

# Analysis of Presumptive Service Connections in Gulf War Vets

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## Abstract

Nearly 700,000 American soldiers deployed to the Middle East in support of Operation Desert Storm/Desert Shield. Of those approximately 30% suffer from Chronic Multisymptom Illness (White, et al., 2016). Those suffering from Chronic Multisymptom Illness (CMI) are able to apply for disability through the Department of Veteran Affairs (DVA) and if they were a veteran of Desert Storm, Desert Shield or any of the Gulf War conflicts since that time the assumption is that the CMI is caused by the Gulf War.

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## INTRODUCTION

Chronic Multisymptom Illness (CMI), also known as Gulf War Syndrome (GWS) affects 30% of the 700,000 deployed veterans of the 1991 Gulf War (White, et al., 2016). There is a debate on what has caused Gulf War veterans to get sick; but, scientific evidence has proven that they are.

A prominent condition affecting Gulf War Veterans is a cluster of medically unexplained chronic symptoms that can include fatigue, headaches, joint pain, indigestion, insomnia, dizziness, respiratory disorders, and memory problems. VA refers to these illnesses as "chronic multisymptom illness" and "undiagnosed illnesses." We prefer not to use the term "Gulf War Syndrome" when referring to medically unexplained symptoms reported by Gulf War Veterans. Why? Because symptoms vary widely (Department of Veteran Affairs, n.d., p. 1)

The DVA (Department of Veteran Affairs, n.d.) expands its definition by asserting that any veteran that has Chronic Fatigue Syndrome, Fibromyalgia, Functional gastrointestinal disorder (IBS, functional dyspepsia and functional abdominal pain syndrome) or an undiagnosed illness with abnormal weight loss, fatigue, cardiovascular disease, muscle and joint pain, headache, menstrual disorders, neurological and psychological problems, skin conditions, respiratory disorders or sleep disturbances; and they have these symptoms existing for 6 months or more it is presumed to be related to Gulf War service without regard to cause. If a soldier fighting in the Southwest Asia theater of military operations and these conditions become at least 10 percent disabling before December 31st, 2021 the DVA presumes the cause is their participation in that conflict.

The other aspect to CMI is the service connection as a result of an undiagnosed illness (UXI). The VA has defined UXI as a "diagnosed illness without conclusive pathophysiology or etiology, that is characterized by overlapping symptoms and has features such as fatigue, pain, disability out of proportion to physical findings, and inconsistent demonstration of laboratory abnormalities" (Cornell Law School, 2016).

The DVA will pay monthly disability benefits to any Gulf War era veteran that can prove he or she has one of the above manifestation of CMI. This research investigated the journey veterans must undertake to present a claim for disability and their success rates in getting those claims approved based on the presumed service connection as defined by the DVA.

Another popular term uses for this cluster of symptoms is Gulf War Illness (GWI). Whether it's defined as GWI, GWS, or CMI the fact remains that it currently affects 30% of those 700,000 veterans that were deployed to the Gulf War.

CMI has been compared to agent orange and it has been a long road getting the DVA to recognize it as a legitimate disease (Hilts, 1993). In 1996 Edward Hyman received \$3 million from congress to study veterans because he believed it was linked to a bacterial infection obtained in the Gulf (Cabell, 1997); but, his results were never published (Binns, et al., 2008).

Of the twenty-eight Coalition members twenty-seven have reported GWI in their troops (Department of Defense, 2016). This project will review the process for applying for disability and analyze the ability for the veteran to successfully be compensated for a disability claim under the presumptive conditions established by the DVA.

## METHODOLOGY

This study included 46,339 veterans who filed for CMI between the years of 2012 and 2016. and 51,701 veterans who filed for an undiagnosed illness (UXI) during this same time period. 2012 was the year both CMI and UXI became presumptive conditions so that was the focus of this study. The data was initially provided by the DVA to the National Gulf War Resource Center (NGWRC). James Bunker, President of NGWRC provided the researcher with the data. The data is comprised only from veterans of the 1990-1991 Persian Gulf War.

The UXI claims were denied greater than 90% of the time. During the 5 years studied 6.25% was the highest grant rate for UXI and that occurred in 2013. One of the reasons for this high number is that once the condition is diagnosed it no longer meets the criteria for UXI. Often during the claims process, an examiner will diagnose the veteran which ultimately causes the appeal to be denied as the condition is no longer unknown.

For this study we compared the approval rates of CWI against those of UXI during the five years.

