



EMERGENCY!



COUNSELOR'S LOG



**EMERGENCY
PREPAREDNESS**

THE H^YPOSPRAY



Red Cross Carrying off the Wounded by Victor Tardieu

Contents

From the Editor's Desk	ii
Welcome to The Hypospray	iv
Emergency!	1
Shining the Light on the "Lady with the Lamp"	2
Doctor McCoy's Emergency Medicine...	10
From The Regions.....	15
Public Health	30
Counselor's Log	32
Historical Archives	34
Memory Alpha.....	36
Cadets' Corner	40

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From the Editor's Desk

I cannot believe we are on our fifth edition! Building the Hypospray over the past year has been a labour of love. So many amazing contributions connecting Star Trek and medicine have been sent in that I am spoiled for choice. The stresses of the continuing pandemic and the ever-changing lockdown rules have us all tired. Thankfully we have SFM to distract and entertain us! Thank you for joining me on this journey to revive the 'Spray and I hope you are enjoying the new format!

LLAP,

Jessica Odell

Editor In Chief





For Russell Camp
Elizabeth Parmley
Carnell Eubanks
Mike Perry
and
Wayne Davis

Welcome to The Hypospray

Welcome to the 5th edition of the Hypospray.

This edition we focus on emergency medicine through the ages from the French Revolution up to modern day.

We see during the French Revolution Dominique Jean Lary after seeing the speed with which the carriages of the French flying artillery manoeuvred across the battlefields, applied the idea of the first ambulances, or "flying carriages", for rapid transport of wounded soldiers to centralised hospital sites which, as seen in the following world wars and later Vietnam war the Mobile Army Surgical Hospital "MASH" units staffed with specialist medical Staff.

In 1952 the first casualty consultant was appointed in the U.K. and in 1961 the United States established 24/7 year-round emergency care, which became known as the "Alexandria Plan". Which in turn led to the establishment of the American College of Emergency Physicians of (ACEP) and emergency medicine training programs by the AMA and the AOA and led to the world's first emergency medicine residency program in 1970 at the University of Cincinnati.

So we can see Emergency medicine as a medical specialty is still relatively young and Prior to

From The Office of The Surgeon General



Mark Logan, SG



Pippa Slack, DSG

We're halfway through the year already! Enjoy your summer, and this edition of the 'Spray!

LLAP,
Jessica Odell
Editor in Chief

the 1950's hospital emergency departments were generally staffed by physicians on staff at the hospital and a variety of other specialists on a rotating basis.

Please enjoy what is a fascinating look at the development of Emergency Medicine.

Mark Logan

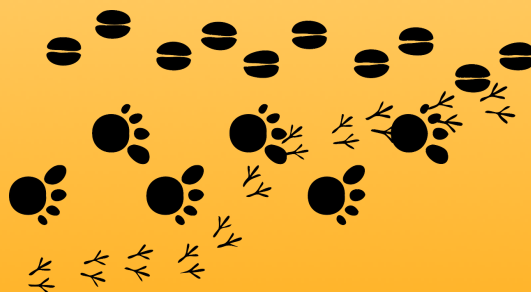
Surgeon General

FLEET MEDICAL CHALLENGE!

For the month of June, Regions are challenging each other to see who can take the most steps!

Do you regularly track your steps? Joining in is easy! Just contact your local Medical Officer, your ship's CO, or your Regional ASG!

Who's going to go the distance?!



Emergency!

It is ironic that this month's subject is Emergency Medicine. It was 21 years ago this month that a tornado hit our tiny town of about 5000 people. My then 3 month old son was squashed under myself and husband trying to protect him, as we heard the tornado rumble overhead.

For those of you who do not have to deal with tornados in your region, for protection you either go in your basement or storm cellar. If you do not have those you go to the lowest floor in your home, and take cover in a room with no window, and preferably no glass. For instance, my parents home did not have a basement. So I had to push their wheelchairs into the bathroom that was an interior room and cover them with a comforter.

After a tornado has struck your area, you want to take care of your family first. Make sure that no one has been injured. Often times you are the only provider for sometime until help arrives. Please familiarize yourself with emergency first aid procedures! At the time of our tornado the cell phone lines were not working. Once they were restored, we would have been able to call for help at that time.

Remember you Midwesterners. It is the season to be weather aware. Consider installing an app on your phone, to alert you to dangerous weather headed your way.

<https://www.weather.gov/safety/tornado>

Laura Felty

Shining the Light on the “Lady with the Lamp”

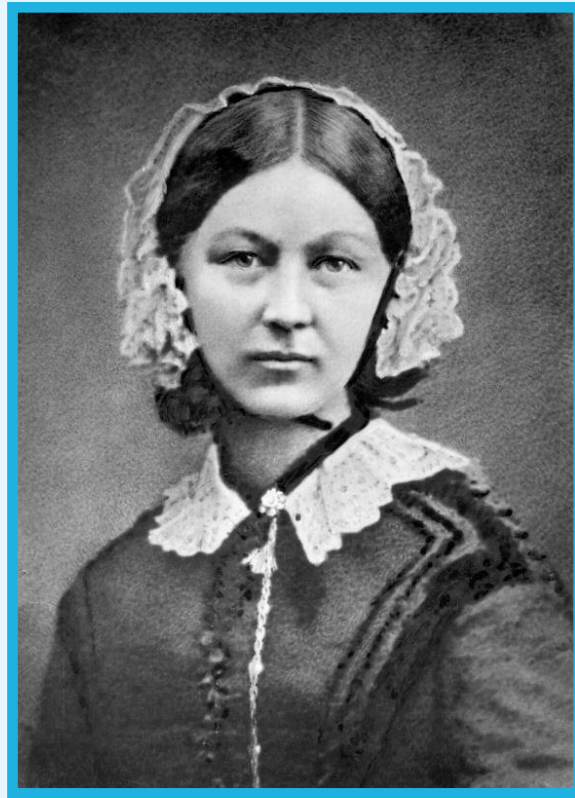


Figure 1. Florence Nightingale C. 1860

Many people have heard of Florence Nightingale as a heroic nurse who saved many lives during the Crimean War of 1853-1856, but how many of you know much more about her than that she was ‘The Lady with the Lamp’ and how exactly she influenced modern healthcare?

Florence was born to wealthy parents William and Frances Nightingale in 1820 in Italy whilst they were on vacation in Florence – and hence her name (similarly, her sister Parthenope was also named after her place of birth, in the Greek settlement that is now part of the city of Naples). Thanks to her father’s very modern idea that women should be educated he sought to ensure that his daughters were well educated in the fields of history, mathematics, Italian, classical literature and philosophy; Florence in particular showed great aptitude for collecting

and analysing data which it turns out became extremely useful to her in her later career.

Even though Florence was brought up in a wealthy society where she would have been expected to marry and start a family, she instead felt a deep urge to devote her life to the service of others. From a very young age Florence chose to minister to the ill and poor in the village next to her family's estate and in 1844 she enrolled as a nursing student in the Lutheran Hospital of Pastor Fliedner in Kaiserwerth, Germany, despite the fierce protestations of her family.

Florence's first job brought her back to London in the early 1850's before the Crimean war where she worked in a Middlesex hospital looking after infirm governesses. She did such a sterling job here that she was promoted to Superintendent within her first year of the job! It was also a job that presented her with the first of many challenges ahead of her, when a Cholera outbreak took hold and unsanitary conditions allowed the rapid spread of the outbreak. Her hard work cost her dearly and she was quite unwell for a time herself... only just recovering just as the Crimean war broke out in October of 1853.



Figure 2. Florence Nightingale working at Scutari hospital

By 1854, 18,000 soldiers – and probably more than this – were admitted into military hospitals as a result of the fighting. These military hospitals were not the hospitals we have today, sadly. There were highly understaffed, disgracefully unsanitary and frankly many were inhumane in the level of care that they provided. Up until now there were also very few female nurses at such hospitals also, as they had previously had a poor reputation.

A close work colleague of Florence's who happened to also be the Secretary of War, Sidney Herbert, asked Florence to organise a corps of nurses to help tend to the ailing soldiers in the Crimea and without a moment's doubt, she rose to the challenge assembling a team of 34 nurses from various religious orders. They sailed together to the Crimea just a few days later not knowing quite what to expect.

They could not have anticipated what they would find in their worst nightmares.

