

## Vicious Habits

### *Sexually Transmitted Infections among Black and White Union Army Veterans*

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## Abstract

We analyze a random sample of 15,049 white veterans and 5,329 black veterans of the US Civil War examined by physicians between 1890 and 1906. We calculate a period prevalence of STI of 1.2–1.7% among whites and 4.2–8.0% among blacks, even though blacks and whites had almost identical prevalence of STIs in their wartime medical records. Furthermore, we find evidence that Board physicians were on the lookout for STIs among black veterans that could be used to justify denial of pension support. With or without STIs, blacks were rejected at roughly twice the rate of whites during this time period. Currently, racial disparities are even higher today than in this historical period, with blacks currently having a 5–15 times higher incidence than whites. We invite a critical reflection upon practices of screening and measurement systems to assess properly the degree to which racial prejudice may be part of these systems.

## Keywords

public health history – racial discrimination – American history

### 1 Introduction

The study and treatment of sexually transmitted infections (STIs) have long been fraught with moral controversy. Nicholas Jabbour notes that discussion of syphilis at the onset of the 20th century was “a subject beyond the ‘boundaries of decency,’ ... a disorder that affected only the immoral.”<sup>1</sup> As we discuss below, this stigma was reflected in the pension for the Union Army veterans, which forbade pension support going to anyone whose disability was a result of “vicious habits,” commonly understood to include sexual misbehavior as well as intemperance and cocaine addiction. Yet despite the stigma, STIs in the late 19th century were common and, due to lack of effective treatment, often devastating.<sup>2</sup>

We provide here the first population-based estimates of the prevalence of STI among men in the late nineteenth and early twentieth centuries. Our sample consists of tens of thousands of black and white veterans who were drawn at random from the military records and who examined by physicians in the period 1890–1906. Detailed medical exams were required to prove pension eligibility, but that eligibility could be denied if the veteran showed evidence of vicious habits. The pension system was ostensibly color-blind, but in practice the implementation of the policy was racially charged and subject to commonly-held stereotypes of black health and sexuality.

Not long after the study period noted above, effective treatments for STIs started to come forth, which culminated in the development of highly effective antibiotic treatments. Modern studies have unmasked, however, that sharp racial differences still exist with respect to the epidemiology of STIs. We do not address directly these modern data, but our results suggest looking beyond individual-level risk factors to assess the role of a variety of social and institutional risk factors such as public health policies, measurement systems, and access to screening and treatment.

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1 Jabbour, N. “Syphilis from 1880 to 1920: A Public Health Nightmare and the First Challenge to Medical Ethics.” *Essays in History* 20 (2000), 1–16.

2 Ibid, 1.

## 2 Historical Context

### 2.1 *Germ Theory and the "Social Disease"*

The US Civil War occurred between 1861 and 1865, just a few years after John Snow's studies on the 1854 cholera outbreak in London and at the same time as Louis Pasteur's experiments on microorganisms and fermentation. These pioneering studies gave birth to the germ theory of disease, and STIs would play a prominent role in the expanding knowledge about microbial pathogens. In 1879, Neisser identified the organism that causes gonorrhea, and in 1905, Shaudinn and Hoffman isolated *Treponema palladium*, the organism that causes syphilis. A few years later in 1909, Paul Ehrlich developed an arsenical compound, Salvarsan, which was the first effective treatment for syphilis. Salvarsan was hard to administer and had serious side effects, but it proved somewhat effective as a treatment until penicillin was developed decades later.<sup>3</sup>

As understanding of germ theory spread, attitudes about STIs changed as well, partly due to the culture mores of the Victorian Era, which was named for the reign of the British monarch (1837–1907). In the United States, this was a period when the culture of the growing middle class placed women on a high moral pedestal but also severely restricted her domain to that of home and family. The association of STIs with sexual activity had been known for centuries but not understood until the advent of germ theory. Previously, it was widely believed that "immoral" or "sinful" sex was at the root of the disease.<sup>4</sup> In the pre-Victorian era, many believed that women bore the primary blame for the disease and its spread and that any woman could potentially spread the disease to men.<sup>5</sup> However, new ideas about women and disease developed during the Victorian era, particularly the notion of the innate purity of women. As knowledge of germ theory spread and views on women changed, it became clear that men often brought infections home to their families. In 1881, a report of the American Public Health Association stressed that STIs could be present in all types of households and that the disease could have serious effects upon "pure women and spotless children."<sup>6</sup> Thus, in the latter 19th century, women

