

Worldbuilding Research Presentation Outline

Research Presentation Outline Graphic Organizer

I. Introduction

<p>Hook / lead-in: <i>What surprising fact, vivid scenario, question, or brief story can you use to immediately engage your audience's interest and lead into your topic?</i></p>	<p>When I was talking to my worldbuilding group to formulate my research question, one of my group members suggested that I do my topic on improvised medicine. As I thought about it more, I began to wonder how the medics in our story could more realistically treat patients and what would a good medic have in mind when it came to the wellbeing of their patients in high pressure situations.</p>
<p>Research question: <i>State the question you focused through research —the one you are answering in this presentation.</i></p>	<p>How does a medic strategically deal with life threatening situations and uses skills like improvisation and resourcefulness to treat patients that have injuries?</p>
<p>Answer / central claim: <i>Based on your research, what is your current answer to the question?</i></p>	<p>Medics strategically handle patients' by assessing lethal injuries using an ordered procedure like treating bleeding first and use the nearby resources to come up with solutions that may not be as straightforward.</p>
<p>Audience / larger significance: <i>Why does this question matter? What inspired this line of inquiry? Why should the audience care?</i></p>	<p>The audience should know what kind of mindset is needed to be a good medic because it is not always about having the right tools at hand but using the best of what you have. Even if you may not have medical expertise, knowing what you could do to help another person can make a difference when there isn't professional help available.</p>

II. Evidence

<p>Source #1</p> <ul style="list-style-type: none"> ● Credibility of source: <i>Who is the author or organization? What makes them authoritative or reliable? (think: SIFT/CRAAP)</i> ● Key finding: <i>What is the most important idea or fact this source provides?</i> ● Relevance to research question: <i>How does this evidence support or complicate my answer?</i> 	<p>https://www.northwestcareercollege.edu/blog/how-to-stay-calm-during-high-stress-situation-s-as-a-medical-assistant/</p> <p>This source is reliable because, my emotional response when I first read this source was that the author wanted to inform rather than to evoke a strong emotional response from me. The source is educational because the website link has .edu in it. It also provides information about the author Crissandra Marion who is the Medical Assistant Program Chair for northwest career college.</p> <p>Source main idea is to list out the main important skills to remain calmer under pressure. Preparation, living in the moment by remembering to breathe, having good communication, having time outside of life for yourself, and reminding yourself of why you pursued this career.</p> <p>The value that this source has towards my research question is that oftentimes to be a good medic, you need to have an outside life that doesn't involve your career. Even though it seems like taking time for yourself can be a waste of time, it helps a person recover and concentrate better afterwards. Being able to communicate clearly with others helps reduce stress for everyone around you. Time management and double checking are important skills. Ultimately, you should also remind yourself of your passion/desire for why being a medic is important like improving people's lives and be a source of inspiration for people that experience stress in difficult situations.</p>
<p>Source #2</p> <ul style="list-style-type: none"> ● Credibility of source: <i>Who is the author or organization? What makes them authoritative or reliable? (think: SIFT/CRAAP)</i> 	<p>www.emra.org/emresident/article/improvised-medicine-lessons-from-the-wilderness/</p> <p>The source seems to be reliable because it is a nonprofit organization website with the .org. The EM resident is a residency has the goal of trying to guide people towards leadership in emergency medicine practice. One of the</p>

- **Key finding:**
What is the most important idea or fact this source provides?
- **Relevance to research question:**
How does this evidence support or complicate my answer?

authors also have PhD and Geoff Comp has experience in leadership roles for EMRA. At the bottom of the website, it includes References to their sources for the information that they brought together. So information is easier to be traced back to its original location.

To summarize, the source wants use to understand that improvising medicine requires a process. The process to **define a problem** and **use the materials nearby** in low resourced conditions to come up with a solution. Solution may not always be straightforward like using a certain tool not for its intended purpose. **Carry versatile tools like a suture kit can be used for multiple types of injuries and can provide temporary solutions to injuries.**

Stuff + Benefits included in a suture kit

- **Antiseptic wipes to sterilize the injury**
- **Suture kit are portable and easy to carry around(Intended use is a medical surgery tool)**
- **Nylon thread used to bind tissue together but requires removal afterwards->surface level injuries**
- **Polymer threading is used for deeper injuries in the body. Depending on the strength of the threading, the time varies how long it takes to dissolve but usually 7 months more or less**
- **Scalpel to make incisions**
- **Suture scissors to cut thread**
- **Needles to close skin where the incision was made**