Scutari, the British Hospital in Constantinople sat above a large cesspool which grossly contaminated their water supplies in the building and surrounding the area. Patients lay in their own filth on stretchers in the hallways with disease vectors such as rats and flies freely running around patients, often patient's clothing itself was infested with lice, fleas and other bugs. Water needed to be rationed as well as medical supplies, even supplies such as bandages and soap were in desperately short supply. There were only 14 baths available for over 2,000 patients! Unsurprisingly many patients were succumbing to infectious diseases such as Cholera, Typhus, Dysentery and Typhoid rather than their original injuries sustained in battle. Luckily for them, Florence had already faced one outbreak of Cholera in her career and had learned from it. She knew that the source of such infections previously came down to diet, dirt and drains.



Figure 3. J. A. Benwell; coloured lithograph of Florence Nightingale checking in on her patients and administering medicine at Scutari Hospital.

The flaws in the system were quickly identified and cleanliness was top priority and she had to fight with military officers she disagreed with in order to improve the care for the soldiers, ironically... because they felt she was a woman who was attacking their own professionalism and not behaving as a woman should. She managed to find hundreds of scrub brushes and asked the other nurses as well as those patients who were well enough to help to clean every ounce of the hospital from top to bottom. She managed to organise a Sanitary Commission to be sent by the British Government to flush out the sewers and improve the ventilation through the hospital.

She improved their nutrition by providing an “Invalid’s kitchen” where food was cooked for patients who had specific dietary needs and they were given cutlery, plates and glasses to use which could be cleaned each time. She set up a laundry facility so that all of the patients would have clean sheets and linens and she purchased a huge quantity of clean shirts for the patients. She set up a classroom and library so that patients would have access to education and

entertainment... a vital component for the recovery of their mental health, which we would recognise today as being leaps and bounds ahead in the thinking of the day.

She spent her time not only transforming the system, but of course spent every minute of her waking day... and often night also, caring for the patients. Her compassion was boundless and within barely any time she became known as the “Angel of the Crimea”, or alternatively and far more famously from her nightly wanderings after the medical officers retired for the night, “The Lady with the Lamp.”



Figure 4. Florence's Lamp

On the 2nd of May, 1855, Florence left Scutari hospital to go and see for herself the conditions that the soldiers were facing on the battlefield. Consequentially, this proximity to the war-zone left her vulnerable to contracting “Crimean fever”, which she did within a few days of being at Balaklava. She was so seriously ill that it was feared that at one point she was near death, but thankfully within three weeks she was much more stable and doing better. Never one to let up with what needed to be done, her recovery was much hampered but she persisted as stubbornly as ever.

Florence spent a year and a half at Scutari before eventually returning back to London in the summer of 1856 once the Crimean conflict had ended and the last wounded man had left the hospital. On the 11th October 1858 Florence wrote a volume to Queen Victoria called, "Notes on Matters Affecting the Health, Efficiency and Hospital Administration of the British Army" which showed that the health of many of the men in the army had a direct bearing on its effectiveness as a fighting machine. This illustrated the large number of deaths that occurred in the Crimea that were entirely preventable from diseases (in blue in the diagram below) as opposed to those deaths which occurred solely from battlefield injuries or other causes (red and black in the diagram below). Ultimately it showed that approximately 16,000 of the 18,000 deaths could have been prevented, had better conditions prevailed. Ultimately this note led to the establishment of a Royal Commission for the Health of the Army in 1957 as well as the United States Sanitary Commission.

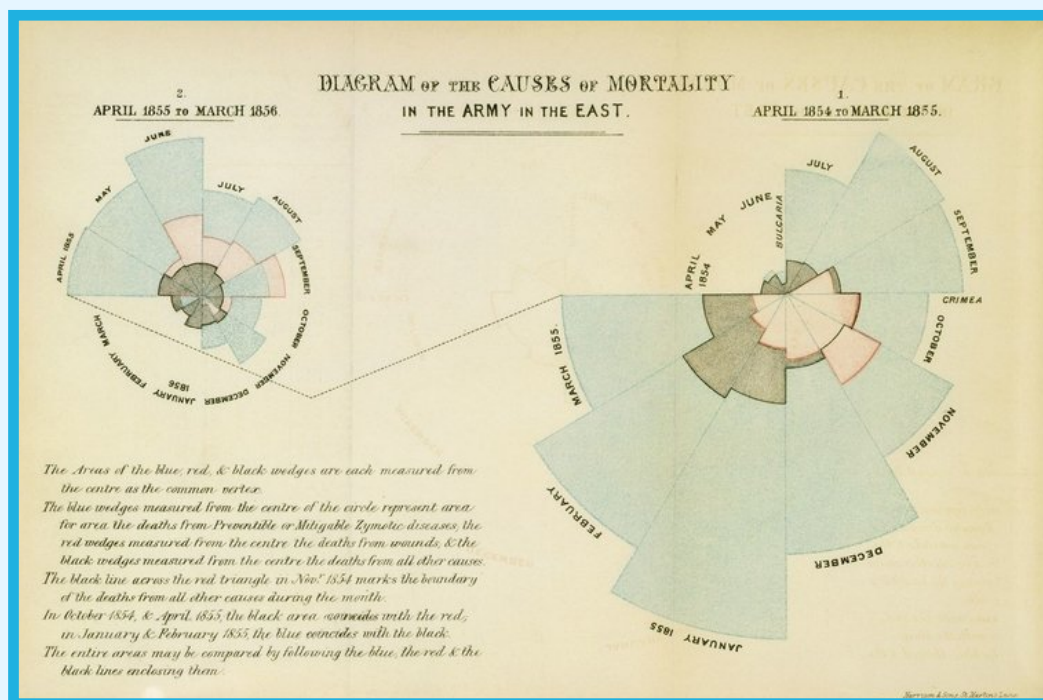


Figure 5. Nightingale Rose Diagram

Florence also discovered that the soldiers would have had a better chance of survival if they had been treated at the battlefield (12.5% mortality rate) than if they were transferred further away to hospitals like the one at Scutari (37.5% mortality rate). This representation of the data in to this visual format became known as the Nightingale Rose Diagram and played a significant role in helping people understand complicated data, with the effect that it set of a chain of changes to how things were done from this point onwards.

In 1859 Florence wrote the book “Notes on Nursing” which is still regarded as a pioneering text today. She set up training schools for nurses in 1860, one of which still runs today. She wrote thousands of letters campaigning for public health and workhouse reform – in many ways the industrial battlefield for many after the Crimean war. She inspired the groundwork for the National Red Cross and Red Crescent societies to later open, where they now care for the wounded and sick soldiers in battle.



Figure 6. Marble bust made by Sir John Robert Steell, given to Florence Nightingale by men of the British Army in 1862

In 1870 Florence mentored a lady called Linda Richards – who became America's first nurse. Eventually Linda returned to the USA with the training and knowledge to establish high quality nursing schools and later also became an innovative nursing pioneer in the USA and Japan.

In 1893 the Nightingale Pledge was created for nurses – a statement of ethics and principles of the nursing profession, much like the Hippocratic oath for Medical doctors.

In today's battlefield of the Covid-19 pandemic, Florence's hygiene message still plays a vital role. Washing hands with soap breaks down the lipid coat of the virus, essentially destroying it and even outside of a pandemic hand washing is essential – and especially so for nurses and other healthcare professionals. Masks play a role in helping to reduce transmission of the virus, as does social distancing.

Florence finally died at the ripe age of 90 on the 13th August, 1910 having suffered from ill health and being bed ridden for many years after the Crimean war. From the lessons learned that the Lady with the Lamp taught us all, it is almost incalculable how many lives have been saved, or improved.

Thank you, Florence, for your dedication and compassion.

She is a "ministering angel" without any exaggeration in these hospitals, and as her slender form glides quietly along each corridor, every poor fellow's face softens with gratitude at the sight of her. When all the medical officers have retired for the night and silence and darkness have settled down upon those miles of prostrate sick, she may be observed alone, with a little lamp in her hand, making her solitary rounds.

— Cited in Cook, E. T. The Life of Florence Nightingale. (1913) Vol 1, p 237.

Pippa Slack

Doctor McCoy's Emergency Medicine

He's a sounding board for the captain and a sympathetic ear for his crewmates. For the audience, he's a stand-in that reminds us that space is disease and danger wrapped in darkness and silence, but that humanity is going to make it. He's assisted in births both humanoid ("Friday's Child") and not (the Gorn birth alluded to in *Star Trek Into Darkness*), cauterized a penetrating wound with a hand phaser (*Star Trek Beyond*), created a vaccine while the Enterprise is in a death spiral above a dying world ("The Naked Time") and put up with a certain half-Vulcan science officer continually putting him in his place. He's the man of the hour, Doctor Leonard McCoy, and here are five times his medical prowess saved the day.

