



CENTER FOR RESEARCH IN INTERCOLLEGIATE ATHLETICS

2019 CRIA NCAA Scholarship Model Proposal Media Contacts:

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The Center for Research in Intercollegiate Athletics Releases Data-Driven Modification Recommendations for NCAA Scholarship Models

Previously, the Center for Research in Intercollegiate Athletics released an NCAA [Scholarship Model History Report](#) & [Financial Aid Proposal Database](#) which presented analysis of historic primary sources. These reports catalogued every financial aid proposal pertaining to athletic based aid from 1971 to 2019 and revealed arbitrary scholarship limits in “equivalency” sports set for cost reduction purposes. Data-driven scholarship models based on NCAA Division I-Power Five average roster size, travel squad size, and starting line-up size for each sport are presented in this report with variants considering different needs of contact and non-contact sports. This data provides a starting point for future discussions based on models that are equitable across all sports. Researchers recommend classifying all sports as equivalency while setting limits on the maximum number of athletes who receive aid above base scholarship limits.

Chapel Hill, NC – December 5, 2019 – The Center for Research in Intercollegiate Athletics (CRIIA) at the University of North Carolina at Chapel Hill has released the [Scholarship Model Proposal Report](#) to facilitate dialogue and policy change. Also available is a [Scholarship Model Database](#).

Current NCAA scholarship limits have been criticized regarding the inequity between sports, the illogical nature of the restrictions in general, and the criteria for current sport “head-count” or “equivalency” scholarship classifications. Review of NCAA archival data presented in the CRIA [Scholarship Model History Report](#) & [Financial Aid Proposal Database](#) revealed scholarship limits were initially implemented due to talent stockpiling in football and men’s basketball and rising costs in college athletics (NCAA Special Convention, 1973). Modest percentage-based adjustments have been made based on revenue-generation and Title IX compliance with limited regard to individual sport needs. This scholarship model has remained stagnant for nearly 20 years while the landscape of intercollegiate athletics and sport in society has evolved significantly. Given the dramatic change in the college sport landscape and flawed methodology of the initial scholarship model, a paradigm shift needs to occur to help achieve a data-driven, pragmatic and equitable scholarship model. Rather than considering revenue-generation or Title IX compliance, scholarship limits based on the sports’ specific needs—average participation, NCAA travel squad size, and sport lineup size – would provide better potential for equal treatment of all collegiate athletes.

Current NCAA Scholarship Model: Head Count and Equivalency Sports

The NCAA sets limits on the number of scholarships available for each sport. These scholarships are categorized into two groups—head-count and equivalency. In head-count sports, each student-athlete counts as one full scholarship if they receive any kind of financial aid (NCAA, 2018). The remaining are equivalency sports, meaning they can divide the total amount of scholarships funding up to the stated limit amongst multiple student-athletes in these sports (NCAA, 2018). The [Scholarship Model History Report](#) outlines the history and evolution of head count and equivalency sport classifications.

Current NCAA Head Count and Equivalency Scholarship Limits Per Sport

Head Count Sports	Current Limit (Men)	Current Limit (Women)
Basketball	13	15
Football	85	
Gymnastics		12
Tennis		8
Volleyball		12
Total Head Count Limits	98	47

Equivalency Sports	Current Limit (Men)	Current Limit (Women)
Baseball	11.7	
Bowling		5
Cross Country/Track and Field	12.6	18
Equestrian		15
Fencing	4.5	5
Field Hockey		12
Golf	4.5	6
Gymnastics	6.3	
Ice Hockey	18	18
Lacrosse	12.6	12
Rifle	3.6	
Rowing		20
Rugby		12
Sand Volleyball		6
Skiing	6.3	7
Soccer	9.9	14
Softball		12
Swimming and Diving	9.9	14
Tennis	4.5	
Triathlon		3.5
Volleyball	4.5	
Water Polo	4.5	8
Wrestling	9.9	
Total Equivalency Limits	123.3	187.5
Total Limits (HC + Equivalency)	221.3	234.5