The information provided by this source can help support our worldbuilding because talks about the limitations of practicing improvised medicine. We can include that in our worldbuilding environment to include limited resources when we start building up conflict. Since the story is taking place on a spaceship in space, there is naturally limited amount of space so we need to think about how to

	incorporate the environment to relevant to the characters in conflict.
<p>Source #3</p> <ul style="list-style-type: none"> ● Credibility of source: <i>Who is the author or organization? What makes them authoritative or reliable? (think: SIFT/CRAAP)</i> ● Key finding: <i>What is the most important idea or fact this source provides?</i> ● Relevance to research question: <i>How does this evidence support or complicate my answer?</i> 	<p>www.ncbi.nlm.nih.gov/books/NBK507778/</p> <p>Looking at the source, it looks credible because it is a government website. The headline used for this article is general as well as it uses the word bone immobilization. the words used are used to attract but to state its topic that it will cover. References used are listed at the bottom of the list so we know that they didn't just make up information. Author names are provided. By other sources, it supports the idea that this website is trustworthy in providing health resource information.</p> <p>When evaluating its value to the research question, it talks about how to manage the pain of a patient like when to continue treatment and when to stop. For the specific procedure for fractured bones, it encourages for the bone to realign the bone fracture into its natural position and uses a splint to help make the fracture maintain its position. If this process is not going well, it is best to leave an injury in the position that the patient was found. Brushing off glass and debris is okay as long as it is easy to do so.</p> <p>The source can help enrich our story's conflict because some of our characters are going to be injured. Having medics on the ship in our story should be have a realistic approach to managing injuries like fractures where they try to realign only once. Since our medics may experience low resourced conditions, it can be interesting for different material textures that are malleable or more rigid can have different affects depending on whether the injury requires more support to stay in place or to reduce pain as a temporary solution.</p>
<p>Source #4</p> <ul style="list-style-type: none"> ● Credibility of source: <i>Who is the author or organization?</i> 	<p>www.wearethemighty.com/popular/army-medical-combat-casualty-care/</p>

<p><i>What makes them authoritative or reliable? (think: SIFT/CRAAP)</i></p> <ul style="list-style-type: none">● Key finding: <i>What is the most important idea or fact this source provides?</i>● Relevance to research question: <i>How does this evidence support or complicate my answer?</i>	<p>I could consider this source to be reliable because the author Logan Nye worked in the army and is now a veteran. He uses his time to be a journalist and provide informative information about the structure of military in its culture, history, and technology. By other sources, it supports that this source is mainly run by people who used to work in the military and is spent to paint the military in an inspirational perspective. It does provide entertainment articles but it is also an historical resource. The headline does propose that it wants to entice people on what it is like to be a army medic but it is straight to the point otherwise.</p> <p>The central idea is that there is a certain order that medics should help a soldier who has been injured. A medic should stop bleeding before trying to look for any other injuries so the soldier doesn't bleed out. After bleeding stops, medics have to observe and treat the most lethal injuries and priority of which patient to treat is decided by severity. But bleeding always remains #1 priority. then #2 priority is breathing problems and if there is time, medics should treat sprains and broken bones. After all that, patients need to be admitted to a hospital and provide any helpful information on the patient. When help comes from an ambulance, medics should get new supplies in the form of a new aid bag and other medical materials.</p> <p>I think this source was answering my research question, I really needed a source that would give me information about what is the procedure of a medic and the order that they prioritize what needs to be treated immediately and what should wait for later due to other injuries being more severe or the environment is currently dangerous. The other sources I used were more about how to regulate your emotion and being prepared and covered more specific injuries.</p>
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<p>Source #5 (optional)</p> <ul style="list-style-type: none"> ● Credibility of source: <i>Who is the author or organization? What makes them authoritative or reliable? (think: SIFT/CRAAP)</i> ● Key finding: <i>What is the most important idea or fact this source provides?</i> ● Relevance to research question: <i>How does this evidence support or complicate my answer?</i> 	
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III. Implications

<ul style="list-style-type: none"> ● What the evidence <i>means</i>: <i>What patterns or themes did I discover? What conclusions emerge?</i> 	<p>Patterns that I discovered throughout my sources was that remaining calm under pressure was important to working well and also keeping the patient calmer.</p> <p>Some conclusions that emerged was that in dangerous situations, the patient's survival sometimes needs to be treated on the spot (Like severe bleeding and breathing blockages) rather than waiting until relocated to a safer place.</p> <p>A medic must be considerate of the space that is available to treat a person and if there are multiple patients, who should be prioritized.</p>
<ul style="list-style-type: none"> ● Why it matters: <i>What is at stake and for whom (i.e. "stakeholders")</i> 	<p>This question matters because it is dealing with a patient's life and how a medic responds and what they prioritize in the moment can make a difference. Some injuries need to be treated but can be put to the side for more serious injuries.</p> <p>Medics also need to be aware that they may not always have the necessary tools at hand to treat a patient and need to be open minded to using unconventional methods.</p> <ul style="list-style-type: none"> - Using any rigid object to keep fractured bones in place until

	<p>brought to a hospital to be given a proper splint is one situation where a medic has to make that decision.</p>
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IV. Conclusion

<ul style="list-style-type: none"> <p>What should be explored further: <i>Identify one or two questions worth continued investigation. What would you be interested in exploring through further research?</i></p> 	<p>How does a medic deal with the guilt of losing a patient and what are some effects it has on a medic mentally?</p>
<ul style="list-style-type: none"> <p>Your final takeaways / why your audience should care: <i>What do you now understand about your topic? What is the real-world significance of this research conversation for your audience?</i></p> 	<p>Need to be in control of your emotions so you can make immediate decisions The real world significance of this research is that medics that have dealt with injuries outside of work may not have access to supplies when they were working at the hospital carrying portable/versatile tools can help offset the lack of medical supplies on the go.</p> <p>Without having a procedure to follow, it can make the treatment for a patient less effective and cause other injuries to worsen over time if not taken care of first.</p>
<ul style="list-style-type: none"> <p>Applications to your storyworld: <i>How could your findings inspire technologies, conflicts, themes, characters, or world rules in your group's project?</i></p> 	<p>In our storyworld, these findings can help our conflicts with our character's physical health be approached more reasonably. Medics are important characters in our story so having knowledge about what the ideal mindset to have can help our characters treat patients in the story that get hurt to the best of their abilities.</p> <ul style="list-style-type: none"> - Technology like our medics carrying suture kits can make our world more realistic - Some inexperienced medics in our world may not follow the correct procedure and end up losing a patient's life because of it

