

### Victoria St. John Historical Research Template #1:

Historical Question: How did sanitary practices and unsafe conditions contribute to the prevalence and causal relationship of Typhus and other hygiene casual illnesses or diseases? Specifically in relation to those who are in war or in military conditions, therefore their illnesses are cured or treated based on state or federal contribution.

Name of the Resource: Trench Fever: Report of Commission, Medical Research Committee, American Red Cross

Form of resource and where did you find it: Book, medical record. University of Minnesota Library. Section: Primary Sources pertaining to Medical Services and Warfare.

Created by: American National Red Cross Records

When/Where created: 1918. A specific origin of where the material is written is not provided, though publication is stated at the Oxford University Press

Type of historic/Scientific Resource: Primary Source/ Literature. As it is a primary account of medical records pertaining specifically to trench foot and within the corresponding time frame of the disease. As well as it is an account to what medical professionals were finding at the time, and not an explanation or reiteration of old experiments. While it can also be considered a secondary source as multiple commissioners are congregating their knowledge of the disease into a physical report. It is also evidenced as a primary source as it is portraying their evidence and explaining how they were able to complete their experiments and what knowledge came from it.

Potential bias or reliability issues: I believe it is very unlikely to have a means of bias or reliability issues as trench foot was not exclusive to one area or one demographic, as well as all parties involved in warfare are stressing about the health of their people and soldiers. Therefore, a medical resource regarding a disease affecting soldiers would have minimal to non-existent reliability issues unless there was a low range of variability in the persons being evaluated through that would speak more strictly to the commissioning of soldiers then the medical evaluation of them. As well as it is even stated that American and British authorities would cooperate with one another there it is information based on trying to benefit people, in comparison to there being a race to find the succession of the disease in a competing manner.

#### Evidence:

- “However, it may be stated that no other infectious disease during the past two years has occasioned so much sickness among the troops in France... Grieveson points out that trench fever formed 40 per cent of his hospital evaluations, and at time 60 per cent.” (Chapter 1, pg. 7)
  - This is a important statistic to use during the presentation to show how much the military was being affected by the typhus as well as trench fever. If it was an epidemic and a large population of those being evaluated then it is prevelant that

there is a large range of sickness and infection, that therefore was something that needed to be controlled through medical care and proper hygiene practices. If they were increasing their own hygiene practices as well as clothing and laundry being completed multiple times a month then the risk of illness and prevalence would decrease.

- “To carry out these experiments of such great importance to the efficiency of our armies it is requested that the Commander-in-Chief give his permission to have experiments made on volunteers from the American Army,” (Chapter 1, pg. 9)
  - If we were to be able to find the reasoning for the illnesses and their prevalence then people within those conditions would need to be studied. Those who are more likely to experience illness are those who have already predisposed medical conditions making them more likely to experience infections.
- “That a man may be entirely free from lice at the time he develops trench fever, the louse that infected him having left him some time previously as its host, and that the louse need only remain upon the individual for a short period of time in order to infect him,” (Chapter 1, pg.11)
  - The importance of infections and their cure or management was to determine incubation therefore determining when someone got infected to when they start presenting with symptoms. If that period would be short it would be beneficial to quarantine and treat people who were in close contact with those who are infected. If longer then it would be smart to use preventative measures until a preventative course or cure was determined.
- “Exceedingly great care should be taken to completely disinfect all patients as soon as practicable, and particularly upon their entering the hospital. Patients on entrance should be carefully bathed, and subsequently sponged with alcohol. Their clothing and blanks should be removed, and, whether or not live or ova are found upon them, should be carefully sterilized by moist heat at a temperature not below 70,” (Chapter, pg. 11).
  - The hygiene and sanitization of soldiers and military personnel needed to be stated into manuals and mandates to make sure that these measures were being enforced. Therefore, if mandates needed to be legislated then it is safe to assume that people lack basic hygiene and sanitization principles therefore increasing their chance of infection or illness. If proper precautions and standards were largely enforced (like how people were stationed at bases to ensure their practices) then illness prevalence would be decreased.
- “Therefore it seems probable that in nature the incubation period usually varies between fourteen to thirty days, though if the infection is acquired from a very large amount of the virus, or by scarification of the skin, this period may be somewhat shorter,” (Chapter 2, pg. 14).
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- “Tachycardia and the condition known as irritable heart of soldiers have been described as frequent complications or sequelae in cases of the disease occurring in soldiers attacked while performing heavy military duty or in those returned to such duty before completely well,” (Chapter 2, pg. 18).
  - If illness and its severity was increased once infected then people would experience greater chance of health problems and fatality. Therefore, proper precautions must be maintained to allow for treatment to reduced in their actions to make sure that they are able to avoid larger complications.