3 Parascandola, J. *Sex, Sin, and Science: A History of Syphilis in America* (Westport, CT: Praeger, 2008), 20–22.

4 Ibid, 7.

5 Spongberg, M. *Feminizing Venereal Disease: The Body of the Prostitute in Nineteenth-Century Medical Discourse*. (New York: New York University Press, 1998), 1–6.

6 Gihon, A.L. *Report of the Committee on the Prevention of Venereal Diseases* (Boston MA: Franklin Press: Rand, Avery, and Company, 1881), 5–9.

were increasingly seen as the victims of the disease, rather than its purveyors, which meant that men should be held morally responsible for their illicit behavior.<sup>7</sup>

STIs were not, in general, an appropriate topic for public discussion in Victorian America. Thus, when it was discussed, euphemisms such as the “social disease” were necessary. Illicit sexual activity fell under the category of what were called “vicious habits,” a term that had been used since the 14th century as an indicator of behavior that was “of the nature of vice; contrary to moral principles; depraved, immoral, bad.”<sup>8</sup> As late as 1906, vicious habits included “intemperance; opium, chloral, and cocaine addiction; sexual excess; self-abuse; and all habits of life which directly undermine the physical constitution and thus affect the brain.”<sup>9</sup>

## 2.2 Race

Jones has argued that the latter 19th century was a time when the sexual morality of African-Americans became increasingly blamed for STIs. Previously, physicians saw blacks as inherently more susceptible to disease, but came to attribute responsibility for poor health to the perceived moral failing of blacks. As Jones said of this period, “In this atmosphere it was not surprising that physicians depicted syphilis as the quintessential black disease, ... that blacks contracted syphilis because of their ‘ever-increasing low standards of sexual morality.’”<sup>10</sup>

Shockingly racist views on sexuality and disease were highly prevalent in this era among the medical community. One physician of the time refers to blacks as a “notoriously syphilis-soaked race,”<sup>11</sup> and another, writing in *The Journal of the American Medical Association*, argued that “The negro springs from a southern race, and as such his sexual appetite is strong; all of his environments stimulate this appetite, and as a general rule his emotional type of religion

7 Brandt, A.M. *No Magic Bullet: A Social History of Venereal Disease in the United States Since 1880* (Oxford: Oxford University Press, 1985), 9.

8 *Oxford English Dictionary*, s.v. “vicious” in 1.1. “Of habits, practices, etc.” Accessed July 8, 2019, <https://www.oed.com/view/Entry/223179?redirectedFrom=vicious#eid>.

9 Burr, C.B. *A Primer of Psychology and Mental Disease: for Use in Training-Schools for Attendants and Nurses and in Medical Classes, and as a Ready Reference for the Practitioner* (Philadelphia: F.A. Davis Company, Publishers, 1906).

10 Jones, J.H. *Bad Blood: The Tuskegee Syphilis Experiment, expanded edition* (New York, The Free Press, 1993), 24.

11 *Ibid.*

certainly does not decrease it.”<sup>12</sup> Another medical article claimed, “the Negro’s ‘moral delinquencies’ along with elements of ‘bestiality and gratification’ were of the close relationship of the race to is ‘animal subhuman ancestors.’”<sup>13</sup>

D’Emilio and Freedman note of the later 19th century that “in an era of rapid change, marked by anxiety about the maintenance of social order, the northern middle class clung to ideals of family stability, female purity, and male self-control. Whites stereotyped other groups as negative images of their own ideals.”<sup>14</sup> Thus, even though the laws and regulations governing the Union Army pension were race-neutral, we expect to find racial differences not only in the prevalence of STIs but also racial stereotypes reflected in the patterns of physical exams related to STIs.