FY	Denied	Approved	CMI Veterans
2012	6,097	2,556	8,081
2013	7,184	2,877	9,468
2014	5,857	2,180	7,625
2015	8,066	3,001	10,489
2016	7,942	3,277	10,676
Totals	35,146	13,891	46,339
FY	Denied	Approved	UXI Veterans
2012	8,166	1,364	9,013
2013	9,214	1,610	10,253
2014	7,390	1,171	8,226
2015	11,132	1,462	12,124
2016	10,971	1,567	12,091
Totals	46,873	7,174	51,707

CMI Claims (P1) 2012 =  $p = x/n = 2556/8081 = .3163$

2013 =  $p = x/n = 2877/9468 = .3034$

$$2014 = p = x/n = 2180/7625 = .2859$$

$$2015 = p = x/n = 3001/10489 = .2861$$

$$2016 = p = x/n = 3277/10676 = .3069$$

UXI Claims (P2)

$$2012 = p = x/n = 1364/9013 = .1513$$

$$2013 = p = x/n = 1610/10253 = .1570$$

$$2014 = p = x/n = 1171/8226 = .1423$$

$$2015 = p = x/n = 1462/12124 = .1206$$

$$2016 = p = x/n = 1567/12091 = .1296$$

Since both UXI and CMI claims are presumptive conditions the hypothesis will be that the CMI claims are approved less than or equal to UXI claims.

$$H_0 = P_1 \leq P_2$$

$$H_a = P_1 > P_2. \text{ Alternate hypothesis}$$

$$CL = 0.99$$

$$\alpha = 0.01$$

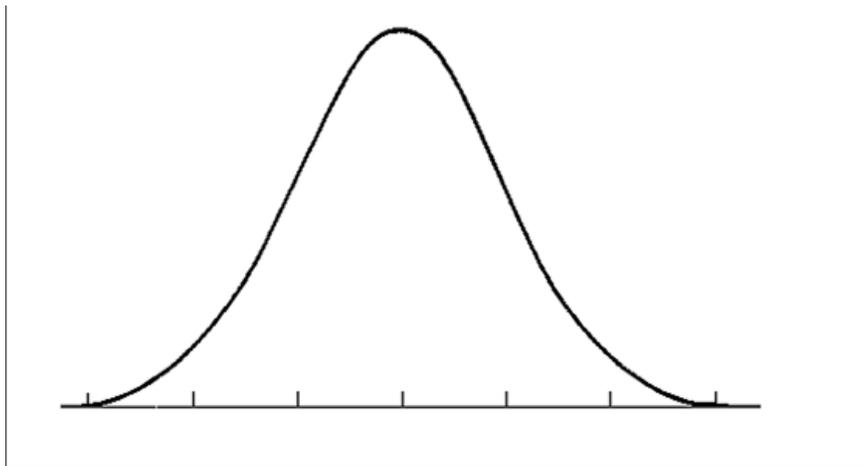


Figure 1: RR=2.33

$$Z = \frac{(p_1 - p_2) - (P_1 - P_2)}{\sqrt{(pq) - (1/n_1 + 1/n_2)}}$$

$$p = (x_1 + x_2)/(n_1 + n_2)$$

$$q = 1 - p$$

$$x_1(p) \quad [?]5, x, q \quad [?]5, x_1 p [?]5, x_2 q [?]5$$

$$X_1 = 3277$$

$$X_2 = 1567$$

$$X_2 = 1567n_1 = 10676$$

$$n_2 = 12091$$

$$P = (x_1 + x_2)/(n_1 + n_2) = (3277 + 1567)/(10676 + 12091) = 4844/22767 = .2128$$

$$q = 1 - p = 1 - .2128 = .7872$$

$$x_1p = 697.35 > 5$$

$$x_1q = 2579.65 > 5$$

$$x_2p = 333.46 > 5 \quad x_2q = 1233.54 > 5$$

$$Z = ((p_1 - p_2) - (p_1 - p_2)) / \sqrt{((pq)(1/n_1 + 1/n_2))} = ((.3069 - .1296) - 0) / \sqrt{(.2128(.7872)(1/10676 + 1/12091))}$$

$$Z = .1773 / .00543557966 = 32.62$$

$$Z = 32.62 > 2.33$$

There is enough evidence to reject  $H_0$  and to support the claim that the proportion of the approval rate for CMI is greater than the approval rate for UXI.

## PROJECT SUMMARY

Nearly 700,000 American soldiers deployed to the Middle East in support of Operation Desert Storm/Desert Shield. Of those approximately 30% suffer from Gulf War Illness (White et al, 2016).