	<ul style="list-style-type: none"> - Themes of an individual being responsible for their emotions when under pressure from other individuals, personal trauma, ego, environmental conditions. Good Medics in our world need to treat patients and be in control of any guilt/fear that they may experience because it could hinder their ability to save other characters in the story.
<ul style="list-style-type: none"> • Prompt the immediate audience (classmates) for any questions or pose a specific question for them: 	<p>If you were a medic in a high pressure situation, what would you prioritize in a patient's health?</p>

Annotated Bibliography

Topic: Practicing Improvised Medicine as a Medic

Research Question:

How does a medic strategically deal with life threatening situations and uses skills like improvisation and resourcefulness to treat patients that have injuries?

Crissandra Marion. "How to Stay Calm During High Stress Situations as a Medical Assistant." *Northwest Career College*, 4 November 2025, <https://www.northwestcareercollege.edu/blog/how-to-stay-calm-during-high-stress-situations-as-a-medical-assistant/>

Some days at a hospital or clinic can be chaotic. There is a crowded waiting room, a ringing phone, and sick patients who urgently need treatment all at once. For a Medical Assistant, composure under pressure isn't merely beneficial—it's essential.

Patients depend upon calm, attentive care. For this reason, becoming adept at managing stress is an integral part of your education. During medical assistance training, students at Northwest Career College receive hands-on training and externships with healthcare providers in Las Vegas. With proper training and assistance, graduates are prepared to navigate stressful situations and make patient care number one.

Understand the Power of Preparation

Being prepared is one of the best methods of remaining calm during stressful moments. As a medical assistant, you must do everything, from caring for patients to performing records and accurate bookkeeping.

For instance, become knowledgeable about everyday medical procedures, learn to manage your time well, and double-check everything. Preparation will enable you to meet adversity with a clear head and steady hands.

Breathe and Stay Present

It's easy to become overwhelmed during high-stress situations. A quick trick to regain concentration is to breathe deeply. When you have a difficult-to-handle patient or an unexpected crisis, inhale deeply through your nose, hold your breath for an instant, and breathe slowly through your mouth. This activates your relaxation response and grounds you.

Being present is equally crucial. Stay fixed on what you have to do at this moment. As one saying goes, "one step at a time."

Build Strong Communication Skills

Clear communication can make stressful situations easier to handle. Effective communication with your team, patients, and their families eliminates confusion and builds trust.

For instance, calmly explaining what to do next with a nervous or upset patient can calm your concerns and theirs. Teamwork is essential in healthcare. It's okay to ask for assistance or get instructions repeated if you're not sure.

Practice Self-Care Outside of Work

How well you care for yourself away from your job will enable you to perform well under stress at your job. Take time to do the things you enjoy that renew you, whether exercising, seeing friends and family, or doing a hobby. Prioritize your sleep, eat well, and drink water. Take care of your body, and your mind will be calm.

Most medical workers report that simple self-care improves concentration and patience. Don't underestimate the power of caring for yourself so that you can care for others.

Keep the Big Picture in Mind

Last but not least, remind yourself why you became a medical assistant. You're changing lives. It may be reassuring an anxious patient or helping with a procedure that saved a life. Your work is meaningful. Remind yourself of this, and you will be calm and inspired, even during your most stressful moments.

Become a Medical Assistant Today

Remaining calm during high-stress situations is a medical assistant's most critical skill. It puts patients at ease and lets healthcare teams function optimally.

Northwest Career College prepares students with training and practical experience to be confident under pressure. With hands-on training, an externship in Las Vegas clinics, and guidance from experienced instructors, graduates are ready to succeed.

It takes only 9 months to begin a fulfilling healthcare career. Financial assistance is available, and jobs await you at clinics, hospitals, and centers. Take your first step forward—enroll with us today.

Geoff Comp and Charles Duke. "Improvised Medicine: Lessons from the Wilderness."
Emra.org, 9 Aug. 2017,
www.emra.org/emresident/article/improvised-medicine-lessons-from-the-wilderness/.
Accessed 5 Dec. 2025.

Improvised medicine might be viewed as a skill reserved for the wilderness — for the people who can whittle an entire trauma bay out of a few sticks. Indeed, someone is occasionally pressed to use a hydration bladder tube to perform a cricothyroidotomy on the side of a mountain. However, emergency medicine is a specialty of improvisation, and the same techniques and ingenuity used in the wilderness setting have a direct benefit in the emergency department (ED).