1). *Miri*: Captain Kirk, Spock, Dr. McCoy, Janice Rand, and two crewmen beam down to a world that's an exact replica of Earth, mid-20th Century. The city they arrive at is near-empty, with just a small group of survivors fighting for life: human children ("Onlies"). The team discovers that the strange circumstances are the result of a pathogen unleashed by a medical experiment to prolong life and the landing party has been exposed. The landing party now has a ticking clock tied to their survival (except for Spock who seems to be immune) So McCoy undertakes a desperate search to isolate the organism responsible for their condition and to find a cure.



Despite overwhelming circumstances such as, primitive conditions, and the theft of their communicators, which are needed to connect with the computers on the Enterprise, McCoy, manages to find the organism responsible for the

condition and synthesizes what he thinks may be a vaccine. When presented with the possible cure, Spock states flatly that the viral may be one of death since they do not know what dosage would be required. To prove Spock wrong and to test the cure, McCoy injects himself with the vaccine. Of course, he saves the day by finding that his vaccine did in fact work.

2). The Devil in the Dark: Miners on Janus VI have been stricken by a series of mysterious deaths, and the Enterprise answers their distress call to look into the situation and find the cause. They soon discover the Horta, an acid-emitting, silicone-based creature has been wounded in a series of escalating conflicts between the humans and herself. Spock decides to go ahead and mind-meld with her and discovers that she's just trying to protect her babies. Kirk sizes up the situation and calls McCoy down to help the hurt alien.

McCoy examines the rocky-skinned patient and says "I'm a doctor, not a bricklayer." He then has a hundred pounds of that thermoconcrete beamed. Next, applies this silicone-based construction material into the wound, where it will act as a bandage until the Horta heals.

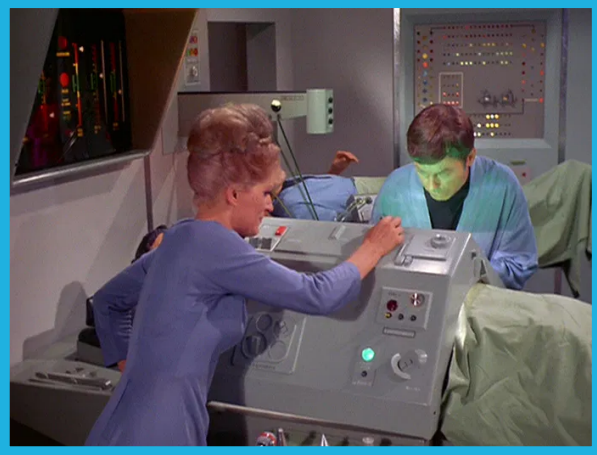


3). Amok Time: Defying Starfleet orders, the Enterprise diverts itself to Vulcan to help Spock, who is suffering from pon-farr, a debilitating biological urge that Vulcans undergoes every seven years, where they have to mate or die. Once they reach the planet, Spock announces that he is married. At age 7, Spock was telepathically bonded with a young Vulcan girl named T'Pring. The telepathic touch would draw the two together when the time was right after both came of age. T'Pring, however, is in love with another Vulcan, Stonn. Because of this love she

opts for kal-if-fee, in which Spock will have to fight for her love. She chooses Kirk as her champion instead of Stonn, knowing that if Kirk wins he will not want to marry her and if Spock won he would release her from their vow. Kirk and Spock enter combat with one another using traditional weapons. McCoy requests permission to inject the captain with a tri-ox compound to help him compensate for the planet's thinner atmosphere. Spock seemingly kills Kirk and McCoy has himself and Kirk beamed up immediately. Spock, shocked at the ritual murder he's just committed, snaps out of the plak tow. Upon return to the Enterprise, Spock says he is turning himself in to be court-martialed and then Kirk appears alive and well. McCoy had actually given Kirk a neural paralyzer that "knocked him out" simulating death.



4). Journey to Babel: The Enterprise returns to Vulcan to pick up Ambassador Sarek as part of a diplomatic party that's being transported to Babel, a neutral planetoid perfect for negotiations. To the surprise of Kirk and McCoy, it's revealed that Sarek is Spock's estranged father. A mysterious vessel is trailing the Enterprise and an argumentative Tellarite diplomat is murdered using a Vulcan technique after confronting Sarek twice about his forthcoming vote. Sarek is questioned about the man's death and succumbs to a previously-unrevealed heart condition that can only be cured through surgery. This surgery requires Spock's presence as a blood donor. However, a signal is sent from the pursuing

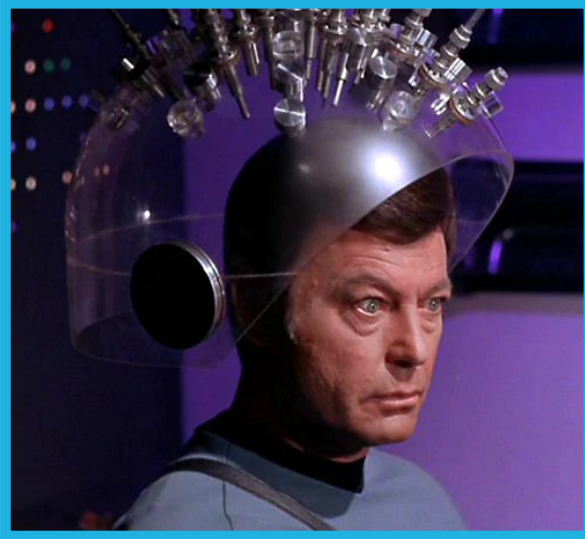


vessel to somewhere on the ship and Kirk is stabbed and left incapacitated by an Andorian diplomat, who is quickly arrested but there's still that mysterious vessel to deal with. Against his mother's and the doctor's wishes, Spock finds himself duty-bound to sit in the Captain's seat. His dilemma is quickly solved when a

seemingly-recovered Captain Kirk shows up on the bridge (with the intention of handing the ship over to Scotty and retiring to his quarters while Spock undergoes the blood transfusion). Of course, it doesn't work out that easily. McCoy performs cryogenic open-heart surgery while the ship is repeatedly rocked by phasers and photon torpedos. There are multiple power failures and Sarek suffers a cardiac arrest, leaving McCoy and Nurse Chapel to use portable equipment to keep him alive while the rest of the ship deals with the whole "Fake Andorian Who Turns Out To Be A Romulan Spy Who Is Working To Disrupt The Babel Conference" situation. Once things are sorted out on the bridge, Kirk returns to sickbay to brief the ambassador and his son, who are chatting away. Kirk collapses and is ordered onto a bed. So not only can McCoy perform space battlefield surgery, he can restore families and, after the Captain collapses and is ordered onto a bed, he finally gets in the last word.

5). Spock's Brain: The residents of Sigma Draconis VII need Spock's high-powered brain to serve as the controller for their vast underground dwelling. Kirk, McCoy, Scotty, and the remote-controlled body of Spock arrive on the Sigma Draconis VII. They finally get in touch with Spock's mind and he informs them that while he, "might trust the doctor to remove a splinter or lance a boil," he doesn't believe that McCoy or indeed anyone has the requisite skills to restore his brain's place in his body.

This leads the rescue party to “the teacher,” a device used to impart knowledge for a period of about three hours. McCoy’s never performed



an encephaloplexy before but he has great faith in his abilities to get the procedure done in three hours with the help of “the teacher”. Spock, of course, disagrees, but the doctor’s desire to prove him wrong again provides a strong motivating factor. Even as the knowledge gradually fades from his mind, McCoy’s competence keeps the patient/brain alive and, eventually restored to his proper place.