### 2.3 *STIs and the Troops*

In 1495, a new disease broke out among the soldiers of Charles VIII of France, which then spread throughout Europe. The disease was syphilis and though mortality was not as high as some infections like the plague, it was a painful, horrible disease that would result in abscesses and ulcers all over the body.<sup>15</sup> Since that time, syphilis, along with gonorrhea and other STIs have long been a scourge of military forces around the world. George Washington was so frustrated in the US Revolutionary War that he set up a system that would fine those officers who contracted an STI.<sup>16</sup> In World War I, the Army discharged more than 10,000 men because of STIs and lost nearly 7 million person-days of service, which was second only to the great influenza pandemic of 1918–1919 in terms of days of last service.<sup>17</sup>

Starting in 1819, the annual reports of the Surgeon General of the Army tabulated total cases of venereal disease. The figure below comes from a 1940 article

12 Hazen, H.H. “Syphilis in the American Negro.” *Journal of the American Medical Association* 63 (1914): 463–466 (quote on p. 463).

13 English, W.T. “The Negro Problem from the Physician’s Point of View,” *Atlanta Journal-Record of Medicine* 5 (Oct) 1903 pp. 463, 468. As cited in J.S. Haller, Jr., *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859–1900* (Urbana: U of Illinois Press, 1971), 71.

14 D’Emilio, J. and E.B. Freedman. *Intimate Matters: A History of Sexuality in America* (New York: Harper & Row. 1988), 107.

15 Frith, J. “Syphilis—Its early history and Treatment until Penicillin and the Debate on its Origins.” *Journal of Military and Veteran’s Health* 20 (4) (2012) (<http://jmvh.org>).

16 Parascandola, *Sex, Sin, and Science*, 26.

17 Rasnake, M.S. “History of U.S. Military Contributions to the Study of Sexually Transmitted Diseases.” *Military Medicine* 170 (4) (2005, Suppl), 61–65.