Many of us were drawn to the emergency department because we have all of the toys. The modern emergency department contains a dizzying array of tools and techniques to resuscitate and treat a variety of conditions as safely as possible. However, situations often demand something that doesn't fit into a neat box, and we have to get crafty. Consider the humble Foley catheter that has been employed by generations of physicians to remove peanuts from noses, tamponade bleeding, and preserve g-tube tracts. That is a lot of mileage out of something simply designed to deliver fluid from one place to another. Another example, the safety pin, has hundreds of applications both in the wilderness backcountry as well as in the pocket of a creative emergency medicine physician during a busy shift in the department.

A core idea of improvised medicine is to identify the problem and find a solution with the materials directly at hand. It is important to think of an object not only for its intended use, but also as a sum of many other useful parts. A suture package doesn't just contain the material for wound closure (or backpacker repair). It can also serve as a plastic backing to splint a finger, or as a wrapper to hold a patient's easily misplaced jewelry.

Weight and space considerations limit the amount of specialized tools a physician may have in low-resource situations, but even a minimal wilderness medicine tool kit generally includes a knife, parachute cord, space blanket, and heavy tape. These items, along with other readily available materials, can help manage a variety of medical conditions. This type of common-sense problem solving is only limited by the physician's imagination.

We wondered how some well-known physicians in wilderness and emergency medicine might apply their favorite improvised medicine techniques. What follows are their favorite tips and tricks for situations in either the wilderness or a busy ED.

Powell, Ryan A., and Alec J. Weir. "EMS Bone Immobilization." *PubMed*, StatPearls Publishing, 2020, www.ncbi.nlm.nih.gov/books/NBK507778/.

Musculoskeletal (MSK) injuries sustained after trauma are a very common occurrence across the United States and throughout the world. Nearly 15% of all routine emergency department (ED) visits are for MSK injuries according to the American College of Surgeons Committee on Trauma. They also state that 85% of all patients suffering blunt force trauma experience some form of MSK injury. MSK injuries are one of the most common injuries that emergency medical services (EMS) providers manage. In addition, MSK injuries affect 1 in 4 Americans annually, and their symptoms are the second most common reason for physician visits.^{[1][2][3][4]}

EMS providers encounter MSK injuries in a wide variety of incidents including motor vehicle collisions, falls, sporting accidents, and physical assaults. MSK injuries are a substantial source of pain and disability. Proper management with appropriate splinting technique not only diminishes this pain but also reduces additional injury to the surrounding tissues and prevents long-term damage. Isolated MSK injuries, along with those occurring as a result of multi-system trauma, all merit the same proper management and treatment to provide the patient with optimal care. It is imperative that EMS providers know how to appropriately stabilize and manage these injuries as many can result in limb-threatening or life-threatening conditions.

Not all bones are created alike or have equal strength. Generally, small bones such as the bones of the wrist and hand, require a smaller amount of force to sustain injury as compared to larger bones like the femur or pelvis. An injury to the MSK system proximal to the ankle or wrist is an indication that a significant force impacted the body. The larger the injured bone and the greater the force, the more suspicion EMS providers need to have for other injuries.

Issues of Concern

Types of Fractures

According to Mosby's medical dictionary, a fracture is, "A traumatic injury to the long bone in which the continuity of the bone tissue is broken." A fracture can be further described as closed or open. Fractures that have no break in the skin are called closed fractures.^{[5][6][7]}

An open or compound fracture occurs when the traumatic force that caused the bone to fracture also results in an external wound. This wound is often caused by the sharp edges of the bone puncturing the skin from the inside out, or by the external compressing force or shearing the skin, leading to an open wound.

Open fractures have a high risk of developing osteomyelitis, an infection of the bone itself. This type of infection typically requires intravenous antibiotics and surgical debridement. When left untreated, can be limb or life-threatening.

Fractures can also be categorized as displaced or non-displaced. In a displaced fracture, angulation and deformity of the bone are often seen. A non-displaced fracture is difficult to diagnose without x-ray films and is not as pertinent for EMS providers to identify.

Types of Splints

Air splints are essentially large air bladders that are initially deflated and wrapped around the affected extremity. After application, they are inflated to provide rigidity through air pressure.

Vacuum splints are applied longitudinally along the length of the extremity, and straps are applied around it to secure it in place. A hand pump is then attached to a valve stem on the splint and is used to withdraw air from the splint. As air is removed, the splint forms to the shape of the injured extremity and becomes rigid.

Slings are used to immobilize suspected clavicle fractures or shoulder injuries. They can also be used to hold and support upper extremity injuries in a position of comfort.

Rigid splints are made out of plastic, malleable metals, wood, or other materials. They tend to be less flexible and more supportive than soft splints and are usually padded. They are typically secured to the patient via circumferentially applied adhesive, bandages, or straps. The joint above and below the injury should be immobilized as well.

Traction splints are used to immobilize femur fractures. They are comprised of straps that attach over the pelvis as an anchor, metal rods to mimic bone stability, and a mechanical device to apply traction. This is done in an attempt to reduce pain, realign the limb, and decrease vascular and neurologic complications to the affected lower extremity.

Pelvic circumferential compression devices (pelvic binder) work to provide circumferential stabilization of the entire pelvic cavity. This is performed to reduce pelvic fractures and decrease pelvic volume, in turn leading to decreased hemorrhage. The compression force is applied at the level of the femoral trochanters. This can also be achieved by wrapping a sheet around the pelvis and tying it tightly to secure it in place.