Resources:

Star Trek the Original Series episodes:

Amok Time

The Devil in the Dark

Journey to Babel

Miri

Spock’s Brain

[https://memory-alpha.fandom.com/wiki/Amok_Time_\(episode\)](https://memory-alpha.fandom.com/wiki/Amok_Time_(episode))

[https://memory-alpha.fandom.com/wiki/The_Devil_in_the_Dark_\(episode\)](https://memory-alpha.fandom.com/wiki/The_Devil_in_the_Dark_(episode))

[https://memory-alpha.fandom.com/wiki/Journey_to_Babel_\(episode\)](https://memory-alpha.fandom.com/wiki/Journey_to_Babel_(episode))

[https://memory-alpha.fandom.com/wiki/Miri_\(episode\)](https://memory-alpha.fandom.com/wiki/Miri_(episode))

[https://memory-alpha.fandom.com/wiki/Spock%27s_Brain_\(episode\)](https://memory-alpha.fandom.com/wiki/Spock%27s_Brain_(episode))

<https://www.startrek.com/news/8-times-leonard-bones-mccoy-s-medical-knowledge-saved-day>

Deborah Keyes

From The Regions

Region 2

Dr. Crusher's Emergency Medicine: Ways She Saved the Enterprise

As the Chief Medical Officer aboard the U.S.S. Enterprise-D, Doctor Beverly Crusher dealt with many diverse challenges that would have been far too imposing for most surgeons to deal with. She had to have emergency plans for every possible medical situation. It seemed like she worked miracles in sickbay as well as in emergency situations while on away missions. We will look at five instances where her passion and skills ultimately saves the day and often saved the Enterprise.

Conspiracy: Parasitic aliens attempted to infiltrate the Federation, by dispatching an infected Admiral Quinn to the Enterprise. The alien's goal was to take over control of Dr. Crusher. The Alien's efforts were thwarted by Commander Riker which gave Crusher an opportunity to study Admiral Quinn. She identified the tell-tale signs that pronounced those infested by the alien creatures, gills. With the help of Commander Riker, who pretended to be infected by the creatures in order to save Captain Picard. Dr. Crusher's plan showed an extraordinary combination of her medical knowledge and her standard tactical training from Starfleet. If it wasn't for Dr. Crusher's ingenuity and quick thinking the aliens may have succeeded in overtaking the Enterprise and the Federation.

The High Ground: While treating citizens on Rutia IV, who were wounded by a terrorist attack, Dr. Crusher is captured by the Ansata separatists. The group's leader, Kyril Finn accuses Starfleet of aligning itself with the Rutian government. Despite Dr. Crusher's emphasizing that she was on a mission of mercy he refuses to let her go. During her "captivity" she discovers that the Ansata are suffering from an illness caused by dimensional shifting. Even though she acknowledged Finn's perspective she tried to use the voice of reason that fear and violence

were not reasonable solutions. Even though her pleas were not accepted by Finn who dies at the hands of the Rutian police. However, she was able to convince an Ansata boy to lower his weapon when the Rutian police found one of their hideouts. Even though peace was not immediate Dr, Crusher's commitment to her ethics, at least for now, saved a young boy's life.

Remember Me: A seemingly rogue warp bubble seems to be making crew members disappear. Dr. Crusher realizes that only she can remember these individual even existed. She confronts her doubt about her sanity until she realizes she is the one actually trapped in the warp bubble. Now that she knew and understood the problem she applied scientific thought and hypothesizes that the vortex she kept seeing was actually a gateway opened by Wesley and La Forge which would allow her to return to reality. While the Enterprise may not have been in danger itself, Dr. Crusher's mental fortitude and problem-solving skills led to her own freedom.

Suspensions: Data's interest in Sherlock Holmes was known by everyone on Enterprise-D, however, Dr. Crusher displayed her own ability as a detective following the alleged suicide of Dr. Reyga, a Ferengi scientist. Dr. Crusher was impressed by Reyga's work with metaphasic fields, so she decided to act as a "scientific diplomat," by gathering experts together to discuss Dr. Reyga's research. However, Reyga's death did not make sense to Dr. Crusher so she decided to investigate by performing an unauthorized autopsy on the Ferengi. Crusher's willingness to disobey a direct order from the captain showed her devotion to the truth, regardless of the cost to herself or her own career. Dr. Crusher even put her life on the line to test Reyga's metaphasic shielding, a course of action that exposed the actual murderer, Takaran Jo'Bril.

I, Borg: When an away team locate a wounded Borg in the Argolis Cluster, Dr. Crusher strongly advocates on his behalf on multiple occasions. She overcame protests from both Captain Picard and Worf

about the dangers of treating him. When she hears that Captain Picard intends to infect the drone with an invasive program that will disrupt the Collective, she immediately objects and accurately describes the plan as being a form of genocide. Dr. Crusher points out passionately the fact that they are discussing an injured boy, not a weapon. Her steadfast protests serve as the crew's moral compass and as the very values the Federation claims to uphold. Captain Picard and the crew eventually come to agree with Dr. Crusher's assessment,

Resources:

Episodes:

Conspiracy

The High Ground

I, Borg

Remember, Me

Suspicious

<https://www.startrek.com/news/dr-crushers-guide-to-saving-the-enterprise>

Deborah Keyes

Region 7

A Brief History of EMS in the United States

Emergency Medical Services (EMS) in the US has a relatively brief history. Modern EMS began in the Napoleonic Wars when Napoleon's chief physician, Jean Dominique Larray, organized a system to remove wounded French soldiers from the battlefield. During the American Civil War, the Union Army (US), devised a system to evacuate wounded soldiers and bring them to field hospitals. This will be a recurring theme in the development of civilian EMS: Military medical lessons being applied to civilian care.

In the Reconstruction Era, many of the lessons of Civil War medicine were applied to civilian EMS and the development of ambulances occurred. However, the delivery model was not uniform. Major cities often had ambulances staffed with physicians from the hospitals they came from, while in suburban and rural areas, fire departments and even funeral homes were delivering rudimentary medical care. Funeral homes were a major source of prehospital transportation as a hearse could transport a patient lying down. This patchwork system was in place through the US, with little innovation, until the 1950s.

By the 1950s, returning military physicians from World War 2, and the Korean War heavily influenced one aspect of EMS: trauma care. The noted name in this aspect of EMS is J.D. Farrington, MD, FACS, an orthopedic surgeon who, by the mid 1950s, noted the disparity in pre-hospital medical care in civilian settings in person, and convinced the American College of Surgeons-Committee on Trauma to develop a training program for ambulance attendants. This would be the forerunner to the EMT curriculum and first textbook, *Emergency Care and Transportation of the Sick and Injured*, published by the American Academy of Orthopedic Surgeons.

By 1966, the National Academy of Sciences published a white paper entitled, "Accidental Death and Disability: The Neglected Disease of Modern Society." This paper called for funding of the EMS system and formal training for not only EMS, but also for Emergency Departments. At this point in US history, there were no formally trained emergency physicians; hospital staff physicians took "ED call" by staffing the ED. Mondays may be staffed by surgeons, Tuesday by internists, Wednesday by OB/GYNs.

Congress took up the white paper and the work of Farrington and others such as R. Adams Cowley MD, the founder of the Baltimore Shock Trauma Center that now bears his name, who advocated for rapid transport of critically injured trauma patients to a trauma center and

passed the National Highway Traffic Safety Act of 1966. This law provided funding for EMS systems and established an EMS office in the Department of Transportation.

Simultaneously, in other areas of the US, intensive care physicians, cardiologists, and cardio-thoracic surgeons began to realize that patients with cardiac disease were also dying in the streets, and the use of defibrillator/monitors could change that. Recognizing that non physicians could be trained to use these devices and other medical skills, paramedic systems were born. The first to do so, outside of the US, was Frank Pantridge, MD, in Northern Ireland. Leonard Cobb, MD, a Seattle, Washington Cardiologist, read his work and established a paramedic program with the Seattle Fire Department, Harborview Medical Center, and the University of Washington. The first class graduated in 1970 and began to serve Seattle and surrounding King County as the Medic One program. Another Seattle physician, Karl Edmark, MD; pioneered work with portable defibrillators and established a small company in Seattle called Physio-Control. Thanks to these two physicians and their work, the Seattle/King County Medic One program remains today a model EMS System, boasting the best out of hospital cardiac arrest survival rates in the US.

On the East Coast of the US, Peter Safar, MD, worked with doll-maker Asmund Laerdal to make the famed ResusciAnnie training tool. Safar, an intensive care physician, pioneered what we know today as the primary survey of Airway, Breathing, and Circulation. He helped to develop the modern ambulance as opposed to the use of station wagons or hearses, with room for an attendant, a stretcher, supplies, and oxygen. Starting in Baltimore City, MD; he continued his work in Pittsburg, PA, mentoring another physician founder of EMS, Nancy Caroline MD. Dr. Caroline is noted for the first paramedic textbook, *Emergency Care in the Streets*. Despite her death in 2002, her textbook continues even today.