Gulf War Illness (GWI) is particularly challenging because there is no actual medical diagnosis for GWI and it manifests with unclear etiological factors (Yee, et al 2017). Haley, Kurt and Hom (1997) defined GWI based on factor analysis that included over 600 Gulf War (GW) veterans. To meet their criteria a veteran must have served in the theater of operations between August 8th, 1990 – July 31st, 1991. There could be no other diagnosis that explained their problems and they must have experienced 5 of 8 symptoms: fatigue, low back pain, headache, diarrhea, forgetfulness, difficulty concentrating, depression, memory loss, irritability, difficulty sleeping, low-grade fever, and weight loss.

The Centers for Disease Control (CDC) also created a definition based on the studies of over 1,000 GW veterans that they termed Chronic Multisymptom Illness (CMI). Their definition was narrower than Haley's in that only two of three chronic symptoms (lasting 6 months or more) needed to manifest in fatigue, mood and cognition, and musculoskeletal. 6% of veterans had severe CMI and 39% had mild to moderate CMI. This definition was based on the work of Fukuda et al (1998).

While definitions of GWI or CMI may have inconsistencies what isn't debatable is that many GW veterans suffer from conditions that have no diagnosis and are presumed to be connected to their service in the Gulf War. The U.S. Department of Veteran Affairs (DVA) affirms this connection and refers to them as "chronic multisymptom illness" and "undiagnosed illnesses". They prefer not to use the term GWI or Gulf War Syndrome. According to the DVA (n.d.) any veteran that has Chronic Fatigue Syndrome, Fibromyalgia, Functional gastrointestinal disorder (IBS, functional dyspepsia and functional abdominal pain syndrome) or

an undiagnosed illness (UXI) with abnormal weight loss, fatigue, cardiovascular disease, muscle and joint pain, headache, menstrual disorders, neurological and psychological problems, skin conditions, respiratory disorders or sleep disturbances and they have these symptoms existing for 6 months are more it is presumed to be related to Gulf War service without regard to cause. If a soldier fought in the Southwest Asia Theater of military operations and these conditions become at least 10 percent disabling before December 31st, 2021 the DVA presumes the cause is participation in the war.

The DVA will pay monthly disability benefits to any veteran that has a disability that is 10% or more disabling. This research will investigate how many veterans are approved for disability based on the presumed service connection as defined by the DVA. The DVA has 8 steps to their claim process. The process can take anywhere between 30 days and 1 year depending on the type of claim filed. This research will compare the successes of both the CMI and UXI claims that the veteran may seek compensation as warranted by the DVA. This research will attempt to define what issues prevent the veteran from getting their disability approved.

There is little debate that soldiers returned from the Gulf War in a condition that is different than when they left. For the VA to presume that if a GW veteran has specific symptoms it is related to their participation in the GW theater it is clearly proven that there is just cause to believe that GW affected the health of those veterans that participated. This project is documenting the path that veterans must take to claim disability for these presumptive conditions.

There are two types of claims that can be filed for benefits. The first is what is called a Fully Developed Claim (FDC) where the veteran provides all of their own evidence and generally has a physician complete paperwork affirming that their condition is related to military service. The second is a process where the veteran files the claim and allows the DVA to look for the evidence to help them with the claim.

There are eight steps to filing a claim with the DVA. The first step for a veteran who believes he or she meets this criterion is to file a claim with the DVA. A veteran can work alongside a Veteran Service Officer (VSO) which are specially trained representatives whose sole purpose is to help veterans navigate the claims process. They are provided free of charge to the veteran and can be very useful. When reviewing the data from the DVA, it is not possible to affirm which veterans did or did not use a VSO. Filing can be done electronically or via paper. Once received the claim is officially Step 1 **Claim Received**.

Step 2 of the claims process has the claim **Under Review**. At this point, the veteran is assigned a representative within the DVA who is responsible for reviewing the claim and ordering any exams that may be necessary. The representative will determine if the claim is an FDC or in need of evidence. In most cases, an exam is scheduled by a VA physician or a contracted doctor to meet with the veteran to do a face to face assessment and verify the claim. At this point, it moves to the next step. If the representative believes the FDC needs no more information, then it will move to Step 5 **Preparation for Decision**.

Step 3 is the **Gathering of Evidence**, and this is the phase where the DVA looks through the veteran's medical records to support his claim. The DVA will also review any evidence supplied by the veteran and order the exams discussed in Step 2 above. This is also a time where the veteran can submit additional evidence to support their claim.

