

# HSA TIMES

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### Do Know Harm: How the Military Made Emergency Medicine

Ryan Lo | Grade 10





In the eyes of their enemies, the United States military is nightmare covered in red, white and blue. In a mere weeks, they could overwhelm and destroy entire nations. When the word is given by our commander-in-chief, America's military can wipe the floor with oppressive regimes, overzealous European countries, delusional terrorists and during the 1860's, could even beat themselves.

One of the things that makes them so deadly is their extensive portfolio of combat experience. The US military has learned many lessons, some harder than others. During the mid to late 20th century and early 21st century, the face of modern warfare began to change. The US was no longer fighting in large-scale battles against conventional armies, but instead, in occupational missions against small groups of guerilla insurgents using unconventional tactics. The result? Lots of flag-draped caskets heading back to mourning families in NATO nations.

Out of the adversity, the military then began to evolve. Better body armor and helmets have cut back on traumatic battlefield injury. More medics were trained and each soldier began to receive more extensive training in first aid. Slower medical support units were instead replaced by smaller and more flexible, Forward Surgical Teams or FSTs that were situated closer to the frontline so that they could treat casualties faster. Nimble HH-60M Blackhawk helicopters were purposed with the task of quickly grabbing injured soldiers and medevacking them to treatment centers. But it doesn't stop there. Technology such as ultrasound was first developed for the military. This also included with other innovations such as tourniquets, mechanical devices that suppressed bleeding in the extremities, and I/O infusion, an intervention that involves drilling into the bone to administer medicine when a vein cannot be found for an IV. All of the above has resulted in combat fatality rates today hovering around 10 percent, the lowest it has ever been in the history

of the US.

### Do Know Harm: How the Military Made Emergency Medicine

continued

Ironically in war, car accidents and careless accidents such as falling off a ladder still plague US soldiers. Every injury overseas whether combat-related or not is recorded into the Department of Defense's Trauma Registry. The information is then used by both military and civilian researchers. Through the registry, attention was shed on the countless fatalities caused by uncontrolled hemorrhage and other effects of trauma, leading to the improvement of treatment guidelines involving bleeding control and blood transfusions.

However, these pale in comparison to the military's contribution to the concept of triage. Coming from the French word meaning, "to sort." Triage was a system of treating patients in order of severity. For example, a soldier who is unconscious and bleeding profusely from his blown off leg is likely to be treated first than the one who has a broken leg and a concussion. In modern times, it was adopted by emergency rooms and trauma centers across the US which has saved countless lives.

Although it is terrible, war can teach us many things. With each new conflict, more advances in medicine are made. In an odd and twisted way, the caskets lowered into the ground today can give rise to new tomorrow for the field of emergency medicine. This then begs the question. How many lives will World War Three save?

Source: Dr. Torran McGee from ACEP Frontline Podcast

# Western University



Ayesha Karim | Grade 11



As students in the Health Science Academy, we all know how challenging it can be to decide what definite career is the one for us, and what school will help us get there. After the field trip to Western University, I realized that it didn't matter what specific career I picked, because this whole field of medicine is amazing, and every aspect of it is an exciting journey that I can't wait to start.

The trip consisted of us exploring three different careers: dentistry, nursing, and physician's assistant. As someone who has always considered nursing as my top option, I was surprised at how interested I was in the dentistry presentation. We were brought into a dentist stimulation room, where dentistry students were actually practicing on the mannequins. We were then shown a presentation on how to fill in a cavity. After being provided the tools to do it ourselves, we each got to fill in some fake teeth, and the best one would get a prize. Being under that light filling in that tooth was one of the most exciting things I have ever experienced.



