



OFFICE OF THE SUPERINTENDENT
UNITED STATES MILITARY ACADEMY
WEST POINT, NEW YORK 10996-5000

MASP

AUG 24 2017

MEMORANDUM FOR Defense Advisory Committee on Women in the Services
(DACOWITS)

SUBJECT: Sources of and Rates of Injury of West Point Cadets

1. Thank you for your interest in injury rates among Cadets at the United States Military Academy (USMA). USMA's mission is to educate, train, and inspire the Corps of Cadets so that each graduate is a commissioned leader of character committed to the values of Duty, Honor, and Country and prepared for a career of professional excellence and service to the Nation as an officer in the United States Army. As such, we prepare our future leaders to lead in the crucible of ground combat. To accomplish this mission, approximately 4,400 Cadets participate in our rigorous curriculum annually. USMA is invested in ensuring Cadets train safely and in a manner that minimizes injuries so that they are physically ready to become commissioned officers upon graduation.
2. USMA maintains a database known as the Cadet Illness and Injury Tracking System (CIITS) to identify injury sources and patterns, as well as to provide duty-limiting profiles to Cadets. The data provided within this response represents all causes of injuries occurring to Cadets between 01 August 2012 and 01 August 2017. This includes approximately 9,000 Cadets who have been part of the Corps of Cadets over the last five years. For this response, the number of days a Cadet spends on quarters is used to approximate the number of lost training days. Additionally, there is no standard definition for "light duty," thus for this response, the length of the profile is used to estimate the number of days a Cadet spent on "light duty."
3. While CIITS contains extensive data, there are some limitations. Our data likely overestimates the number of days Cadets spent on profile or confined to quarters for a number of different reasons. Chief among them is duplicate entries by different medical providers (i.e. a physical therapist and a primary care provider both caring for the same Cadet) and lack of ability to expire a profile authored by another medical provider, even if the Cadet is returned to duty. Additionally, data entry consistency can vary due to medical provider discretion in how profiles are entered into CIITS, as there are more than 100 medical providers that entered data over the last five years. This data also does not account for Cadets that are traveling on a semester abroad or other sponsored travel, Cadets who are hospitalized, or those who return home on a medical leave of absence. Finally, Cadet injuries related to military training occurring away from West Point may be underreported, because other installations do not have access to CIITS.

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4. Annually, Cadets spend a total of 64,000 days on profile and 3,200 days on quarters. For approximately 9,000 Cadets in the last five years, this amounts to an average of seven days on profile per Cadet per year and 0.35 days confined to quarters per Cadet per year. Of note, not all of these profiles are entered for reasons of duty limitation. Sometimes they are entered to authorize altered wear of the uniform, shaving modifications, or other accommodations. Thus, this number likely overestimates the number of days that Cadets were on "light duty."

5. For approximately 9,000 Cadets that have passed through USMA over the last five years:

a. For all types of injuries, 27 percent of all days on profile and 24 percent of all days on quarters were due to free time injuries. This amounts to approximately 1.96 days on light duty per Cadet per year and 0.09 days confined to quarters per year. The most common cause of injuries during free time was running.

b. For all types of injuries, 4 percent of all days on profile and 0.03 of all days confined to quarters were due to boxing program related injuries. In total, 5,549 Cadets completed the mandatory 19 lesson boxing course. Of these, there were 340 unique injuries over the course of five years. This amounts to approximately 70 boxing related injuries annually for the approximately 1,200 Cadets who take the course, or 5 percent of Cadets enrolled in boxing annually. Of the 340 unique boxing related injuries, 167 (49.1 percent) were classified as "head" injuries in CIITS. Of these, 151 (44 percent) injuries were due to concussion. This is typically how concussions are entered in CIITS, but may overestimate the amount of concussions due to the boxing program because of other head injuries that are categorized similarly. Concussions from boxing represented 14 percent of all concussions sustained by USMA Cadets in the last five years.

c. During the last five years, there were 96,891 total boxing exposures in the boxing course, with an average concussion exposure rate of 1.54. A "boxing exposure" is one Cadet attending a boxing session, whether that be a boxing class session, or a team boxing practice. Concussion exposure rate is the rate of concussion per 1,000 exposures and is defined as the number of concussions divided by athlete-time (number of athletes multiplied by measure of time). Additionally, numerous risk mitigation measures exist to help mitigate the risk of concussion. All Cadets participate in DoD-NCAA Grand Alliance baseline testing, a national multi-site consortium to better understand concussive injury and recovery in order to enhance safety and health in student athletes. Cadets also receive consistent care with a physician-led concussion care clinic and the Head Injury Working Group provides strategic review of concussion policies, Return to Play/Return to Learn protocol, and injury patterns to recommend safer training environments and maximize recovery efforts for return to classroom and athletics.

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d. For all types of military training injuries (summer training and Sandhurst), 18 percent of all days on profile and 6 percent of all days on quarters were due to training related injuries. This amounts to approximately 1.27 days on light duty per Cadet per year and 0.2 days confined to quarters per Cadet per year. Cadets participate in a variety of training during and between academic years, with the primary intent of mission readiness for leadership in combat.

e. For all types of injuries, 27 percent of all days on profile and 21 percent of all days on quarters were due to participation in NCAA Division 1 sports. This amounts to approximately 1.9 days on light duty per Cadet per year and 0.8 days confined to quarters per Cadet per year. There is a possibility that the total number of injuries is underestimated, as minor injuries that do not require the care of a physician are usually treated by team athletic trainers, who do not use CIITS.

f. For all types of injuries, 23 percent of all days on profile and 36 percent of all days on quarters were due to participation in all other sports, including competitive clubs (club boxing as well), hobby sports, and company athletics. This amounts to approximately 1.7 days on light duty per Cadet per year and 0.1 days confined to quarters per Cadet per year. Over a five year period, this represents over 9,000 Cadets exposed to multiple potential sources of injury.

6. There were no other major sources of injury that caused a loss in training or instructional days.

7. USMA is committed to the continued safety of its future leaders. As such, we will continue to monitor injury rates and, as we have in the past, take action wherever necessary to ensure that our graduates leave West Point mentally and physically ready to take on any mission.

8. POC for this memorandum is CPT Amina Moghul, D.O., USCC Surgeon, OIC of the Mologne Cadet Health Clinic, (845) 938-4703.



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