Approach to MSK Injury

Prior to the evaluation of specific MSK injuries, EMS providers should follow advanced trauma life support (ATLS) guidelines. The primary survey in ATLS consists of the airway, breathing, and circulation (ABCs). Any life-threatening hemorrhage found should be managed as part of the circulation exam. Severe hemorrhage from an MSK injury is best controlled with direct pressure and takes precedence over injury stabilization.^{[8][9][10]}

EMS providers should begin the evaluation of the MSK injury by visually assessing the injury and removing any overlying clothing or jewelry so they can fully examine the affected body part. One should look for any debris such as broken glass and dirt that can be easily brushed away and not become embedded into the skin of the patient. Also, one should assess whether there is disruption of the skin secondary to a fracture. Next, palpate the injured area for any deformity, bony tenderness, swelling, or crepitus. Evaluate the distal portion of the affected extremity to assess for proper circulation, sensation, and muscle strength. Do this by checking capillary refill, distal pulses, muscle strength testing, and skin sensation.

When an MSK injury is identified, the treatment goal of the EMS providers is to restore and maintain bone and joint alignment. By doing this, EMS providers control pain, reduce motion, prevent further soft tissue injury, and promote the tamponade effect of muscles on any injured blood vessels. This is best attained by realigning the extremity into anatomical position as soon as possible, then applying a splint to maintain its position.

There is some controversy over whether or not EMS providers should attempt reduction to realign bone fractures. The current teaching is that the MSK injury should be splinted in the position the patient is found unless there is apparent poor distal circulation. In this case, EMS providers should employ one attempt to try to reposition and realign the extremity, and then splint it in place. If their attempt is unsuccessful, they should return to splinting in the initial position found.

Approach to Reduction

To perform a reduction of a fracture, EMS providers start by checking for distal circulation, sensation, and motor function. Next, stabilize above and below the injury, followed by applying gentle traction to the distal extremity in the direction it is facing. While maintaining traction, move the distal extremity back toward its anatomical position. Stop immediately if there is resistance, a significant increase in pain, or when the correct anatomical position is obtained. Recheck distal circulation, sensation, and motor function. Apply an effective splint to maintain anatomical position and to protect the extremity from further damage.

Aggressive pain management is indicated if possible to help relax the patient during an attempt to reduce and realign a displaced fracture. Realignment is uncomfortable for the patient. However, it is frequently associated with a considerable reduction in pain. For this reason, realignment should not be delayed if the administration of pain medication is not readily available.

Soldier Is Wounded.” *We Are the Mighty*, 7 Jan. 2022,
www.wearethemighty.com/popular/army-medical-combat-casualty-care/.

When a soldier is wounded on the battlefield, medics get the call.

Medics are sort of like paramedics or emergency medical technicians in the civilian world, except paramedics and EMTs are less likely to carry assault rifles or be fired at by enemy forces. When everything goes wrong, soldiers count on the medics to keep them alive until they can be evacuated to a field hospital.

Ninety percent of soldier deaths in combat occur before the victims ever make it to a field hospital; U.S. Army medics are dedicated to bringing that number down.

To save wounded soldiers, the medic has to make life or death decisions quickly and accurately. They use Tactical Combat Casualty Care, or TCCC, to guide their decisions. TCCC is a process of treatment endorsed by the American College of Surgeons and the National Association of Emergency Medical Technicians.

First, medics must decide whether to return fire or immediately begin care.

Since the Geneva Convention was signed, the Army has typically not armed medics since they are protected by the international law. But, the Iraq and Afghanistan wars have mostly been fought against insurgencies who don't follow the Geneva Convention and medics have had many of their markings removed, so they've been armed with rifles and pistols.

When patients come under fire, they have to decide whether to begin care or return fire. The book answer is to engage the enemies, stopping them from hurting more soldiers or further injuring the current casualties. Despite this, Army medics will sometimes decide to do “care under fire,” where they treat patients while bullets are still coming at them.

Major bleeding is one of the main killers on the battlefield. Before the medic even begins assessing the patient, they'll use a tourniquet, bandage, or heavy pressure to slow or stop any extreme bleeds that are visible. If the medic is conducting care under fire, treatment is typically a tourniquet placed above the clothing so the medic can get them behind cover without having to remove the uniform first.

Now, they can finally assess the patient.

Once the medic and the patient are in relative safety, the medic will assess the patient. Any major bleeds that are discovered will be treated immediately, but other injuries will be left until the medic has completed the full assessment. This is to ensure the medic does not spend time setting a broken arm while the patient is bleeding out from a wound in their thigh.

During this stage, the medic will call out information to a radio operator so the unit can call for a medical evacuation using a “nine-line.” Air evacuation is preferred when it's available, but wounded soldiers may have to ride out in ambulances or even standard ground vehicles if no medical evacuations are available.

Medics then start treatment.

Medics have to decide which injuries are the most life-threatening, sometimes across multiple patients, and treat them in order. The major bleeds are still the first thing treated since they cause over half of preventable combat deaths. The medics will then move on to breathing problems like airway blockages or tension pneumothorax, a buildup of pressure around the lungs that stops a soldier from breathing. Medics will also treat less life-threatening injuries like sprains or broken bones if they have time.