No discussion of EMS in the US is complete without mentioning James Page, JD. A firefighter with the Los Angeles County Fire Department, he rose thru the ranks and became the coordinator for the LA County FD Paramedic Program. His work here led him to be the technical advisor to the TV Show *Emergency!*, a groundbreaking TV program chronicling the duties of LA County FD paramedics. The show is one of the most recognizable TV shows on EMS and continues in syndication. He eventually became the state EMS Director for North Carolina and one of the founders of the Journal of Emergency Medical Services (JEMS). He was a founding partner of the EMS law firm Page, Wolfburg and Worth.

Throughout the 1970s, this patchwork system of EMTs and Paramedics slowly came together into an EMS system. Still driven by local and/or state jurisdictions, EMTs were introduced to medical care, and paramedics were introduced to trauma care. In trauma care, a noted program, Prehospital Trauma Life Support, was founded by Norman McSwain, MD, who sought created this course as a prehospital companion to the Advanced Trauma Life Support course for physicians.

In medical care, the biggest advance to EMTs was the advent of the Semi-Automated External Defibrillator (SAED), a device that would read a lethal heart rhythm and prompt the user to administer a counter-shock. Another Seattle physician, Mickey Eisenburg, MD, PhD, pioneered the use of AEDs and lay person CPR in the Seattle area. His work is often cited for the establishment of such programs elsewhere.

Recognizing that lay person CPR could also include defibrillation, public access SAEDs were deployed in airports around the US thanks to the lobbying efforts of Paula Willoughby DeJesus, DO, and Paul Pepe MD. Dr. Pepe has gone on to be one of the founding physicians of the US Metropolitan Medical Director's Consortium, a group consisting of the 50 largest EMS systems in the US plus federal partners (Homeland Security, Health and Human Services, FBI, Secret Service, and others). Their annual conference, known as the The Gathering of Eagles, is a two-day

conference presenting state of the art research by this group and has expanded to include the medical directors of London, Paris, and Berlin on a regular basis.

Paramedics have delved into other areas of care such as critical care transport, the transport of patients between hospitals. Critical care paramedics are trained in many ICU level treatments in addition to Emergency Department treatments. Expanding further, paramedicine is being redefined as Mobile Integrated Health. Such programs involve paramedics doing house calls, particularly on discharged patients with frequent readmission diagnoses as congestive heart failure (CHF) and chronic obstructive pulmonary disease (COPD). Medical leaders have realized paramedics can assess and treat patients in a home setting and avoid a readmission to the hospital.

EMTs also are involved with critical care transport and mobile integrated health, but also have specialty areas such as tactical EMS: providing medical support to law enforcement tactical teams. Another area is wilderness EMS, often providing the EMT with unique skills in austere environments that are far from forward medical care. Paramedics can also avail themselves to such training.

Finally, the unsung heroes of EMS have also grown with the system: the dispatcher. Much the same as a patchwork EMS system, dispatch was also a hodgepodge of local and county systems, often handled by a police officer or specific dispatcher with little training in the art of call taking. As early as 1970, the US Department of Transportation established educational guidelines for an Emergency Medical Dispatcher. Largely forgotten until 1978 when Jeff Clawson, MD, established guidelines for dispatch in Salt Lake City, Utah. His system has evolved into one of the most widely used commercial dispatch products available, the Medical Priority Dispatch System. Another model product was developed by the New Jersey Office of EMS, the first such office in the nation founded in 1970, and the NJ Office of Telecommunications is the emergency medical guide cards.

The patchwork development of EMS has led to many models of delivery systems of EMS in the US. There is fire based, police based, third service, private, hospital based, career and volunteer models in place. Levels of care also vary in STARFLEET Region 7, New Jersey is a two-tiered system, with large numbers of Basic Life Support ambulances staffed with EMTs and small numbers of paramedic units which are hospital based. Delaware is also a two-tiered system, with county based Advanced Life Support (paramedic) units. Pennsylvania is largely a single tier system, with ambulances that are staffed with 1 paramedic and 1 EMT. There are advantages and disadvantages to each system, beyond the scope of the discussion here. The point being is the saying is true: If you have seen one EMS system, you have seen one EMS system.

As an EMS medical director, I would love to hear what your system is like. Cross-pollination is a good thing!

And for further reading and research, I refer you to the following articles which contributed to this article:

The Formation of the Emergency Medical System: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1470509/#:~:text=Although%20modern%20EMS%20initially%20developed,system%20in%20the%20United%20States>

Founding Fathers of EMS: EMSWorld Magazine: <https://www.emsworld.com/article/10321743/founding-fathers-ems#:~:text=J.D.%20%22Deke%22%20Farrington%2C%20MD,incorporated%20into%20civilian%20medical%20systems.>

Accidental Death and Disability: The Neglected Disease of Modern Society. National Academy of Sciences:

<https://www.ncbi.nlm.nih.gov/books/NBK222962/>

Farrington, JD. Death in a Ditch, Bulletin, American College of Surgeons, May-June 1967 Vol 52, No 2:

<https://www.facs.org/~media/files/publications/bulletin/reprints/1967%20mayjune%20bulletindeath%20in%20a%20ditch.ashx>

Stephen J. Vetrano

Region 8

Hyposprays and you!

Hyposprays. The namesake of this newsletter, not to mention the most commonly used medical device to administer emergency medical attention across all Star Trek perhaps only beaten by the Medical Tricorder. What are they though? And how close are we to having something similar in 2020?

To answer that, we need to take a look at how they are defined in Star Trek. Its official definition has it listed as “an injecting, needle free device, that can subcutaneously inject drugs via forced air.”

Sounds a bit magical, but at the end of the day, it actually turns out that we’re very close to similar technologies (No more needle stabs to administer much needed aid in our future!)

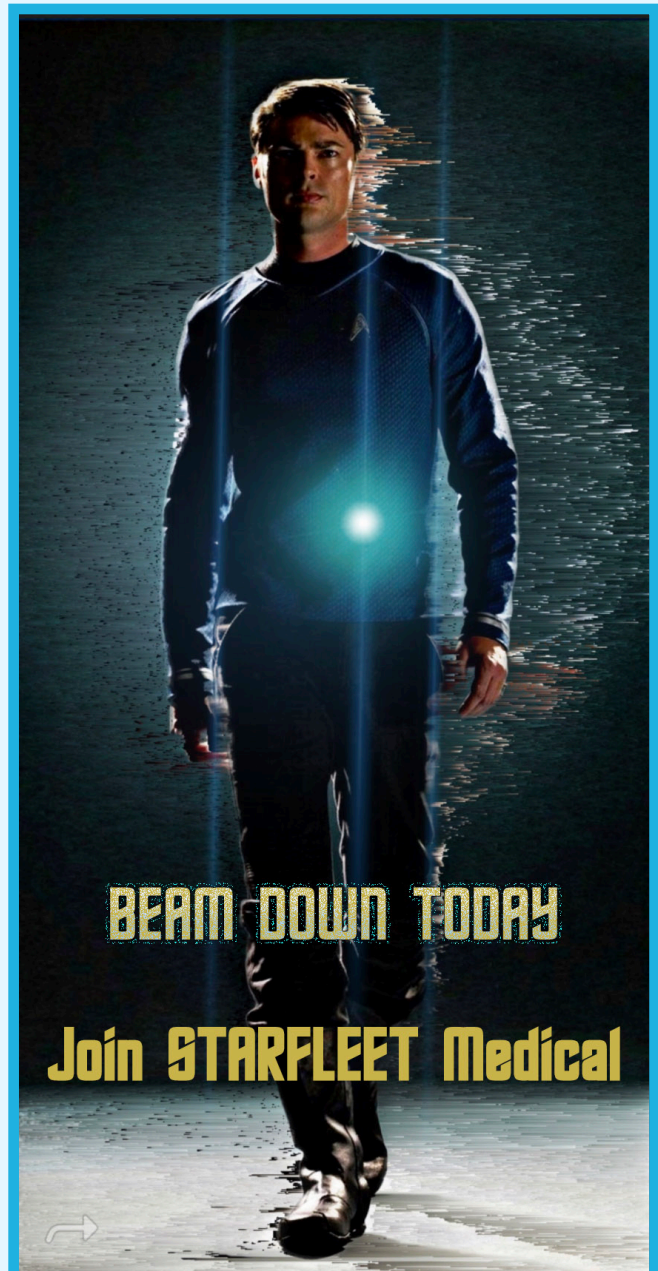
The product “Samavel DosePro” from a company called Zogenix (which is as sci-fi a name as I’ve ever heard) is the size of a Fat permanent marker and can deliver a migraine relief drug called sumatriptan subcutaneously by using a small amount of compressed nitrogen to push the liquid through the skin in less than one tenth of a second. (More than enough time to knock out an enraged mind-controlled crew-mate I might add)

Another similar product is the Biojector 2000 (because of course it needs such a high number on the end... did they develop 1999 versions before this one?) which also uses high pressure gasses to force the

needed liquids into a patient without breaking the skin, ideal for dealing with high-risk situations like delivering medication to a patient with hepatitis or HIV. They do not, however, mention how effective it would be when combating Rigelian fever unfortunately.