Note: Sports without scholarship limits are not recognized as official NCAA sports

As the research team analyzed considerations for model proposals, we gathered input on whether these head count and equivalency sport classifications should remain. As detailed in the [Scholarship Model History Report](#), “maximum initial awards” and ultimately “headcount sports” were designated in order to combat the prevalent practice of teams bringing in a large number of freshmen and having a try-out once on campus. This practice, known as “stockpiling” and “runoff”, was prevalent in football and basketball in the early 1970s and created a recruiting advantage for bigger schools (NCAA Convention Proceedings, 1973). In 1973, NCAA representatives wanted to have an equivalency scale for scholarships in all sports due to the low participation numbers in sports other than football, basketball, and track and field (NCAA Convention, 1973). However, given the popularity of college sports, a decision made over 40 years ago should be reconsidered for today’s landscape.

If all sports were to go headcount, schools would be limited to the number of student-athletes on scholarship. Previous concerns of a decrease in participation and popularity of Olympic sports are now outdated due to the high number of student-athletes “walking-on” and participating without receiving any athletic aid. One could also argue that Title IX compliance could be regulated more easily than the current model allows if all sports were to go to headcount. If schools could afford the full cost of athletic scholarships for each student-athlete, schools would now only have to consider the ratio of male and female student-athletes and out-of-state and in-state tuition, as opposed to accounting for equivalency values per student-athlete.

If all sports were to go an equivalency model, schools would be limited to the total aggregate amount of scholarships allowed per sport. Schools would be able to divide scholarships amongst multiple student-athletes per sport, and more student-athletes could receive athletic-based aid. However, with that flexibility, concerns of bigger programs stockpiling talent could increase due to the increased number of student-athletes able to receive athletic-based aid (Sutter & Winkler, 2003). For example, football could divide 85 scholarships amongst an entire team averaging 118 players. Scholarship amounts per student-athlete could decrease overall, but an extra 33 student-athletes could now be on some amount of athletic-based aid. Talented student-athletes that were originally on the cusp of receiving one or none of the 85 scholarships could now receive an equivalent amount of financial aid and still attend schools with big-time programs. Overall, having an equivalency-based model for all sports would allow greater flexibility in the number of student-athletes on athletic based aid and the amount awarded per each.

A combination approach addressing previous concerns of stockpiling may be to classify all sports as equivalency while setting limits on the maximum percentage of athletes who receive aid above base scholarship limits. This approach does not limit participation opportunities but limits the potential for stockpiling. **This is our recommendation.**

Foundational Models & Model Variants

Three scholarship models were created to help explore an equitable division of scholarship allocations. These models are based on the average roster size of each sport (M1), NCAA travel squad size (M2), and the starting line-up size for each sport (M3) utilizing EADA and NCAA data from 2017. Having three different models gives the audience three different perspectives when it comes to scholarships needed. The first model, based on average roster sizes, is founded on the participation numbers that the schools currently carry for their sports. The second model, based on NCAA travel

roster size, is founded on what the NCAA currently believes each sport needs to fill a team. The third model, based on line up sizes, is founded on what the individual sports need to field a team.

Within each model, three additional variants were created to demonstrate depth of considerations and alternative lenses of interpretation. These variants were created to compare the ratio of football's scholarships to other sports (V1), reallocate scholarships in an equitable manner amongst all sports (V2), and to consider the different scholarship needs of contact and noncontact sports (V3). The foundational models and their variants are described below. These foundational models with scholarship allocation changes are included in table form within the appendix of this paper.