Most importantly, Army medics facilitate the evacuation.

Army medics have amazing skills, but patients still need to get to a hospital. Medics will relay all information about the patient on a card, the [DA 7656](#) and the patient will get on the ambulance for evacuation. The medic will usually get a new aid bag, their pack of medical materials, from the ambulance and return to their mission on the ground, ready to help the next soldier who might get wounded.

3 Annotated Research Sources

[Improvised Medicine: Lessons from the Wilderness EMRA](#)

C- Made in 8/9/2017

R- It connects to my research because it talks about improvised medicine and just a general overview of what people should bring when they are out in the wilderness.

A- Geoff Comp worked in the medical industry and universities that were focused on medical topics. University of Arizona College of Medicine Phoenix. Charles Duke worked in EMRA wilderness medicine division.

P- References are listed at the bottom of the website and states the name of authors

P- the purpose is to inform people what it means to practice improvised medicine. It is driven by creativity on the spot and requires some preparation for situations that would lead to a person needing help.

The source's main claim is that improvised medicine can be useful in situations that are not in the wilderness but in high pressure situations. Being resourceful and creative with the tools you already have by using them not for their intended purpose. This source expands my thinking

because creativity is helpful in improvised medicine but also carrying around basic tools that are versatile can go a long way. What other tools would be useful to carry around to prepare for the future

Annotations:

- In the wild, there is only so much you can carry. But by having basic tools that have versatile use cases, it can be used for so much more than its intended use. This is only effective to the point of the person's creativity
- Problem solving with little resources requires solutions that may not perfectly solve the problem and are usually not neat
- Bare minimum of a medicine tool kit is a Knife, parachute chord, space blanket, and heavy tape are versatile tools

[What Is Included in a Medical Suturing Kit? - Cascade Health Care Inc.](#)

C- Made in September 22 2022 and it is important because a suture is a very useful accessory to have that holds a lot of tools.

R- Answers how to treat people by describing what each tool in a general suture kit may do and its intended purpose

A- Doesn't have a specific author but is made by the organization Cascade Health. The author nonprofit health care organization

A-It doesn't really cite its sources that it used to take the information. But the way the website is set up is to inform the reader and give general information of each tool and a short description of the use case.

P-I think the source was made to persuade people into having a suture kit at hand for themselves and the solutions they provide to problems when a hospital isn't very accessible.

The purpose of this source is to help people understand that while sutures provide a variety of possible solutions. Not all suture kits are the same so other purchases may need to be made. For a medic who may have to carry around medical supplies, having a suture kit at hand would be very helpful. This source has complicated my thinking because there are so many different tools and to include this into our worldbuilding, making sure I use the right terminology will be helpful to convey the right idea. The question that was brought up was how effective are suture kits and if used correctly, does the injured person still need to go to the hospital?

Annotations:

- A suture package is used for medical surgery use. It is a surgery kit that is easy to bring

- In the package, it usually contains some kind of thread such as silk or nylon. Which can be used to bind issue back together
- Antiseptic wipes to help sterilize the area or wound
- Scalpel to make incisions and suturing scissors to cut the thread
- Needles used for wounds that are close to the skin typically
- Non cutting needles need more strength than cutting needles but are used for soft tissue like organs and under the skin tissue
- Depending on your certain suture kit that was purchase, you may need to purchase replace for some tools like if they are single use
- Non absorbable sutures are used for surface wounds to close them up(used in less extreme or critical cases)--> uses polymer threading and removes threading when the healing process is done
- Absorbable sutures are used for deeper wounds and use threading that dissolves in about time period of about less than 2 months

[Splint: Types, Uses and How Long To Wear Them](#)

C- the source was last reviewed on September 15, 2023. It is important because a splint is used to manage fractured bones and other parts of the body that may need to be held up to heal properly/better.

R-This is relevant to my research topic because our characters are going to be in potentially high conflict situations that cause them to get hurt. Our medics in the story are going to have to utilize splits for our characters.

A-Not any specific author is listed in the source. But it is made by Cleveland Clinic which is a nonprofit organization. The organization's expertise is to help lead health research and education.

A-The source provides references at the very bottom

P-The purpose of the source is to inform people about what different kinds of splits may look like and the different functions that each unique split serves.

- Splinting is when a part of a body is needed to be held in a stuck position in order to heal a fracture or prevent further injury(Tendons, ligament, or bone fractures, dislocation)
- Helps to reduce inflammation and can provide some pain relief
- Usually used for fingers, wrists, elbows, forearms, knees, ankles, and feet
- Different types of splints include: static splint(can't move that part of the body), static progressive splint where it can be adjustable to stretch the body or change the splint's position

- Dynamic splint where the person has a splint that lets them move a certain set range of motion
- Serial static splint where a medic would use a splint in a position that would hold the injured part of the body in the widest range motion so it would heal the tissue in a way that lets it stay stretched and flexible
- In some cases, splints may have some drawbacks like causing skin irritation, pressure sores, nerve compression, and infection
- For less serious injuries it can be worn for a few weeks but more serious injuries can lead up to a person needing a splint for many months
- Assuming that aren't pre made splints around, may require just making a splint with normal materials that are flat like a stick or a metal rod in low resourced conditions and use tape to hold it down to the fractured body part

Short Reflection:

My initial research had shifted my direction to be focused about how we could incorporate what would go on in a medic's mind in high pressure situations with a lack of supplies. The initial question that I had was more focused on improvised medicine and how to treat people. I am somewhat interested in the medic's approach to improvised medicine but I want to shift more towards the thought process of a medic that is put on the spot. What would a good medic do and think in a situation that is very traumatic because they are in a life threatening situation. One evidence that I found to be most relevant was the importance of a creative mindset when in the wilderness. What remains unclear still is getting more specific so focusing on severe bleeding would be good. Improvisation and being resourceful are important skills to have so learning about how a medic would manage severe bleeding would be relevant to our worldbuilding project.