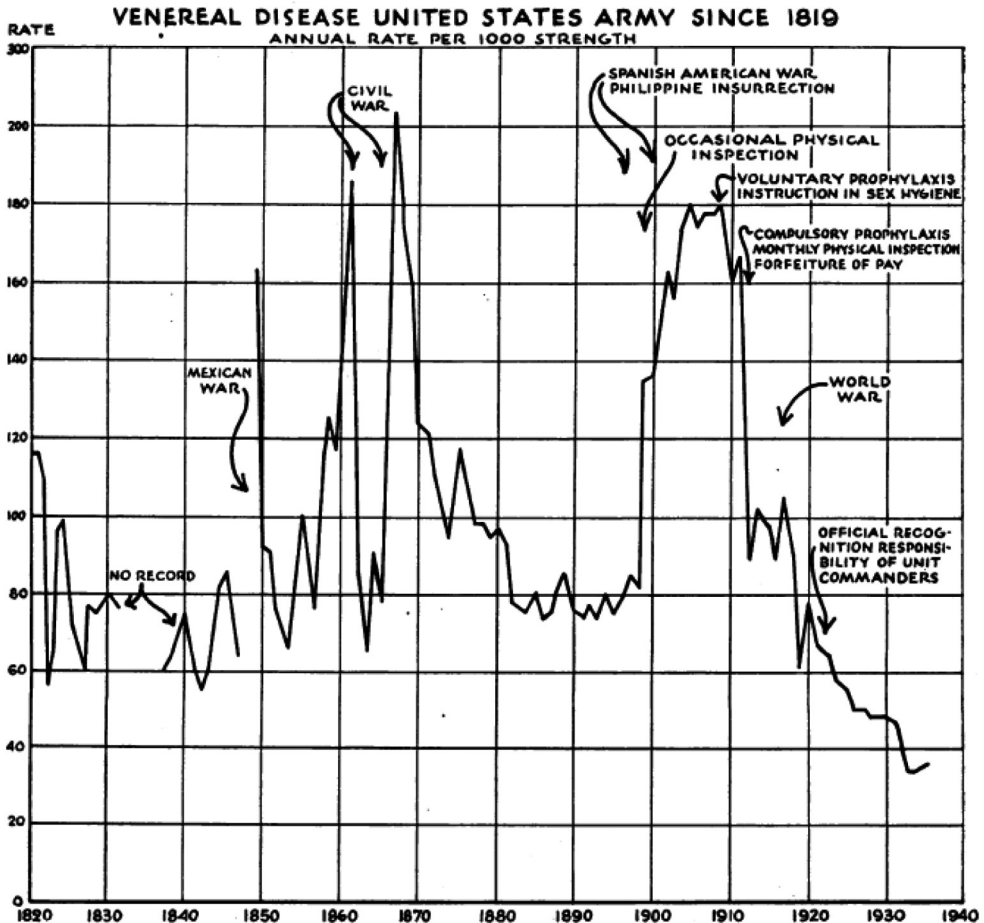


FIGURE 1 Incidence of STIs in the US Army

SOURCE: SURGEON GENERAL OF THE ARMY, AS PUBLISHED IN REYNOLDS, C.R. "PROSTITUTION AS A SOURCE OF INFECTION WITH THE VENEREAL DISEASES IN THE ARMED FORCES." *AMERICAN JOURNAL OF PUBLIC HEALTH* 30 (1940), 1278

summarizing those reports.<sup>18</sup> This figure suggests an annual rate of around 80–100 per year per 1,000 men (individuals could appear more than once per year) over the course of the 19th century, with spikes representing outbreaks, mostly during wartime.

18 Reynolds, C.R. "Prostitution as a Source of Infection with the Venereal Diseases in the Armed Forces." *American Journal of Public Health* 30 (1940), 1276–1282.

Lowry reports that during the Civil War among whites the rate of infection for all types of venereal disease was 82 cases per year per 1000 men, with gonorrhea occurring somewhat more often. Among black troops, the reported incidence was slightly lower: 78 cases per 1,000 men per year.<sup>19</sup> Disease among black troops, however, may have been underreported relative to whites because white medical officers often accused blacks of feigning sickness, which would have resulted in fewer official reports of disease among black soldiers.<sup>20</sup>

### 3 The Union Army Pension

#### 3.1 Overview

On July 14, 1862, the first major law was enacted specifically granting pensions to veterans of the Union Army (Confederate soldiers were never eligible for federal pensions). In the first decade after the war, the pension system remained a tightly controlled system of disability support confined to disabilities that resulted from war. But in the years that followed, more and more veterans were receiving pensions based on “sequelia” to war-time conditions.<sup>21</sup> Wilson refers to this expansion as “informal liberalization” and argues that it resulted, in part, from political and social pressure exerted by groups such as the Grand Army of the Republic (GAR). Over the 1880s, GAR membership and political activity skyrocketed, and liberalization of the pension system became a major plank of the Republican party and an issue that swayed presidential elections of the time.<sup>22</sup>

In 1890 the pension was formally liberalized to allow for disabled veterans to enter the system even if their conditions were not war-related. This change resulted in a large spike in pension enrollments. The program reached its peak in 1893, consuming 41.6% of the federal budget. Veterans were still required to be examined by a board of three physicians who certified that

19 Lowry, T.P. *The Story the Soldiers Wouldn't Tell: Sex in the Civil War* (Mechanicsburg, PA: Stackpole Books, 1994), 104.

20 Berlin, I., J.P. Reidy, and L.S. Rowland. *Freedom's Soldiers: The Black Military Experience in the Civil War* (Cambridge, UK: Cambridge University Press, 1998), 636.

21 U.S. Bureau of Pensions, “Report of the Commissioner of Pensions,” In *Annual Report of the Secretary of the Interior on the Operations of the Department for the Fiscal Year Ended June 30, 1877, Part 1* (Washington, DC: Government Printing Office, 1877), 731.

22 Wilson, S.E. “Prejudice and Policy: Racial Discrimination in the Union Army Disability Pension System, 1865–1906,” *American Journal of Public Health* 100, (S1) (2010), 56–65.

their claims were grounded in legitimate disability. Even though enrollments increased markedly, we see from the records an increased rate of rejection following the 1890 law. Following the 1890 law, the quality and detail associated with the examination certificates improved significantly, a trend which tracked the increasing professionalization and knowledge of the national medical community.