Citation:

1918. *[[Trench]] [[fever]]: Report of Commission. Medical Research Committee. American Red Cross.*

Available through: Adam Matthew, Marlborough, Medical Services and Warfare.

[http://www.medicalservicesandwarfare.amdigital.co.uk.ezp3.lib.umn.edu/Documents/Details/hoover\\_xx482\\_bx217\\_f11](http://www.medicalservicesandwarfare.amdigital.co.uk.ezp3.lib.umn.edu/Documents/Details/hoover_xx482_bx217_f11) [Accessed April 16, 2024].

Victoria St. John Historical Research Template #2:

Name of the Resource: Army Manual of Hygiene and Sanitation 1934

Form of resource and where did you find it: UMN libraries and the section supporting primary sources sectioned in Medical Services and Welfare.

Created by: Official Army Orders of November, 1940 reprinted with Amendments (No. 1)

When/Where created: 1940. Western Hemisphere, the United States

Type of historic/Scientific Resource: Primary source as it is a written production of Army Orders and how the army would need to be conducted.

Potential bias or reliability issues:

Evidence:

- “All of theses conditions under which the soldier serves must be studied and taken into consideration so that his environment may be modified to suit his mode of life, and to do this it is necessary to know first how the body lives and works and secondly how it is affected by the environment,” (Chapter 1, pg. 16).
  - Typically manuals have a golden standard of practices in relation to sanitation and hygiene therefore, if those are not able to be met then it needs to be modified. If modified it needs to ensure the utmost standards of hygiene and sanitization therefore proving the need for hygiene and sanitization throughout all practices of working in the military.
- “When free circulation of air around the body is prevented, dirt and germs accumulate on the skin and give rise to sores and boils. Dirty clothing also becomes infested by vermin. Underclothing should be washed thoroughly once a week and parts of the outer clothing which come in contact with the skin should be cleaned frequently,” (Chapter 1, pg. 18).
  - Basic practices must be maintained in order to have both a clean body to reduce chance of infection or ingestion or bacteria or microbes to increase infection. Clothing and bedding must be washed regularly to reduce the chance of infection from microbes on it as well as dirt. If not, infection or illness would be increased.
- “The daily round of life causes many impurities to be deposited on the surface of the body and must be removed if the body is to be kept healthy,” (Chapter 1, pg. 22).
  - Typhus was related to lice and the injection of a bacteria into the bloodstream, and if one person had the illness and had bodily injuries their blood could infect someone else if their blood made contact and it entered into the other person's blood stream.
- “By far the most important are the direct routes of infection whereby fresh infective material is transferred from sick to healthy people. There may be actual contact between persons as in the case of diphtheria spread by kissing, and of venereal disease by sexual contact may be more remote with a brief interval of time or space, as in what is

known as the, “droplet infection.” This disease spread by droplet infection are those of which the germs live in the nose, throat, or lungs, such as influenza, cerebro-spinal fever and tuberculosis,” (Chapter 2, pg. 27).

- Route of infection was able to determine transmission and if one person was sick it is likely those around them get infected as well. Therefore why people who are sick need to be quarantined and that individual as well as those around them need to increase their cleanliness.
- “Lice are the agents by which typhus fever, relapsing fever and trench fever are transferred from sick persons to healthy persons, and personal cleanliness is thus an important factor in the prevention of the spread of these diseases,” (Chapter 2, pg. 29).
  - Route of infection was able to determine transmission and if one person was sick it is likely those around them get infected as well. Therefore why people who are sick need to be quarantined and that individual as well as those around them need to increase their cleanliness. “Many of these old barracks do not conform to modern hygienic standards, but for financial reasons they cannot all be replaced at once, so that it is necessary to adopt such sanitary measures as are possible to improve the conditions in such barracks,” (Chapter 6, pg. 87).
- “Accommodation should be arranged so as to limit the numbers to small groups and to space beds far enough apart to prevent risk of infection by close contact or by droplets,” (Chapter 7, pg. 68).
  - States how these mandates were put in place showing how the government stated that those practices needed to be done to reduce or eliminate people from infection or illness, and if they weren’t they were likely to become ill. Though the financial issues of not being able to support those needs then it was likely that people in the military would still experience increased risk of illness.
- “The necessities of sanitation are no longer carried on by special departments as in barracks, and the men, accustomed to civilian or barrack life, fail to realize that it is necessary for them to carry out their own sanitary measures. When units first take the field, a marked lack of adaptability to field sanitary methods is always to be found and is manifested by an outbreak of preventable disease ; this proneness to early outbreaks of disease can only be prevented by education in field sanitation in peace and the inclusion in units of men trained in sanitation,” (Chapter 7, pg. 91).
  - States how these mandates were put in place showing how the government stated that those practices needed to be done to reduce or eliminate people from infection or illness, and if they weren’t they were likely to become ill. Though the financial issues of not being able to support those needs then it was likely that people in the military would still experience increased risk of illness.