While the career presentations were interesting, the highlight of the trip was the cadaver lab. When we first entered, the strong smell of chemicals made me want to leave right away. However, upon seeing the bodies, I was so glad I didn't. There were about thirty to forty cadavers laid on the tables, with white sheets covering them. I will never forget the sight of the body being opened, to reveal all the very real organs our skin and flesh conceal. Holding a real human heart in my hands was eye-opening and seeing the size and shape of each individual organ was breathtaking. This field trip was everything a person hoping to go into the medical field dreams of, and if I ever get the chance, Western University would be an amazing school to go to.

## Nick Vujicic: Inspirational Speaker

Shreya Arcot | Grade 10



Imagine being born without arms or legs. Imagine being bullied and depressed to the point where you think, and even try, of just giving up. And imagine overcoming all these obstacles and making the best of them. Meet Nick Vujicic, the inspirational speaker, who has been to 17 countries, spoken with 18 presidents, traveled around the world for a total of 3,000,000 miles (which is over 120 times around the world!), and has spoken to ten governments, three of which have changed their laws after he spoke. On May 6, 2019, Nick came to CHHS and gave a beautiful message of hope, love and strength to students and parents across the district. Nick started his speech with jokes and funny stories to break the ice and connect with the students. For instance, he told us of a time when he went into the overhead storage container above the seats of a plane, with the help of his friends, and scared a passenger. With these stories and humor, it was immediately obvious that Nick was filled with love for his family, for himself and for everyone around him.

Nick was born in Australia, and no one, not even the doctors, knew that he was going to be born without limbs until after his birth. Although it was a big shock to his parents at first, they were a constant support to him. In 1989, Nick's mom spoke to the government, and Nick became the first special needs kid to go to school. At school, Nick was constantly bullied and teased for his appearance. He told us how it was so easy for anyone to go up to him and say mean things, but when he got home from school, those words were constantly replaying in his head and making him depressed. Nick told us that we need to love ourselves, despite what other people think or say. When we are bullied, we have a choice. We can either believe the negative words spoken about us or we can use them to become a better, stronger person. Nick told us that one day, he went to his bully and asked him what his problem was, and he soon learned that he had been bullied because of a broken home situation in the bully's house. All those emotions inside of him were then taken out on Nick.

In order to show the reality of the problem faced in teenagers across the world, Nick did a survey with all the students in the large gym. He made everyone bow their heads, close their eyes and put their hands up, and every time he asked a question, we would have to make a fist if our answers were yes. After finishing this survey, Nick determined that in the large gym alone, 1 in 10 students had thought about giving up, 1 in 20 have tried, and of the people that tried, 12 had tried due to a broken home situation and 6 had tried due to bullying. With these numbers in mind, Nick told us to talk to a friend, adult, etc. to help us with any situation we are in. Furthermore, it is important to reach out to people, ask them how they are doing, and be thankful for what we have. Finally, Nick told us that change will always start with us, so no matter how tempting it may be to tease someone or spread gossip, you should never do it. Because remember, as Nick said, what goes around, comes around.

## Senior Sendoff



Najia Saleem | Grade 11

Graduation from the Health Science Academy is a culmination of four years of hard work that goes beyond the traditional classroom setting. HSA students are required to attain 100 medical hours generally through an internship. For any student to graduate with the distinction of HSA, it is a tremendous accomplishment. This year Courtney Price and Isabella Panagiotou, members of the HSA Times staff, will be graduating, and they decided to sit down with me to share their experiences and wisdom.







**Courtney Price** 

The first question I asked them is what HSA has meant to them over the course of their high school career. Isabella and Courtney both felt that HSA gave them a family which helped ease the transition from junior high to high school. For both freshman and sophomore years, HSA students commonly share many classes together, so the two were able to develop close friendships.

By sophomore year, they began increasing their course load and signing up for internships. Courtney interned at Priceless Pets, an animal shelter, where she was able to administer medicine and work closely with veterinarians. Later, she joined LiveWell Therapy, a family counselor in Chino Hills, where she was able to attend clinical trial meetings and submerse herself in the field of psychiatry. These experiences helped Courtney decide what fields she liked and disliked, and she was further able to develop her time management skills. Isabella interned at Beach Cities Dermatology where she got the opportunity to sit in over 40 surgeries. She would prepare surgery trays and even help the physician to cauterize skin. Through her internship, she was able to reaffirm her belief in medicine and realize the many pathways that exist in the field of medicine. Her advice for HSA students is to enjoy their internships rather than just completing the requirement. She also urges students to keep an open mind as you never know what career best suits you until you go out and try working for a day.