The 1890 law also saw a formalization of certain restrictions to pension support. In particular, the disability was not to be “the result of their own vicious habits.”<sup>23</sup> As discussed earlier, the term “viscous habits” is a euphemism for diseases thought to be caused by some type of immoral behavior on the part of the applicant. From the outset, however, considerable discretion was granted by the Pension Bureau with respect to enforcement. The Commissioner of Pensions instructed examiners that

Where there are grounds for suspecting that the disability is a result of vicious habits, the kind and amount of evidence necessary to overcome that suspicion will vary according to the circumstances of the case. In general, where there is no apparent ground for suspecting vicious habits, and, so far as can be ascertained, claimant has always been a man of good habits and of good repute for credibility, the presumption should be in favor of the claim.<sup>24</sup>

The last major change to the pension system occurred in 1907 and consisted of the formalization of granting pensions automatically to soldiers over age 65. Thus at that time the Union Army pension became a universal age-based program for Union Army veterans and their surviving widows. In the years following this change, however, the financial costs of the program were falling considerably since most veterans had already died and the existing population was dwindling rapidly.

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23 H.C. Evans, Commissioner, *Laws of the United States Governing the Granting of Army and Navy Pensions together with the Regulations Relating Thereto. Compiled in the Law Division of the Bureau of Pensions, and Published in Accordance with the Provisions of Section 4748 of the Revised Statutes*. May, 1899.

24 *A Treatise on the Practice of the Pension Bureau governing the Adjudication of Army and Navy Pensions compiled by order of the Commissioner of Pensions under the authority of the Secretary of the Interior*, (1898, 98–99).



### 3.2 *The African-American Experience*

The pension was a remarkable social achievement in that the letter of the law made no distinction between white and black veterans. The administration and effects of the law, however, were not race-neutral. It was difficult for black veterans to obtain the necessary documentation for pension support, especially before the 1890 law, and their claims faced a higher level of scrutiny. For instance, blacks were twice as likely as whites to be the object of special investigations.<sup>25</sup> Furthermore, the leniency and benefit of the doubt that was being extended to applicants as the pension gradually liberalized was frequently not extended to black applicants.<sup>26</sup>

Because the presence of STIs could be grounds for denying a pension claim, examiners may have used this mechanism as a tool to deny pensions to black applicants. Given the racist views of many physicians discussed earlier, it is not surprising, therefore, to find higher reported STI prevalence among black soldiers. But because the true prevalence of STIs among black and white veterans is unknown, higher reports of disease among the black veterans may simply reflect true differences in prevalence, just as the prevalence of STIs are much higher today for blacks in the US, as noted above.

### 3.3 *Data*

All data for the analysis in this paper were taken from the public use files of the NIH-funded project *Early Indicators, Intergenerational Processes, and Aging*,<sup>27</sup> which our research team collected from 1991–2015 using pension files in the National Archives in Washington, DC. The *Early Indicators* data is random sample of companies of white enlisted men from the Union Army (UA) and black soldiers from the United States Colored Troops (USCT). The total *Early Indicators* sample consists of 39,388 whites and 21,186 blacks (blacks were significantly oversampled compared to whites). The pension files contain both the veteran's medical records from the Civil War and the detailed "Surgeon Certificates," which were the examination records conducted by the board of examining physicians charged with conducting a detailed medical exam sub-

25 Shaffer, D.R. *After the Glory: The Struggles of Black Civil War Veterans* (Lawrence: University of Kansas Press, 2004), 209.

26 Wilson, "Prejudice and Policy" and L.M. Logue and P. Blanck, "Benefit of the Doubt: African-American Civil War Veterans and Pensions," *Journal of Interdisciplinary History* 38 (2008), 377–399.

27 Costa, D.L., H. DeSomer, E. Hanss, C. Roudiez, S.E. Wilson, and N. Yetter, "Union Army Veterans, All Grown Up." *Historical Methods* 50, 79–95.

sequent to the veteran applying for a pension. Each white recruit was examined an average of 5.5 times through his life, and each black recruit had 4.2 exams (several factors explain this discrepancy, including that whites lived longer).