Model 1: A Scholarship Allocation Model based on Average Roster Size (See Appendix)

- **M1V1 (Football Ratio Adjustments):** Scholarship allocations for all sports are assigned based on football's ratio (.71) of numeric scholarship limits (85) to its average roster size (119.4).
- **M1V2 (Scholarship Restriction Considerations):** Scholarship allocations for all sports are assigned based on the ratio (.38) of total number men's and women's scholarships (440.3) to the total average roster sizes for men's and women's sports (1161.6).
- **M1V3 (Contact Sport Considerations):** Scholarship allocations for contact sports are assigned based on the ratio (.66) of total number of contact scholarships (158.9) to the total number of contact student athletes (241.2). Scholarship allocations for noncontact sports would be assigned based on the ratio (.31) of total number of noncontact scholarships (281.4) to the total number of noncontact student-athletes (920.5).

Model 2: A Scholarship Allocation Model based on NCAA Travel Squad Size (See Appendix)

- **M2V1 (Football Ratio Adjustments):** Scholarship allocations for all sports would be assigned based on football's ratio (1.21) of numeric scholarship limit (85) to its travel size (70).
- **M2V2 (Scholarship Restriction Considerations):** Scholarship allocations for all sports are assigned based on the ratio (.66) of total number men's and women's scholarships (380.3) to the total average travel sizes for men's and women's sports (572).
- **M2V3 (Contact Sport Considerations):** Scholarship allocations for contact sports are assigned based on the ratio (.99) of total number of contact scholarships (149) to the total number of contact student athletes (151). Scholarship allocations for noncontact sports would be assigned based on the ratio (.55) of total number of noncontact scholarships (231.3) to the total number of noncontact student-athletes (421).

Model 3: A Scholarship Allocation Model based on Starting Line-up Size (See Appendix)

- **M3V1 (Football Ratio Adjustments):** Scholarship allocations for all sports would be assigned based on football's ratio (3.54) of numeric scholarship limit (85) to its starting lineup size (24).
- **M3V2 (Scholarship Restriction Considerations):** Scholarship allocations for all sports would be assigned based on the ratio (.97) of total number men's and women's scholarships (452.3) to the total lineup sizes for men's and women's sports (466).
- **M3V3 (Contact Sport Considerations):** Scholarship allocations for contact sports would be assigned based on the ratio (2.41) of total number of contact scholarships (170.9) to the total number of contact student athletes (71). Scholarship allocations for noncontact sports would be assigned based on the ratio (.71) of total number of noncontact scholarships (281.4) to the total number of noncontact student-athletes (395).

Recommendations

Given the criticisms of the current NCAA scholarship model, the goal of this research is to provide new models based on data to form the foundation for the development of a more equitable model. Based on various analyses, we recommend M1V1 with a football scholarship adjustment to 75 as a starting point for a future scholarship model. This model facilitates Title IX compliance and additional sport-by-sport equity. Additionally, we recommend classifying all sports as equivalency while setting limits on the maximum percentage of athletes who receive aid above base scholarship limits for sports where stockpiling may be an issue. We recommend similar men and women's sports (e.g. basketball) be allowed the same number of scholarships given the similarities in game format. The scholarship limits in this model were either rounded up or down to the nearest whole number or .5 while similar men's and women's sports limits were averaged into one scholarship limit.

Recommended Starting Point - M1V1 Model with Football Limit set to 75 and All Sports Equivalency with Counter Caps

	Current Limit (M/F)	New Limit	Cap
Baseball	11.7	23	32
Basketball*~	13/15	12	17
Bowling	5	7.5	11
Cross Country/Track and Field~	12.6/18	67	94
Equestrian~	15	32	45
Fencing~	4.5/5	15.5	21
Football*	85	75	105
Field Hockey	12	15	21
Golf	4.5/6	6	8
Gymnastics**	6.3/12	12.5	18
Ice Hockey	18	16	22
Lacrosse	12.5	27	38
Rifle	3.6	3.5	5
Rowing~	20	52.5	74
Rugby	12	12	17
Sand Volleyball	6	10.5	15
Skiing	6.3/7	6	9
Soccer	9.9/14	19	26
Softball	12	14.5	20
Swimming and Diving~	9.9/14	20.5	29
Tennis**	4.5/8	6.5	9
Triathlon	3.5	3.5	5
Volleyball**	4.5/12	12	17
Water Polo	4.5/8	18.5	26
Wrestling	9.9	20.5	29
Total	221.3	490	687

Note: Rugby and Triathlon did not have EADA data. The current limit was used for this model.