Citation:

1934-1940. *Army Manual of Hygiene and Sanitation*. Available through: Adam Matthew, Marlborough, Medical Services and Warfare, [http://www.medicalservicesandwarfare.amdigital.co.uk.ezp3.lib.umn.edu/Documents/Details/LIDDLE\\_WW2\\_ARMY\\_194\\_k](http://www.medicalservicesandwarfare.amdigital.co.uk.ezp3.lib.umn.edu/Documents/Details/LIDDLE_WW2_ARMY_194_k) [Accessed April 16, 2024].

### Victoria St. John Historical Research Template #3:

Name of the Resource: Field Service Hygiene Notes. India. 1940. The control of Epidemic Typhus.

Form of resource and where did you find it: Primary Source as it is a manual made by people in legislative positions within the military of India and within the surrounding areas. Resource was found in the UMN library specializing in primary sources categorized into the Medical Services and Welfare.

Created by: Command of the Army Council. The War Office.

When/Where created: February 16th, 1944.

Type of historic/Scientific Resource: Primary Source as it was written by legislation to provide information and evidence that was to be supportive to their army and community in order to prevent and avoid illnesses. Especially those that are able to be prevented with proper precautions and standards, which is stated within the source.

Potential bias or reliability issues: I believe there would be minimal bias or reliability issues as the source is written by the war office and would be used as a source to their armies and other people in legislation and power. The source would then be used to ensure their armies are able to maintain proper hygiene and standards to avoid illnesses.

Evidence:

- “Lice can survive a wide range of temperatures but they prefer the normal temperatures of the body and will not remain away from the host for any length of time. They will migrate if the temperature is raised by fever or lowered by death, seeking a new human host,” (pg. 5).
  - If they are able to survive in multiple conditions then it is probable that illness remains steady in multiple circumstances. Increase hygiene and sanitization to reduce risk of infection, especially if normal conditions are optimal there would need to be proper precautions to make the body unable to get infected by microbes.
- “The normal method of spreading lice is by close contact of individuals such as in crowded billets, dugouts, shelters, refugee camps, and overcrowded public conveyances. The indiscriminate use of bedding, towels, hair brushes, hats, and clothing also helps in spreading infestation, and accidental infestations may arise by contact with lousy seats, cushions, etc, “ (pg. 5).
  - Reduce contact with those who are sick as it makes you have an increased risk of illness.
- “The methods of chemical control are designed particularly to prevent lousiness and not to cure it, though louse powders can be used for delousing under special circumstances. It should be remembered that a chemical method of protection will not prevent an

individual from picking up a louse as the louse cannot be affected by the chemical unit it reaches the treated garment,” (pg. 6).

- There is not a way to completely reduce risk of infection, therefore have proper conditions to reduce risk as much as possible.
- “The anti-lice belt is made of cotton, sewn into pleats to attract the louse. It is impregnated with a chemical which is lethal to lice and nits. The belt is worn next to the skin. Unfortunately the belt present issued is liable to discomfort to white troops ; when there is sweating an erythema may develop which may be severe,” (pg. 6)
  - There is not a way to completely reduce risk of infection, therefore have proper conditions to reduce risk as much as possible.
- “If all the men can not be treated in such manner the disinfection should be carried out by groups...The second principle is that disinfection will eradicate a louse infestation but will not prevent re-infestation which may take place immediately,” (pg.7).
  - Medication and treatment need to be given as soon as possible to reduce infection and severity of it. As well as proper hygiene needs to be done regularly in order to prevent the rate of infection and recurrence of it.
- “When there is a possibility of typhus, it is dangerous to crush lice with the thumbnails ; they should be dropped into a fire or into a heated tin, so that germs are destroyed at the same time,” (pg.7)
  - Proper disposal will reduce risk of infection and could be used as a way to rid the body of infection.