## 4 Results

### 4.1 *Period Prevalence*

We focus on the period immediately following the liberalization of the pension laws that led to a large wave of new applicants who hoped to gain a pension because of the more liberal eligibility requirements. For this period, we look at a sample of 47,334 surgeon certificates for white veterans and 19,725 certificates for black veterans.<sup>28</sup> We analyze the period prevalence of STIs among the population of Union Army veterans in the period 1890–1906. Men applied in intermittent intervals based on factors such as age and health status. The average age at examination of the veteran during this period was 57.9 for whites and 58.0 for blacks.

Our outcome measure is divided into four sub-categories: 1) no mention of STI; 2) A negative diagnosis of STI; 3) An ambiguous reference to STI; 4) a positive diagnosis of STI. The records often distinguish between syphilis and gonorrhea, but for the purpose of this analysis, we combine all STIs together as a single category. Veterans could be examined more than once during this period. Though the disease state of an individual could change over the period, the 4 categories are mutually exclusive because they are prioritized in the order mentioned above. If a veteran was ever diagnosed by the examining board with having an STI then he was counted as being positive for the period. Similarly, a person is counted as ambiguous if they ever have language suggesting STI, even if a prior exam contained a negative diagnosis.

As indicated in Table 1, 86.3% of white men and 75.5% of black men had no mention of STI at any point in the examination period. In contrast, 1.2% of white men and 4.2% of black men had a positive diagnosis of STI with an additional 0.5% of whites and 3.3% of blacks having an ambiguous status. Treating all of the ambiguous cases as negative is a lower bound for the estimates, and treating all ambiguous cases as positive is an upper bound. Thus our ranges of estimates for period prevalence is 1.2%–1.7% for whites and 4.2%–8.0% for blacks.

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28 The complete sample that includes examinations from the time of the Civil War until the veterans were all dead includes 102,580 white exams and 28,736 black exams.

TABLE 1      Period prevalence of STI, by race

<i>Pension exam finding</i>	Whites			Blacks		
	<i>War-time STI</i>			<i>War-time STI</i>		
	No	Yes	All	No	Yes	All
No mention of STI	86.3 %	60.9 %	85.7 %	75.5 %	34.4 %	74.5 %
STI: negative diagnosis	12.4 %	24.2 %	12.7 %	17.2 %	27.2 %	17.5 %
STI: ambiguous	0.4 %	1.7 %	0.5 %	3.6 %	12.8 %	3.8 %
STI: positive diagnosis	0.9 %	13.2 %	1.2 %	3.7 %	25.6 %	4.2 %
Percent with war-time diagnosis			2.4 %			2.4 %
N	14,686	363	15,049	5,204	125	5,329
Total exams: 1890–1906	46,084	1,250	47,334	19,234	491	19,725

Table 1 also breaks down the prevalence estimates according to the wartime records of the applicant. For this group of veterans, 2.41 % of whites and 2.36 % of blacks had a record of STI in their wartime records. For both whites and blacks the prevalence of STI in the 1890–1906 period—many decades after the end of the war—is much higher for individuals who had an STI in their military records. Among veterans with a wartime STI, 14.9 % of whites and 38.4 % of blacks had a positive or ambiguous indication of STI. These results suggest a strong linkage between the wartime experience and disease prevalence in later life, though that relationship has only a small impact on the overall findings since only 2.4 % of veterans had wartime STI.

4.2      *Race and Pension Rejection*

In this section we estimate the impact of STIs on the likelihood of receiving a pension. We know from the results above that STIs were reported more commonly for blacks than whites and that even negative and ambiguous exam findings were more common for blacks. These facts together suggest that physicians were looking for STIs among the black veteran population more than they were among whites, either as a reason to deny pension support or as an outgrowth of stereotypes about black sexual behavior.