*Previously Head Count

**Previously Head Count for Women

~Adjustment recommended due to large/potentially inflated EADA participation numbers

Given limitations in the EADA data, further discussion is needed relative to actual participation rates and scholarship needs for each sport to adjust and finalize scholarship limits. Some considerations for this model would include checking the accuracy of school's reported EADA participation rates. Also, some sports data could be inflated and considered "duplicate" (e.g., cross country and track and field) counting individual athletes multiple times due to the three sports they compete within. Lastly, the data used came from the 65 Power 5 schools, so to implement a new model across all DI, a larger sample of schools should be used to ensure that accurate participation rates are used.

We recommend all sports move to an equivalency model, with caps on the number of student-athletes that can receive financial aid in some sports where stockpiling of athletes may be an issue. Caps per sport were calculated by multiplying the sport's participation rate by 1.4 and then rounded to the nearest whole number. As previously stated, going towards an equivalency model for all sports would allow greater flexibility with sport programs having more student-athletes on financial aid and the amount received per student-athlete. Caps on how many student-athletes could receive financial aid would be set greater than the scholarship limit. This would help ensure that the practice of stockpiling would not return to certain sports.

Lastly, one major consideration going forward for a new model would be decreasing football's current scholarship limit. Football's large scholarship number has been the cause of diminishing Olympic programs (e.g., ice hockey, wrestling), restrictions on men's Olympic sport scholarship limits, and Power 5 dominance. Lowering the football scholarship limit would allow for a more equal playing field amongst all of DI, would help with Title IX compliance, and would lower the operating budget for schools. Considerations and conversation of lowering the football scholarship limit to 75 or 70 should be considered.

All three models and their variations are data-driven and give different perspectives on how the scholarship model could be more equitable and suitable for all sports. One could argue that the recommended model contains unrealistic scholarship limits for some sports, and this certainly appears to be the case when examining the total scholarships. In reality, only a small parcel of the sports are offered at most schools, and this model presents equitable scholarship figures across sports based on roster size. This model highlights the tremendous disparities between roster needs and scholarship allocation in this historic model for all sports other than football and basketball.

The goal of this research was to provide data-driven models to inform decisions about scholarship equity. Because M1V1 is based on current EADA participation data, all sports' participation should be examined and/or adjusted for accuracy, credibility, and sustainability to create an equitable model and these adjustments can be made in the available Scholarship Model Database. The other two models that examine NCAA Travel Squad Size (M2), Roster Size (M3), and averages of the three models (M4) provide additional perspectives on how many athletes are needed for travel and needed to field a team.