The 4th step is **Review of Evidence**. In this step, the DVA will review all the evidence. It is not unusual for them to request more evidence and when this happens, the claims are moved back to Step 3. There is no timeline for this or any other step in the process. Once the review is complete, it moves to the next step.

The 5th step is **Preparation for Decision**. In this step, the representative has reviewed all the evidence and recommended a decision. During this phase, the representative gathers all the required documents to finalize the claim and occasionally may find something missing and again send it back to Step 3.

The 6th step is **Pending Decision Approval**. In this step, the representative's decision is reviewed and final approval is made. Again at this step, it can be determined that more evidence is needed and sent

back to Step 3.

The 7th and 8th steps happen concurrently. The 7th step is **Preparation for Notification**, and that is when the DVA gathers all of the evidence they used for the claim and prepares to send that decision to the veteran. In the last and 8th step the claim is **Complete**. At this point, the decision has been sent to the veteran via U.S. mail.

According to data received from the NGWRC, a total of 341,558 claims were filed for UDX and CMI between the years of 2002 and 2016. 19% of these combined claims were granted. 27.54% of claims for CMI were granted compared to 4.73% of claims for UDX. In the year 2016 10,676 veterans filed 14,550 claims for CMI. 4,520 of these claims were denied for not having a diagnosis resulting for a sample of n=10,030. Of the 10,030 that had a diagnosis 3,277 were approved for service connection. The data indicates that 67% (n=3277) of these claims were improperly denied. The DVA states that 2,265 of the claims were denied for not being established by presumption. However, that contradicts their clear instruction that presumption is not necessary. Another 4,057 were denied for not incurring in service. Which again contradicts the fact that no connection to service is required.

Since CMI became presumptive in 2012 it should follow that successful claims would increase in the following years. However the number of denials have maintained their levels in the years 2012-2016. The chart below lists the number of veterans that have been denied service connection for CMI.

The US Government Accountability Office (GAO) has made multiple recommendations to the DVA over the years. In July of 2017 the GAO released a ten page report using the term GWI. The report found that GWI claims were approved at “three times lower than all other claimed disabilities” (Melissa Emrey-Arras, 2017, p. 4). One of the main reasons this report found was the lack of a single case definition for GWI. According to Emrey-Arras (2017) the DVA was charged in 2015 for developing a single case definition; but, as of yet has made no action plan to achieve that benchmark.

The numbers are worse for those veterans with UDX claims. 12,091 veterans filed 29,296 claims for UDX in 2016. Again, according to the DVA no presumption is required. If a veteran is able to offer medical evidence that affirms they suffer from UDX symptoms no nexus to military service is required. Despite this of the nearly 30,000 claims 5,232 were denied for not having a diagnosis. Veterans filed a claim for an undiagnosed illness and were denied for not having a diagnosis. Another 6,177 were incorrectly denied for not establishing presumption (though no presumption was required). 14,895 were denied for not having incurred in service which again contradicts the statement that no requirement is necessary. According to the data 3 claims were properly denied for not being in country. Presumption cannot occur unless the veteran served in the Gulf War.

## LEARNING OUTCOMES

This project has taught me the value of collaboration. I have been fortunate to have some great mentors who have guided me along the way and stubbornly I tried to stick to my objective and regrettably did not heed all the advice given to me. Dr. James OCallaghan (OCallaghan, 2018) suggested I focus on comparing GW vets against GW vets. While that data would have meaning it would not help provide support to the many veterans whose claims are not handled properly.

I have also learned that sometimes there is not a “best tool”. I have struggled with knowing how to analyze these numbers. Just looking at the raw data it is easy to draw the conclusion that something is not right; but, then being able to take those raw numbers and to transfer them into meaningful data without bias can be challenging. To that end I learned that I am biased. I am a veteran of the Gulf War who has been incorrectly denied multiple times by the DVA and it has been difficult to remove that bias from this work. Yet it is important work. Work I intend to continue as I have the time to do it correctly and learn to ask the right questions.

I was benefited of speaking to several former VA employees who gave me insight into this and were able to offer perspectives I had not considered. Patrick Kelly (Kelly, 2018) told me that even though a veteran has a diagnosis it may not be of good quality. He also informed me that there is a prescribed format that the diagnosis should and that can be a cause for denial. He also mentioned that claims were handled in various processing areas so it would be good to look at the data from each center instead of focusing on the numbers as a whole. Again, good advice; but, not necessarily something that could be incorporated into this project.

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