Table 2 shows the estimated logistic regression results. The table shows estimates for the effect of an STI during the war and of age at application. We

TABLE 2     Logistic regression results

	Whites		Blacks	
	<i>Coeff.</i>	<i>Std. Err</i>	<i>Coeff.</i>	<i>Std. Err</i>
<i>Disease status</i>				
No mention of STI	<i>Reference</i>		<i>Reference</i>	
STI: negative diagnosis	0.193	(.093) **	-0.008	(.087)
STI: ambiguous	0.910	(.396) **	0.331	(.171) *
STI: positive diagnosis	0.813	(.187) ***	0.563	(.145) ***
<i>Disease history</i>				
STI in military record	0.139	(.124)	0.091	(.15)
Age	-0.065	(.004) ***	-0.056	(.004) ***

Notes: The dependent variable is the probability of being rejected for those not previously in the system. Regressions include fixed effects for application year and state of residence (not shown). Regressions run separately for Blacks and Whites. P-values: \*: .1; \*\*: < .05; \*\*\*: < .01

also include fixed effects for application year and state of residence, though we do not include those estimates on the table. We find that for both blacks and whites, a positive diagnosis raises the probability of rejection relative to those with no mention of STI. Both of these estimates are highly statistically significant. The effects of an ambiguous diagnosis is also positive, though the standard errors are higher as we would expect. For white veterans, we also see that having a negative diagnosis raises the probability of rejection by a small but statistically significant amount. Having an STI in wartime does not significantly increase the probability or rejection after controlling for disease status at examination. The regression also shows that older recruits have a significantly lower probability of rejection.

Figure 2 illustrates the disease status effects estimated in Table 2. It shows the probability of rejection based on the model coefficients holding other variables fixed at their mean levels; 95% confidence bands around these fitted values are also included. The most salient feature of this figure is that black veterans are getting rejected at much higher levels than whites, whether or not they have an STI. Whites without an STI have much lower rejection rates than whites with an STI. This is less true for blacks. Having a positive indication of STI does raise the rejection rate for blacks, but the system is finding other rationales for rejecting black applicants.

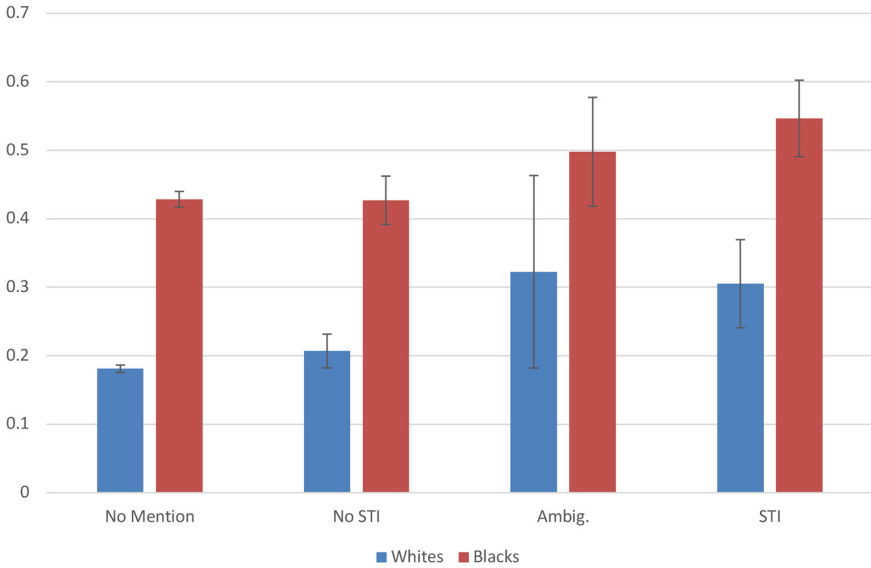


FIGURE 2 Rejection probability by disease category and race (model-based estimates)  
SOURCE: AUTHORS' CALCULATIONS BASED IN ESTIMATES IN TABLE 2

## 5 Discussion

No population-based estimates of STI prevalence or incidence exist in this period for this (or any other) age group in the public health literature. Indeed, the estimates we provide here (1.2%–1.7% for whites and 4.2%–8.0% for blacks) are the only ones we are aware of that are based on a random sample of a large subset of the US male population during this era. Other estimates are largely contemporary conjectures of medical and public health practitioners in large cities. In contrast, the *Early Indicators* sample is broadly representative of the northern, male US population of the time.