Foundational Model 1 - Scholarship Allocation Model based on Average Roster Size

	Men's Sports					Women's Sports				
	Current Limit	Average Roster Size	Variant 1 Football Ratio (M1V1)	Variant 2 Scholarship Restriction (M1V2)	Variant 3 Contact Sport (M1V3)	Current Limit	Average Roster Size	Variant 1 Football Ratio (M1V1)	Variant 2 Scholarship Restriction (M1V2)	Variant 3 Contact Sport (M1V3)
Head Count Sports										
Basketball*	13	15.7	11.2	6	10.4	15	22.4	15.9	8.5	14.7
Football*	85	119.4	85	45.3	78.7					
Gymnastics						12	19.3	13.8	7.3	5.9
Tennis						8	9.8	7	3.7	3
Volleyball						12	17.9	12.8	6.8	5.5
Total HC Limits	98	135.1	96.2	51.3	89.1	47	69.4	49.5	26.3	29.1
Equivalency Sports										
Baseball	11.7	36.8	26.2	13.9	11.2					
Bowling						5	12	8.5	4.5	3.7
CC/Track and Field	12.6	98.7	70.2	37.4	30.2	18	115	81.8	43.6	35.2
Equestrian						15	51	36.3	19.3	15.6
Fencing	4.5	26.6	18.9	10.1	8.1	5	23.4	16.6	8.9	7.1
Field Hockey						12	24.1	17.1	9.1	7.4
Golf	4.5	10.3	7.3	3.9	3.1	6	8.6	6.1	3.3	2.6
Gymnastics	6.3	20.7	14.7	7.8	6.3					
Ice Hockey*	18	27.6	19.6	10.4	18.2	18	23.3	16.6	8.8	15.4
Lacrosse	12.6	51.1	36.4	19.4	15.6	12	35.3	25.1	13.4	10.8
Rifle	3.6	5.8	4.1	2.2	1.8					
Rowing						20	83.6	59.5	31.7	25.6
Rugby*						12	N/A	N/A	N/A	N/A
Sand Volleyball						6	17.2	12.3	6.5	5.3
Skiing	6.3	11.3	8.1	4.3	3.5	7	8.3	5.9	3.2	2.5
Soccer	9.9	29.6	21	11.2	9	14	30.1	21.4	11.4	9.2
Softball						12	22.7	16.2	8.6	6.9
Swimming & Diving	9.9	32	22.8	12.1	9.8	14	32.9	23.4	12.5	10
Tennis	4.5	10.6	7.6	4	3.3					
Triathlon						3.5	N/A	N/A	N/A	N/A
Volleyball	4.5	20.8	14.8	7.9	6.4					
Water Polo	4.5	29.3	20.8	11.1	8.9	8	25.7	18.3	9.7	7.9
Wrestling*	9.9	32.8	23.3	12.4	21.6					
Total Equivalency Limits	123.3	444	315.8	168.1	157	187.5	513.2	365.1	194.5	165.2
Total Limits (HC + Equivalency)	221.3	579.1	412	219.4	246.1	234.5	582.6	414.6	220.8	194.3

Foundational Model 2 - Scholarship Allocation based on NCAA Travel Squad Size

Men's Sports						Women's Sports				
	Current Limit	Travel Squad Size	Variant 1 Football Ratio (M2V1)	Variant 2 Scholarship Restriction (M2V2)	Variant 3 Contact Sport (M2V3)	Current Limit	Travel Squad Size	Variant 1 Football Ratio (M2V1)	Variant 2 Scholarship Restriction (M2V2)	Variant 3 Contact Sport (M2V3)
Head Count Sports										
Basketball*	13	15	18.2	10	14.8	15	15	18.2	10	14.8
Football*	85	70	85	46.5	69.1					
Gymnastics						12	15	18.2	10	8.2
Tennis						8	9	10.9	6	4.9
Volleyball						12	15	18.2	10	8.2
Total HC Limits	98	85	103.2	56.5	83.9	47	54	65.6	35.9	36.2
Equivalency Sports										
Baseball	11.7	27	32.8	18	14.8					
Bowling						5	10	12.1	6.6	5.5
CC/Track and Field	12.6	N/A	N/A	N/A	N/A	18	N/A	N/A	N/A	N/A
Equestrian						15	N/A	N/A	N/A	N/A
Fencing	4.5	N/A	N/A	N/A	N/A	5	12	14.6	8	6.6
Field Hockey						12	24	29.1	16	13.2
Golf	4.5	5	6.1	3.3	2.7	6	5	6.1	3.3	2.7
Gymnastics	6.3	12	14.6	8	6.6					
Ice Hockey*	18	27	32.8	18	26.6	18	24	29.1	16	23.7
Lacrosse	12.6	32	38.9	21.3	17.6	12	32	38.9	21.3	17.6
Rifle	3.6	5	6.1	3.3	2.7					
Rowing						20	25	30.4	16.6	13.7
Rugby*						12	N/A	N/A	N/A	N/A
Sand Volleyball						6	12	14.6	8	6.6
Skiing	6.3	12	14.6	8	6.6	7	12	14.6	8	6.6
Soccer	9.9	21	25.5	14	11.5	14	22	26.7	14.6	12.1
Softball						12	20	24.3	13.3	11
Swimming & Diving	9.9	19	23.1	12.6	10.4	14	19	23.1	12.6	10.4
Tennis	4.5	9	10.9	6	4.9					
Triathlon						3.5	N/A	N/A	N/A	N/A
Volleyball	4.5	15	18.2	10	8.2					
Water Polo	4.5	16	19.4	10.6	8.8	8	16	19.4	10.6	8.8
Wrestling*	9.9	N/A	N/A	N/A	N/A					
Total Equivalency Limits	123.3	200	242.9	133	121.7	187.5	233	282.9	154.9	138.5
Total Limits (HC + Equivalency)	221.3	285	346.1	189.5	205.6	234.5	287	348.5	190.8	174.7