Currently the only thing holding these technologies back is the higher cost of producing the administrative device (rather than the much cheaper syringe and needle approach) but as the world advances, perhaps we will see these technologies adapted and perfected even further till you eventually see it on every starship in your sector.

Gregg Barlow



Region 12

The Seven Doctors

Several years before Star Trek, there was Dr. Who. I know what you're thinking. Why am I writing an article about Dr. Who? This is STARFLEET, not Wholigans! Stay with me, it makes sense in a minute.

One of the hallmarks of Dr. Who is regeneration. It is a nifty plot device for when the actor who is portraying The Doctor is unable to continue or wishes to move on. One of the biggest arguments among Dr. Who fans is "Who is your favorite Doctor?" And there are sub-categories. Older or newer series? (For the record – Tom Baker is THE Doctor of the older series and it was Chris Eccleston without question until Peter Capaldi came along and now, I'm confused!)

Among Star Trek fans, the same type of argument takes place. I've always enjoyed discussing "favorites" with people. Even when their choices do not align with mine, I like hearing the reasons they choose the Doctor they do.

Rather than try to convince you why the EMH and Dr. Bashir are tied for first place, I thought I would do something completely different. I'm going to pen a few lines as to how much the writers liked the Doctor they were writing for. I'm ranking from most to least liked.

1. The EMH

Without question, the writers loved The EMH. His arrogant attitude and horrible bed-side manner are written in such a way that most people find it endearing rather than irritating. The journey The EMH takes from his first activation to the end of the series is well fleshed out. The progression is natural and not at all forced. Though brought on to shore up the male 18-36 demographic, Seven of Nine's arrival was the best thing that could have happened to The EMH. It only highlighted how far he had come.

2. Julian Bashir

Every actor on this list should be proud of their work. While some were given much better material to work with, they all left their mark on the character. Of them all, Alexander Siddig was a master. That Bashir went from a wide-eyed, somewhat creepy (Jadzia could have reported him for harassment) newbie to much respected Chief Medical Officer was in the script. The way Siddig pulled it off was nothing short of amazing. Between his acting and the quality scripts, it is difficult to notice the transition. Which is how true growth generally occurs.

3. Hugh Culber

Though still a little early, I've got to put Culber here. It is obvious the level of investment the writers have with this character. While the growth might not be as dramatic, we see many sides of Culber we don't see in the other characters. Part of this is, of course, due to the talents of Wilson Cruz. When Discovery launched, there was some criticism that one half of the first openly same-sex couple was to be portrayed by a straight male. That criticism has largely died down in the three seasons Cruz has portrayed Discovery's Chief Medical Engineer.

Here is a character that has died and come back to life. While Spock largely took it in stride (OK, it did take him the entire time of *The Voyage Home* to get back to normal), Culber has been all over the place since Voq/Ash Tyler broke his neck and the mycelial network brought him back. But it is a much better representation of how confusing that must have been.

4. Phlox

The Original Series had Spock. Next Gen had Data. Odo on DS9 and The EMH & Seven of Nine round out the last two series. Enterprise had T'Pol and Dr. Phlox. I can only imagine how much fun it was writing for the character John Billingsly so whimsically brought to life. To be sure there were serious moments, but only McCoy and The EMH come close to the view we see through the lens of the Denobulan doctor.

5. Leonard McCoy

Here is where things start going south in my opinion. McCoy has some great moments. The “I’m a Doctor, not a (fill in the blank) left an enduring legacy. But mostly, McCoy is known for his borderline insubordination and curmudgeonliness. There is so much the writers could have done with this character. Granted – only having two seasons put a monkey wrench in the works. But they could have done so much better by Dr. McCoy. Fortunately, DeForrest Kelley was a such a great actor.

6. Beverly Crusher

It makes me sad that Crusher and Pulaski are the last on this list. In some ways, Dr. Crusher was a more respectful Dr. McCoy. While nowhere near the level of insubordination demonstrated by Dr. McCoy, there were times Crusher got away with things no Starship Captain should let slide. And the will they/won’t they tension throughout the series was tedious. Gates McFadden deserved better than to be a cute Doctor tempting Captain Picard with what he cannot have.

7. Katherine Pulaski

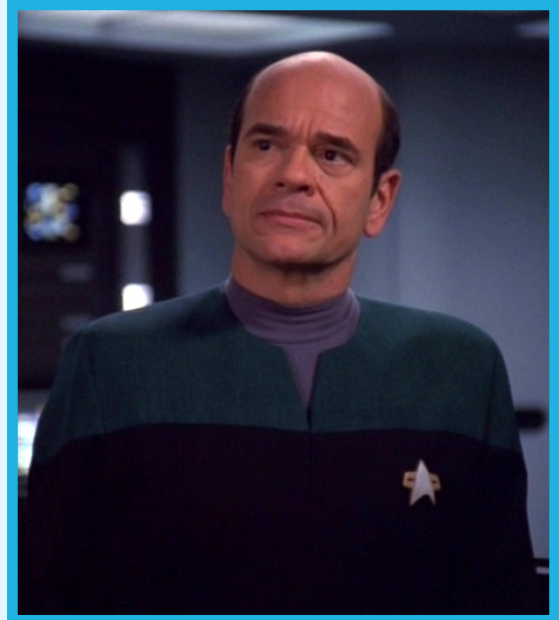
It makes me sad when I think of Diana Muldaur and how much the writers hated this woman. Pulaski had two strikes against her from the start when it became known she had little use for fan-favorite Data. It is almost like they got together and said, “We did a pretty bad job with Dr. Crusher. How can we make that character look like it was written by the best in the business?” That is the only way I can make any sense out of how Pulaski was written. Had she been given another season and less acerbic dialogue Muldaur might not have ended up another Pete Best.

Jim Landelius

Region 20

The Importance of First Aid Skills

Throughout the history of Star trek, medical emergencies have been a strong theme running through many episodes. From Doctor McCoy being on the surface of what appeared to be 20th Century Earth where he was able to work to cure a pathogen that threatened the population through to Starfleet creating the Emergency Medical Hologram which has saved countless lives, especially for the crew of the USS Voyager, where the Emergency Medical Hologram was in constant use during its 7 year journey.



Emergency medicine is taught at a very basic level to the cadets at Starfleet Academy and all Starfleet Officers are capable of using the most basic tools to assist in an emergency situation. Furthermore, further non-medical crew are trained in higher levels of response to emergency events such as Lieutenant Paris.

This is echoed in contemporary society also. From our frontline ambulance crews, emergency room practitioners and highly skilled medics, through to the individual who has attended a basic course in CPR, Emergency Medical Treatment in the contemporary world is as accessible as it is in Starfleet.



Many incidents across the

globe have relied upon having people present who have the basic knowledge and skills needed to help others, and the use of these skills has saved countless lives, from victims of large-scale incidents through to slips, trip and falls in the workplace the role of a First Aider should never be underestimated.

The levels of training offered and required vary by country, but it is a worthwhile and humanitarian skill to learn. First Aid is a skill that everybody should have some fundamental skills in. It isn't difficult to learn, and should you ever be in the wrong place at the wrong time, your skills could be the difference between life and death for someone. Find out what training is required and available in your own country, get some training and potentially become a life saver.

James Goulding

Public Health

Emergencies, Populations, and You! How Public Health Works to Keep Planets Healthy

Preparing for the worst in a population is a staple of public health, from pandemics to environmental hazards that impact entire communities. Public health works from a framework of Prevent, Promote, and Protect, including preventing those situations that could put a community/population at risk. It is an entirely boring and extremely non-sexy effort compared to treatment, as success is determined by nothing happening.

