low-tech, allows a trained assessor to spot intentional underperformance on baseline tests – a way student-athletes sometimes create artificially low thresholds for later return-to-play clearance. (Dr. Hainline also recommended an eye-tracking protocol, called the King-Devick test, which so far only one school has reported using on the COIA survey.)

Dr. Hainline also noted the importance of NCAA schools contributing to a centralized injury reporting database, Datalys. Only one-third of survey respondents currently link to Datalys. The reason for that may be that schools understand Datalys to be solely an electronic medical records platform, and there are many more powerful EMR systems available. However, Datalys is now serving as a clearinghouse for NCAA injury data, and in that respect it can be linked to primary EMR systems. Dr. Hainline urged schools to contact Datalys President Tom Dompier (datalyscenter.org).

Dr. Hainline will be tracking the COIA survey data as it is updated, and the aggregated information will inform the development of new NCAA online resources for concussion issues.

Dr. Hainline had to leave the meeting after two hours to return to New York, and in a closing discussion session, participants discussed the timing for completion of the final survey report, and ways that COIA and faculties in general can further contribute with regard to student-athlete welfare issues. A follow-up effort focused on students-athlete mental health issues, issues that Dr. Hainline told us he believed were a more serious problem than concussions, was raised as a possibility, particularly if work COIA initiated in this respect could be accommodated under the umbrella of normal faculty due diligence inquiries into health policies and practices concerning all students.

APPENDIX III

NCAA Concussion-Related Policy, Legislation, and Best Practices

1. Policy and Legislation

The NCAA Executive Committee has adopted (April 2010) the following policy for institutions in all three divisions:

“Institutions shall have a concussion management plan on file such that a student-athlete who exhibits signs, symptoms or behaviors consistent with a concussion shall be removed from practice or competition and evaluated by an athletics health care provider with experience in the evaluation and management of concussions. Student-athletes diagnosed with a concussion shall not return to activity for the remainder of that day. Medical clearance shall be determined by the team physician or his or her designee according to the concussion management plan.

“In addition, student-athletes must sign a statement in which they accept the responsibility for reporting their injuries and illnesses to the institutional medical staff, including signs and symptoms of concussions. During the review and signing process, student-athletes should be presented with educational material on concussions.”

NCAA adopted concussion management plan legislation

An active member institution shall have a concussion management plan for its student-athletes. The plan shall include, but is not limited to, the following:

- (a) An annual process that ensures student-athletes are educated about the signs and symptoms of concussions. Student-athletes must acknowledge that they have received information about the signs and symptoms of concussions and that they have a responsibility to report concussion-related injuries and illnesses to a medical staff member;
- (b) A process that ensures a student-athlete who exhibits signs, symptoms or behaviors consistent with a concussion shall be removed from athletics activities (e.g., competition, practice, conditioning sessions) and evaluated by a medical staff member (e.g., sports medicine staff, team physician) with experience in the evaluation and management of concussions;
- (c) A policy that precludes a student-athlete diagnosed with a concussion from returning to athletic activity (e.g., competition, practice, conditioning sessions) for at least the remainder of that calendar day; and
- (d) A policy that requires medical clearance for a student-athlete diagnosed with a concussion to return to athletics activity (for example, competition, practice, conditioning sessions) as determined by a physician (e.g., team physician) or the physician’s designee.

Effect of violation.

A violation of Constitution 3.2.4.17 shall be considered an institutional violation per Constitution 2.8.1; however, the violation shall not affect the student-athlete’s eligibility.

2. Best Practices for a Concussion Management Plan

In addition to the Executive Committee policy requirements, additional best practices for a concussion management plan include, but are not limited to:

1. Although sports currently have rules in place, athletics staff, student-athletes and officials should continue to emphasize that purposeful or flagrant head or neck contact in any sport should not be permitted and current rules of play should be strictly enforced.
2. Institutions should have on file and annually update an emergency action plan for each athletics venue to respond to student-athlete catastrophic injuries and illnesses, including but not limited to, concussions, heat illness, spine injury, cardiac arrest, respiratory distress (e.g., asthma) and sickle cell trait collapses. All athletics health care providers and coaches (including strength and conditioning staff) should review and practice the plan at least annually.
3. Institutions should have on file an appropriate health care plan that includes equitable access to athletics health care providers for each NCAA sport.
4. Athletics health care providers should be empowered to have the unchallengeable authority to determine management and return to play of any ill or injured student-athlete, as the provider deems appropriate. For example, a countable coach should not serve as the primary supervisor for an athletics health care provider, nor should the coach have sole hiring or firing authority over a provider.
5. The concussion management plan should outline the roles of athletics health care staff (e.g., physician, certified athletic trainer, nurse practitioner, physician assistant, neurologist, neuropsychologist). In addition, the following components have been specifically identified for the collegiate environment:
 - a) Institutions should ensure that coaches have acknowledged that they understand the concussion management plan and their role within the plan and that they received education about concussions.
 - b) Athletics health care providers should practice within the standards as established for their professional practice (e.g., physician, certified athletic trainer, nurse practitioner, physician assistant, neurologist, neuropsychologist).
 - c) Institutions should record a baseline assessment for each student-athlete before the first practice in the sports of baseball, basketball, diving, equestrian, field hockey, football, gymnastics, ice hockey, lacrosse, pole vaulting, rugby, skiing, soccer, softball, water polo and wrestling, at a minimum. The same baseline assessment tools should be used post-injury at appropriate time intervals. The baseline assessment should consist of one or more of the following areas of assessment.
 - 1) At a minimum, the baseline assessment should consist of the use of a symptoms checklist and standardized cognitive and balance assessments [e.g., SAC; SCAT; SCAT II; Balance Error Scoring System (BESS)].
 - 2) Additionally, neuropsychological testing (e.g., computerized, standard paper and pencil) has been shown to be effective in the evaluation and management of concussions. The development and implementation of a neuropsychological testing

program should be performed in consultation with a neuropsychologist who is in the best position to interpret NP tests by virtue of background and training. However, there may be situations in which neuropsychologists are not available and a physician experienced in the use and interpretation of such testing in an athletic population may perform or interpret NP screening tests.

- d) The student-athlete should receive serial monitoring for deterioration. Athletes should be provided with written instructions upon discharge, preferably with a roommate, guardian or someone who can follow the instructions.
 - e) The student-athlete should be evaluated by a team physician as outlined within the concussion management plan. Once asymptomatic and post-exertion assessments are within normal baseline limits, return-to-play should follow a medically supervised stepwise process.
6. Institutions should document the incident, evaluation, continued management and clearance of the student-athlete with a concussion.

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