Another potentially interesting source for the future

<https://www.sciencemuseum.org.uk/objects-and-stories/medicine/medicine-war-z-one>

<https://pmc.ncbi.nlm.nih.gov/articles/PMC3299157/>

From Topic to Question Research Guide

What do they expect me to do?

I want to see how improvised medicine could be incorporated into our worldbuilding project. We are intending to have many of our characters die off and some will get injured throughout our story. To have medics that are going to have to treat people around them. Treating people who may have minor injuries or may suffer from fractures.

How much can I expect them to know already?

I don't really expect my audience to know much about how to treat other people. Some could know how to do CPR and disinfecting minor wounds. Putting on bandages, the audience may include people who have experience with being in low resourced environments like people who go camping.

I want to learn more about improvised medicine because I want to find out the thought process of a medic who may not have pre-made medicine at hand so my audience can better understand how people can be treated in harsh conditions. (How are bodies that are dead decomposed)---> potentially like some kinda fungus that breaks down the bodies for fertilizer

How would a medic approach improvised medicine when trying to care for people in critical conditions?

Power Brainstorm

Power in society is in people who have a strong resolve for the change they want to create and individual ambition. The people who usually hold the most power are the people who appear to look steadfast in the face of pressure. The Captain of the Ship and the Commander would be people in power naturally because of their position and their experience in leadership. People like them have the power to rally people together under a common goal like what is the best way to establish the colony. Potential resistance is the battle between good which upholds humanity's morals and the bad which seeks to achieve progress through any means necessary seen in the commander. Potential resistance comes from the people who choose a side due to personal experience that hinders a person's ability to fully care for good every single time. But choosing to give our characters a chance at redemption gives them power in

our world. I believe our characters like Leto Davis, Mika, and Elaine Collins can show a shift in power through their character development. It can be by overcoming their insecurities and trauma for the benefit of creating a colony that values good (morals and redemption). These characters do good to the best of their ability despite how their fate may come to an end soon when there is conflict on the ship. These characters can also achieve power by also challenging the two main sides that develop in the ship that is on the way to the colony. Like they may not entirely agree with the captain of the ship or the commander entirely and may take a different approach to problems despite the pushback they could receive. But because our character's inner being wants to do good, the end result leads to creating a better world by helping each other despite their differences. Differences can include social status, personality, ambitions, and more. Finding common ground with each other like various characters wanting to maintain their humanity through maintaining their morals brings different people together which gives them power because they can rely on each other. Ego can be a driving factor of who attains power like the Commander who is power hungry. The commander feels entitled to power and uses inhumane methods of achieving it which harms other passengers on the ship of their own power. In the process of achieving power through negative ways can cause a person to lose themselves by tying their identity to being able to control others.

Surrounding Characters:

Captain of the Ship:

- Wyatt Williams who is an older and seasoned leader of the ship
- Chosen due to his accomplishments that he had on Earth in leadership roles

Navigator (Specialize in making sure ship stay on course)

-

Deck Officer who is second in command of the ship

- Power hungry and is very competitive to the point where it becomes toxic

-

Kitchen Head Chef of the spaceship

- Known for their cheery personality and tries their best to make food taste good with the limited amount of resources

-
Chief Engineer

-
Son of the Chief Engineer

Assignment: Character Writing

Outer Layer:

The character's name is Leto Davis. His appearance is pretty average as he often wears an assigned baby blue nurse uniform. Whenever he is out of uniform he usually wears clothes that are casual so as to not stand out. The voice is more quiet and has a medium strength to it which doesn't make him heard as much by his peers. 21 years old and he's known to be quite shy but is committed to helping others in the medical sector of the ship. Others' impressions of him see him as quiet and not even worth mentioning as he doesn't open up easily to people. People view him as insignificant as he doesn't have many notable accomplishments.

Layer 1: Surface Problems/Habits

Often lacks basic etiquette which leads to others typically deviating away from him. Leto has a hard time trying to show care to his patients in making them feel better on an emotional level but tries to do his work well. Human connection doesn't come easily to him but it doesn't necessarily mean he doesn't care. Nervous habit of biting his nails and looking down towards the floor just enough to see things in his peripheral vision when walking through corridors. Despite how he comes across as uninterested, it is more so because he is attentive. He tries hard to focus when on the job and occasions that people do talk to him.