Besides work experience, Isabella and Courtney had an abundance of advice about applying to college. They warned against not applying to enough colleges, especially when the requirements are lax. They also advised students to look at the environment, cost and compatibility of the college rather than solely the prestige. Additionally, they expressed their dismay for HSA students that were sufficiently qualified but failed to turn in the proper paperwork or meet deadlines. Being successful in their senior year, Isabella and Courtney are proud to announce their acceptances to world-class universities. Isabella will be heading to UC San Diego to study General Biology, and Courtney will be attending UC Santa Barbara as a pre-chemistry student. We wish them great luck in their future endeavors and hope that you will take their advice.

# HSA Seniors - College Bound

Student	College	Major
Melissa Avalos	California Baptist University	Nursing
Isabel Carandang	University of California Riverside	Public Policy
Isabel Caymo	University of California Davis Bi	ochemistry/Molecular Biology
Jasmine Chandler	University of La Verne	Kinesiology
Hailey Danskin	University of Hawaii at Mānoa	Kinesiology
Maya Desai	University of California Riverside	Psychology
Stephanie Fung	California State Polytechnic University	Kinesiology
Serena Gallegos	University of La Verne	Business Administration
Sebastian Hernandez	California State University Fullerton	Pyschology
Brandon Kotoff	California State University Fullerton	Criminal Justice
Samantha Laureta	University of California Riverside	Psychology
Cassidy Lee	University of California Santa Barbara	Biology
Shalsy Martinez	San Jose State University	Marine Biology
Jason Matson	California State University Northridge	Music Industry Studies
Madison Menard	California State University Fullerton	Psychology
Isabella Moreno	California State University San Bernardino	) Nursing
Isabella Orozco	University of California Riverside	Cellular, Molecular, Developmental Biology

Student	College	Major
Isabella Panagiotou	University of California San Diego	General Biology
Selena Parga	California Baptist University	Health Science
Levyan Pham	University of California Irvine	Pharmaceutical Science
Courtney Price	University of California Santa Barbara	Biochemistry
Hana Roble	University of California Riverside	Biology
Isabella Sifuentes	Azuza Pacific University	Nursing
Sara Takenaka	California Baptist University	Psychology
Meghan Thompson	University of Florida	Microbiology
Weeince Tsang	University of California Riverside	Biology
Heather Varnes	Grand Canyon University	Nursing
Petcy Yao	University of Southern California	Health Promotion and Disease Prevention

Collaga

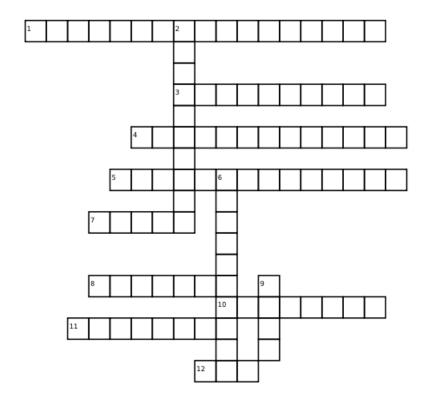
Major

Student

Sending all our support to the graduating HSA Seniors! Good luck for all your future endeavors!

- HSA Times

## **HSA** Crossword



#### Down:

- 2. modern warfare
- 6. medicine
- 9. Nick Vujicic

#### Across:

- 1. ultrasound
- 3. UC San Diego
- 4. veterinarians
- 5. psychiatry
- 7. Technology
- 8. organs
- 10. Courtney
- 11. career
- 12. internships