It seems only logical that such activity would continue on a much grander scale as Starfleet expands throughout the universe, discovering not only strange new worlds, but strange new bugs/diseases as well. Consider how many episodes through the Star Trek universe revolve around planet wide disease outbreaks or other medical situations that have exploded out of their control. Dependence on others is not a weakness, and a key component of any competent governmental structure is providing for the care of its citizens when trouble arises. From a larger perspective, having the well educated and trained professionals who seek out new life and new diseases is not something you can spin up in a short timeframe. Having a strategic national stockpile of drugs and equipment that can be distributed in an emergency takes time and money.

Looking at a more personal level, individuals can take the load off of the larger system by being prepared themselves. Stay healthy and better prepared to stave off infections and parasitical diseases by being physically active, eat food that didn't come from a box/replicator, and stay up on your medical check-ups/vaccinations. Be prepared physically for the impacts of a local or planet-wide disaster by keeping a stockpile

of things you might need, and rotate those to keep them safe. Daily efforts can even be made to be prepared for individual emergencies by keeping a first aid kit in your home, car, or even on your person. The term every day carry (EDC) has an emergency medical component with items such as an individual first aid kit. Trends have changed over the years to be more than just a band-aid and some ibuprofen, and many people include tourniquets and chest seals to address the growing number of shootings and mass casualty incidents happening around the world.

The best way you can be prepared for emergencies, however, is to be mentally prepared with knowledge and skills that can be applied to take care of you and those in your immediate care. Public health now and in the future will be there to help prevent emerging diseases, promote healthy lifestyles, and protect vulnerable populations. While the perspective of public health is that the needs of the many outweigh the needs of the few, we will continue to do all we can to help everyone live long and prosper.

Brett McIlff

Counselor's Log

Deanna Troi: Counseling, Crisis and Community

Star Trek: The Next Generation takes place approximately 350 years in the future. The earth was once a war-torn, greed-ruled planet but it now has become an almost perfect haven. Through great leadership and advances in technology, most sicknesses have been eradicated, starvation is a thing of the past, and even currency is no longer necessary as needs are abundantly met in this wake of human advancement. In fact, Troi even comments at one point that poverty was eliminated on Earth a long time ago, and a lot of other things disappeared with it; such as, hopelessness, despair, and cruelty. I believe one of the major themes of Star Trek is the inherent goodness of humanity, and within the midst of all that advancement, is Counselor Troi.

Life on earth is almost perfect, peace abounds, and the mission of the Enterprise is simply to go make friends with new species. However, despite all the perfection, the Federation still deems it necessary to send along a therapist. Furthermore, they give her a seat, on the bridge, at the left hand of Captain Picard. Troi's role as a counselor isn't shameful or concealed or even put down in any way; instead, in the futuristic world of Star Trek, the need for a mental health provider is normal, good, and even cherished. What's also true is that the mental health needs of the crew are not looked down upon either. She is sought out in times of stress, grief, or pain. The crew turns to her when they need to process life aboard a starship, and she comes alongside them as they work through their struggles. She provides advice and provides a listening ear. Troi is a mental health professional, who is so, so needed.

I know it's entirely possible in the mist of Troi's complex origins that the writers of Star Trek: just intended her to help with first contacts and unique inter-species negotiations. Or perhaps the writers simply thought she would make an entertaining, different kind of character, that she brought something to the group that was lacking. But

I like to think that the writers also envisioned a world where the mental health needs of the crew were not looked down upon but were rather seen as an important part of living in a healthy society.

In Star Trek, the crew of the Enterprise are on a mission “to seek out new life and new civilizations. To boldly go where no one has gone before.” It is a mission of peaceful exploration, and because it is such a long-term mission of peace, the Federation allows the Enterprise to become a home to the crew and their families. It is like the Enterprise has become more than simply a starship, it has become a traveling community. This community lives their lives together, facing the unknown from both the outside and from within. Throughout the series the members of the crew faced sickness, family struggles, births, and deaths., just to name a few. They experienced love, loss and loneliness, and they experienced those things as a community. At the heart of that community is one woman, one counselor, who demonstrates what it looks like to care for and to help each other. Deanna Troi embodied care and empathy, and she showed us the high need and value of community.

Resource:

<https://christandpopculture.com/the-enterprise-deanna-troi-and-the-importance-of-mental-health/>

Deborah Keyes

Historical Archives

Jean-Nicolas Corvisart, physician of Emperor Napoleon the First



Corvisart by François Gérard, 1806

This year, France commemorates the two hundred year anniversary of the death of Emperor Napoleon I on the island of Saint Helena. But behind such a man there was a doctor: Corvisart. Son of a prosecutor in the Parliament of Paris and born in 1755, he went against the will of his father who wanted him to study law after meeting the famous doctor Antoine Louis (one of the "fathers" of the guillotine). He then began his medical training at the Hôtel-Dieu and received the title of doctor-regent of the faculty in 1782.

But, by refusing to wear the wig, he only got a job at a hospital for poor people, the Hôpital de la Charité. He also taught in this hospital and

Esquirol (famous alienist) and Laennec (inventor of the stethoscope) were among his students. He lived through the French Revolution without too much trouble, continuing his teaching work at the school of medicine recreated at the post of internal medicine in 1794, and then at the Collège de France in 1797. He reformed his service at the Hôpital de la Charité, focusing on clinical medicine (in the patient's bed) and pathological anatomy. He insisted that a careful and systematic examination be carried out on admission of the patient, and applied Auenbrugger's examination techniques (percussion of the thorax), whom he translated the book in 1808. Having a great interest in cardiology, he himself published a book on diseases of the heart and large vessels in 1806.

His integrity won him the confidence of Napoleon Bonaparte, then First Consul, and his wife Joséphine de Beauharnais. In 1804, he attached him to his service, impressed by his calm and reliable diagnosis, which would have made him say: "I do not believe in medicine, but I believe in Corvisart". This high-ranking position will allow Corvisart to fundamentally reform the medical system of his time. He accompanied Napoleon to Italy in 1805 and to Austria in 1809.

Recipient of the Légion d'Honneur in 1806, he will be made Baron of the Empire in 1808. He will also be present at the birth of the little king of Rome in 1811, whose life he saved after the difficult birth.

Faithful to the Empire, he will have to retire at the end of the reign, victim of apoplexy attacks. He died in 1821, only a few months after Napoleon. Of him, Napoleon is believed to have said: "he is a clever and honest man".

Did you know? Corvisart's son, Lucien, was Napoleon III's personal physician.

Anne-Laurre Perrin

Memory Alpha

The Intern

by Anne-Laurre Perrin

USS Defiant, 2374

For now, the USS Defiant's small infirmary was empty of patients, but Julian Bashir knew it wouldn't stay that way for long. Indeed, the valiant little vessel was about to join a battle, and he now had enough experience with it all to know what it all entailed. Around him were members of his staff, and he had also brought a fresh intern from medical school who was due to complete his field training. Considering his situation close to the front line, he had not received any since the beginning of the war, but this one, son of an admiral, had expressly requested the station in order to be able, as he had said, "behave like a hero". Hearing this, Bashir had seen himself again a few years earlier, young and full of himself and wanting to do "border medicine" and had sworn to make this mad head understand what the reality of the profession was in time of war. That was why he had taken him to see for himself, reality being a better teacher than anything he could have told her. But for now, the young intern was mostly spending his time bragging to the nurses and medics. Bashir, on the other hand, conferred with his chief medical technician to make sure everything was in place.

But, concerned to put things right with him, he called him and explained things to him calmly:

"You know how to do first aid, I think, that's part of your training. So you will go to start helping with the triage, which is happening in the next room. This is where it all happens, before patients even get here. You will thus learn to judge, alongside the nurses, the seriousness of a case, sometimes it can be misleading ..."

The young man controlled himself, but Bashir could see the disappointment in his eyes. He obviously took it as relegation, but the doctor knew he would realize soon enough the major role the triage staff played.

“As soon as there is the red alert, you will need to be focused and in action. You will help Doctor Leyan, here, she will show you the workings of the trade...”

No way to let go of an intern on his own. Dr Leyan was a strong Bajoran woman, very experienced in emergency medicine, coming from the Bajoran resistance, he would learn a lot from her. He really hoped that the young man would fully appreciate the chance he was given to prove himself.