Layer 2: Deeper Causes or Motivations

What drives these insecurities is this fear of being abandoned in times when things become inconvenient to be around him. As a child before being a part of the colony spaceship, his parents had left him because they couldn't carry the extra financial burdens of a child when the parents could barely take care of themselves. He was regarded as nothing special in his school years as he kept to himself and very few people would connect but

not on a deeper level. His emotional needs are learning how to express his emotions with more clarity to people that are trustworthy. Fighting his fear of abandonment is a huge struggle for him and to let it affect it can cripple his ability to function as a person.

Core: central conflict or desire

Leto does his job well but in some moments, it is fueled by his need to prove that he isn't a liability. As long as he can help or save the person in front of him, he brings him much joy. He desires to one day that despite how most people view him, he can find people who truly have his back. The force that will drive for his desire will be caused by humanity's morals are challenged with challenges that put them in situations where they can choose to be selfish or selfless. Strives to be part of that force that can maintain morals even in hardship and yearns for deeper connection with people that align with these morals or are willing to change to preserve his humanity(morals). He needs to learn what it could mean or looks like to take a risk for friends and patients by choosing to do that and is driven to do that by his role model Bill Davis who is his father who adopted him when he was 12years old. Bill Davis stands as a humble man who put the needs of others before himself and has always tried to follow his moral code to be a good example to Leto.

Pre-1984 WB Brainstorm

Citizens may try to survive under a government that seeks to destroy the enemy within it by trying to create this front or public appearance of themselves as abiding to a government. Since the needs may not be met by the government, people may find illegal ways or ways that the government may not approve of to get what they need. Some ways a government controls people in the world are resources like access to water and food. Some human behaviors that persist despite the pressure of these tools of power is the need to have a separate opinion that may not agree with what the government is trying to push out.

Magical Realism-inspired Worldbuilding Brainstorm

Part 1: Describe a mundane world.

A mundane world could start with a book store owner who wakes up in the morning to bland coffee. Their routine is putting on sweaters and jeans in neutral colors. Struggling is typically traffic to get to work in the smog covered skies using a bike. It often rains so

the owner has to take an umbrella almost every day. Struggles is making a steady income because he operates the store by himself. The store is lit with warm dim lights hanging from the ceiling like lightbulbs and has a hint of coffee smell and pumpkin spice. The bookstore owner has a thing for the season of autumn and enjoys having the store themed with fall colors like red, orange, yellow, and various shades of brown. The store has paint peeling off slightly from the wooden small building. On an ordinary day, the store only gets a few customers every day but it isn't A BIG problem because the rent isn't that high at the location. The store is somewhat between the town and the forest nearby.

Part 2: Envision a supernatural arrival.

Halloween is a big part of the town's festivities as everyone participates in trick or treating. The unusual thing about it is that apparently, people see people that died years ago calling them to the forest which happens randomly. Everyone else seems to forget that the person was there before except the person who is being targeted (who doesn't forget that person). People tend to ignore this unusual phenomenon because not many people are aware about it. Some chose to spend time with the passed away people. The price is that it chips away at a person's soul and could even lead to people feeling like they are crazy the more time they spend with the "dead" people. There are only a few people that have a better understanding of what is going on in the town but these are from secluded elderly people. The "dead" people act pretty much normally but it invites unusual events/anomalies to happen in town.

Part 3: Imagine potential community responses to the arrival & the values that response reveals.

The bookstore owner could see a friend that they lost not long ago and is tempted to communicate with the friend. But it is mainly just a spirit who has taken up the image of the friend they lost. The thought of having a lost one back in your life causes the bookstore owner to almost worship his "friend" and hold his friend close so as to not lose the friend again. This reverence causes the bookstore owner to ignore the cost of his soul. If that happens then a person can die for being around the supernatural for too long even though everything seems fine. It causes the natural forces of nature like insects start grouping together in an almost supernatural way and weather patterns become more erratic. People in the town are getting hurt and begin seeing ordinary things perform both good and bad miracles. The bookstore owner has to be given the choice to continue this path at his own expense or decide to turn away from his own desires even when it means falling back into his mundane lifestyle before he met with the supernatural. The bookstore owner struggles to give it all up when life before felt almost like a blank or like he was just going through the motions of living. One of the elders notices this and provides guidance in this process.

Omelas-inspired Worldbuilding Brainstorm

Step 1

- An ideal society has a some kind of strong authority system like social norms that have to be followed or a government
- Ideally the general public is treated well and has a strong sense for justice
- I think if the people value safety to the point where it comes with sacrifice it could make for an interesting story

Step 2

- I think the hidden cost could be that the population is split apart between how a society should be run like democracy vs autocracy or some form of something like that
- One group of people being exploited for example like people in poverty vs aristocrats
- Aristocrats take over the good land and benefit off the economy significantly more than the majority who are struggling
- It bothers me because it almost feels like a difficult or near impossible task to overcome that exploitation

Step 3

- A few people in the upper hand may break free from the norm of exploiting other people
- People in the struggling group could like come together with the few people who are more well off and come together to break the unfair system
- Conflict may occur when there is an event that causes drastic change in a short time period where people cannot just ignore
- Maybe there is a situation where both parties are forced to work together as a whole to overcome a common problem

What is Magical Realism, Really?

Magical realism can be a world view that is unique to a person. It could include supernatural aspects to it but it is done so in a way that isn't hard to believe. It is supernatural which is part of the natural world. Like commonly believed cultural beliefs.