Citation:

1940. *Field Service Hygiene Notes: India (AHQ India)*. Available through: Adam Matthew, Marlborough, Medical Services and Warfare.  
[http://www.medicalservicesandwarfare.amdigital.co.uk.ezp1.lib.umn.edu/Documents/Details/KCL\\_McCutcheon\\_6\\_1\\_21](http://www.medicalservicesandwarfare.amdigital.co.uk.ezp1.lib.umn.edu/Documents/Details/KCL_McCutcheon_6_1_21) [Accessed April 15, 2024].

### **Summary of Analysis: Summation of historical templates**

When it comes to determining if lack of hygiene practices in military personnel increases the occurrence of per se typhus or trench fever it is important to evaluate what hygiene is and what that would mean in relation to illnesses. Hygiene is the principle of maintaining a standard of health and cleanliness which can be categorized as facial, body, clothing, and bedding. The required action should include bathing, brushing teeth, and cleaning bedding and clothes weekly if not daily to maintain proper health. If personal bodily hygiene is not maintained it is more likely for pathogens or germs to infect a person as health declines when the body is exposed to countless things harming the person. As well as if clothing or bedding is not cleaned regularly bacteria is able to flourish and maintain a proper environment to ensure the person being exposed to them constantly increases risk of illness. When it comes to the legislation that was presented specifically within the time period ranging from 1918-1940 all were released from the American Red Cross or military services/foundations. Traditionally, information is released from larger corporations or organizations because they are those who have authorization to complete what they are outputting. Which does implore their credibility into what they are proposing. Though there is a downside to the legislation being made regarding the health and safety of armies because when there is extenuating circumstances to what they are going through there would be less possibility to reduce their own illness. It would be more successful in a stationary standpoint as there would always be adequate living conditions as there would be likely visits or higher individuals present to make sure they are following the in place regulations, though outside of those such as on active duty missions they are void of resources and accessibility to things to allow for them to remain safe and illness-free. As one of the manuals stated that lice should be burned instead of crushed by fingers, that is able to put men in danger as the flame could give away their positions therefore it would more or less be something they need to live with until they are in safe conditions to do so. So it is to say that people within authority are quick to propose solutions to a problem such as the rising epidemics in barracks and in the proximity of soldiers though the problem is when they lack applicability. As soldiers in active duty are taught to do the best they can with the bare minimum and are usually within a low state of capacity to make sure they are following strict hygiene patterns when they are all crammed



together trying to see if they'll get to see tomorrow and not knowing what they would be doing the next minute. Therefore, when it comes to the sources used above they are reliable though the applicability states that if they are not at a camp or base that is structured to provide the best possible living arrangements required for them to avoid sickness, illness, or disease. Though outside of those strict regulations that often have specific management to instill the proper precautions, there is likely to be epidemics of illness as the practices are void without the specific staffing dedicated to their hygiene. My dad was in the Navy for 23 years and towards the beginning doing active missions in Desert Storm, where he said one of the hardest things about being in the military is knowing that you have limited access to things that are usually in an abundance that you tend to take for granted during your everyday life such as a shower or the ability to get food or water whenever you want, or to even be able to sleep without worrying if you'll wake up to the sounds of being in immediate danger. That amplifies the importance for why these sources and regulations are made as we need to ensure the people who are protecting our entire population are able to remain as healthy as possible so they can continue doing their jobs. Though at the end of the day those manuals cannot be followed at every moment, while also displaying how there was an influx in epidemics and varying illnesses shows how more support needed to be given to the armies, to ensure there was proper funding for all the required materials and people to ensure the best outcome.

In my opinion the most useful source in relation to the efficiency and effectiveness of hygiene and sanitation to the prevalence of infections or illnesses such as typhus would be the Field Service Hygiene Notes from India. As it was able to show how precautions and items were put in place to avoid infection and carrying lice leading to infection. While it is important to know that proper hygiene such as bathing and washing clothing and bedding was enforced and recommended. It is also important to know that other precautions were being used when those strict hygiene practices were unavailable. For example in active duty there would be limited time or availability to shower or do laundry therefore it would be more likely to carry things on one's clothing, which could be deterred by chemical cottons or the belt to deter lice. As well as other solutions that could be used as an antibacterial to cleanse one's skin and their clothing or bedding therefore reducing risk of bacteria growth. As well as it is evidenced that these methods were able to somewhat improve infection rates as well as serve as a reduction to the epidemics experienced in the military.