No need to brief his team, since the time the war lasted they knew their work and he knew he could count on them. Many of them had arrived at the same time as him and the team dynamics were excellent and efficient. It was thanks to them that he was able to perform all of his duties, and he told them regularly. Of the boastful young man he was six years earlier, little was left, and it was much better that way, he recognized himself. But this was no longer the time for soul-searching, the red alert rang, and his mind immediately went into action. The ship was shaking on all sides and it wasn't long before the first wounded began to pour into the hospital wing. Bashir healed, reassured, operated, rescued indefinitely, and it was after that, as the flow dried up and the ship's movements calmed down, he inquired about his intern.

“He has potential, sir,” Leyan said calmly, “I think he will make a very good emergency doctor. Rarely have I seen an intern remain so calm, take advice and do the right thing, even when someone dies. He held on for a very long time...”

She said no more, but Bashir understood: the intern had to be somewhere to recover. Leaving his team to finish the work on the last patients, he used his commbadge's signal to search for him and found him

curled up in a Jefferies tube. The shock to reality had obviously been tough, even though he had behaved remarkably. He didn't say anything at first, just sitting down next to him. Then he simply said:

"I was sick after my first time ..."

The young man, his eyes wet, looked at him for a moment in silence. What was he thinking? That he always had a super-doctor's cloak used to everything? No, even though he was salutatorian of his class he too had had his moments of weakness, although he didn't like to talk about it.

"How do you do it?" the young man asked.

Bashir gathered his thoughts so as not to sound too pedantic or too "old" and began to explain:

"The procedures are my first secret. Be sure of your diagnosis and get it right. You know as well as I do how we are taught procedures in medical school, but I have adapted them to my way of doing things and the environment in which I work. This is my way of doing things, and you will find yours, the one that suits you, I have no worries about it."

He added:

"But the rest ... you never really get used to it, you live with it and remember every patient you lose for life. There are difficult times, but as soon as you have to heal, you go back because that is what you can do and how you can be of help. And if all this threatens to overwhelm you, you have to know how to let go of the ballast and get help, never stay alone... "

He was deeply sincere in saying this, it was real life and he felt that the young man understood it. And he didn't care about cracking his image as a super "frontier doctor," he just assumed the man he was. He smiled and continued:

"I recommend that you eat or drink something sweet to make yourself feel better. If you'd rather stay here a little longer because you need to,

that's fine. But you behaved remarkably well, and I wanted to tell you that. For the rest, we can talk about it later... "

He stood up and, as he was about to exit the airlock, he heard the voice of the intern saying thank you. He got up and walked back to the infirmary feeling like he had done some useful work. The intern would join him when he was ready, when he had started to "swallow" everything he had just seen. No matter what he will remember of his experience, Bashir hoped he would keep his faith in the job. Because in the midst of this maelstrom that shook the whole Quadrant, faith was the most important thing.

THE END

Cadets' Corner

Test Your Laugh Response!

A young man was applying to join Starfleet; "Where were you born?" asks the recruiting officer. "Earth, Sir." He replied. "What part?" the officer asks. "All of me, Sir" he replies.

Did you hear about the Federation weapons expert? He never forgets a phaser.

Noticing the medals on Balok's chest, Kirk asked, "Did you win those in combat?"

"Oh no," said Balok. "I don't believe in military service

"Did you shrink from battle?" asked Kirk.

"No," shrugged Balok, "I've always been this size."

Patient: "Dr. McCoy, I sleep all day, stay awake all night, I'm hot all the time, I can't stop dancing and I see rings before my eyes! What's wrong with me?"

McCoy: "Sounds like Saturn Day Night Fever."

What does a Romulan frog use for camouflage? A croaking device.

STARFLEET Command was alarmed to hear that the Klingons had a diabolical plan to trap the Enterprise in Silver Paper. Luckily, however, the plan was foiled.

McCoy finished his examination of Scotty and shook his head. "Scotty, I'm sorry but I can't find any reason at all for your stomach pains. Frankly though, I think it's due to drinking."

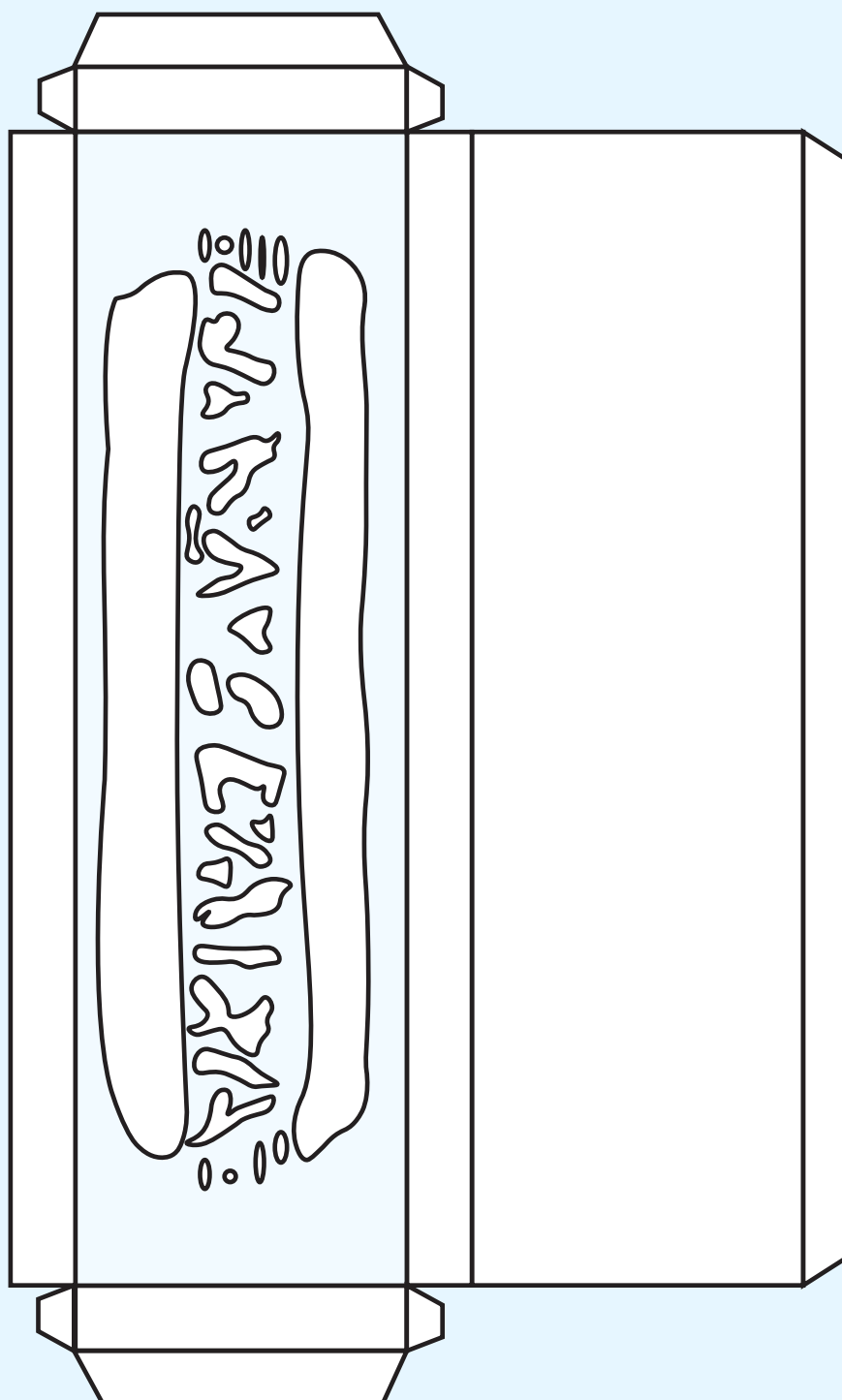
Scotty grinned back at him and said, "In that case, Leonard, I'll come back when you're sober."

What do you call it when two science officers have an argument? Science Friction.

Uhura was working at her console when she suddenly straightened up. "I think there's a sick crewmember on Deck 9," she said. As no message had been received Kirk was baffled however he sent McCoy to check it out. Sure enough, the doctor reported that a crew member had indeed collapsed where Uhura had specified. Impressed, Kirk turned to her and said, "You must be psychic, Uhura. How did you know that that crewman was ill?" Uhura smiled, "I had my ailing frequencies open, Sir."

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