Foundational Model 3 - Scholarship Allocation Model based on Starting Line-up Size

Men's Sports						Women's Sports				
	Current Limit	Starting Line Up Size	Variant 1 Football Ratio (M3V1)	Variant 2 Scholarship Restriction (M3V2)	Variant 3 Contact Sport (M3V3)	Current Limit	Starting Line Up Size	Variant 1 Football Ratio (M3V1)	Variant 2 Scholarship Restriction (M3V2)	Variant 3 Contact Sport (M3V3)
Head Count Sports										
Basketball*	13	5	17.7	4.9	12	15	5	17.7	4.9	12
Football*	85	24	85	23.3	57.8					
Gymnastics						12	15	53.1	14.6	10.7
Tennis						8	12	42.5	11.6	8.5
Volleyball						12	6	21.3	5.8	4.3
Total HC Limits	98	29	102.7	28.1	69.8	47	38	134.6	36.9	35.5
Equivalency Sports										
Baseball	11.7	10	35.4	9.7	7.1					
Bowling						5	5	17.7	4.9	3.6
CC/Track and Field	12.6	54	191.3	52.4	38.5	18	51	180.6	49.5	36.3
Equestrian						15	16	56.7	15.5	11.4
Fencing	4.5	9	31.9	8.7	6.4	5	9	31.9	8.7	6.4
Field Hockey						12	11	39	10.7	7.8
Golf	4.5	5	17.7	4.9	3.6	6	5	17.7	4.9	3.6
Gymnastics	6.3	15	53.1	14.6	10.7					
Ice Hockey*	18	6	21.3	5.8	14.4	18	6	21.3	5.8	14.4
Lacrosse	12.6	10	35.4	9.7	7.1	12	12	42.5	11.6	8.5
Rifle	3.6	5	17.7	4.9	3.6					
Rowing						20	23	81.5	22.3	16.4
Rugby*						12	15	53.1	14.6	36.1
Sand Volleyball						6	10	35.4	9.7	7.1
Skiing	6.3	6	21.3	5.8	4.3	7	6	21.3	5.8	4.3
Soccer	9.9	11	39	10.7	7.8	14	11	39	10.7	7.8
Softball						12	10	35.4	9.7	7.1
Swimming & Diving	9.9	18	63.8	17.5	12.8	14	18	63.8	17.5	12.8
Tennis	4.5	12	42.5	11.6	8.5					
Triathlon						3.5	N/A	N/A	N/A	N/A
Volleyball	4.5	6	21.3	5.8	4.3					
Water Polo	4.5	7	24.8	6.8	5	8	7	24.8	6.8	5
Wrestling*	9.9	10	35.4	9.7	24.1					
Total Equivalency Limits	123.3	184	651.7	178.6	158.2	187.5	215	761.5	208.7	188.8
Total Limits (HC + Equivalen	221.3	213	754.4	206.7	228.0	234.5	253	896	245.6	224.3

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