As noted earlier, the 1890 pension liberalization was designed to bring large numbers of veterans into the system who had been previously ineligible because their disabilities were not war-related. But the Victorian sentiments of that time were reflected in the prohibition against providing pension support to anyone with vicious habits.<sup>29</sup> Nonetheless, examining physicians and pension officials were given a broad degree of discretion in how this prohibition was applied. To the extent that examining physicians wanted to protect applicants from having their pension denied by the Pension Board, they may

29 Syphilis was sometimes referred to as “family poison,” Brandt, *No Magic Bullet*, 9.

have understated the evidence of STIs, especially among whites. We can see the discretion in Pension Board decisions by observing that almost 70% of white veterans who had a positive diagnosis of STI were still granted a pension. We can also see the inherent discrimination in the system in that only about 45% of blacks with an STI received a pension (though almost all veterans, black and white, eventually received a pension, assuming they lived long enough).

This discretion granted to examining physicians may explain part of the racial differences in the prevalence estimates. Blacks received a negative diagnosis of STI much more often than whites and their examination records were much more likely to have ambiguous language. Both of these facts suggest that physicians were more likely to be on the lookout for STIs when examining black applicants. The prevalence rates we find are tentative for a number of other reasons including that many veterans with STIs would have been asymptomatic (and would likely have taken efforts to avoid their symptoms being detected). Syphilis goes through a long latency period in which there are no symptoms, and even when it enters the tertiary phase, in which serious consequences to a variety of body symptoms can occur, those symptoms would not necessarily be linked to syphilis—especially in the case when the examiner was hoping *not* to find evidence of STI. In addition to the normal statistical uncertainty associated with random samples, our estimates are subject to additional uncertainty resulting from the racial discrimination blacks faced in the pension system.

Even though knowledge about prevention and treatment of STIs has grown substantially over the past century, leading to significant declines in disease prevalence, racial disparities still persist and have widened in relative terms. According to recent CDC data, the incidence of STIs among blacks is currently 5–15 times the rate for whites, depending on diagnostic category, age, and gender.<sup>30</sup> The origins and persistence of these racial disparities are not well understood, and socioeconomic status and sexual behaviors do not fully account for the differences.<sup>31</sup>

The Union Army disability pension system was a remarkable policy achievement, both in terms of the ultimate scope of the program and also with respect to the race-neutral nature of the legislation and the formal administration—there were, for instance, no race-based protocols for application or examina-

30 Centers for Disease Control and Prevention, “STDs in Racial and Ethnic Minorities,” in *Sexually Transmitted Disease Surveillance* (Atlanta: US Department of Health and Human Services, 2014), 65–72.

31 Ellen, J.M., S.O. Aral, and L.S. Madger. “Do Differences in Sexual Behaviors Account for the Racial /Ethnic Differences in Adolescents’ Self-Reported History of a Sexually Transmitted Disease?” *Sexually Transmitted Diseases* 25, 125–129.

tion, and the cases were considered by the same government officials in the same manner. But the analysis of the medical examination data we have conducted here adds to the evidence that the informal implementation of the program was heavily influenced by racial discrimination. As we have shown, blacks with STIs were much more likely to be rejected than were infected whites, and the higher prevalence among blacks of physician comments that were negative findings (such as “no evidence of vicious habits”) indicates that the examining physicians were making more effort to find disqualifying evidence for black veterans. The Union Army program was the nation’s first large scale disability benefit program. Analysis of data from more recent programs, such as Social Security Disability Insurance, may find raced-based discrepancies in how the policies are informally implemented.

Studying the historical epidemiology of STIs reveals a presence of prejudice and sexual stereotypes that may persist in some form to the current day. Understanding the racial differences in STI prevalence is not only about the underlying individual-level risk factors for disease. The differences may also be influenced, positively or negatively, by social and institutional risk factors. In the period we study, no effective treatments for STIs existed. But as medical treatment has become available and public health programs have expanded significantly, racial differences have become apparent. Our findings indicate that a strong racial bias existed in the way a supposedly race-neutral disability program was administered at the turn of the twentieth century. Now, more than a century later, bias is more likely to be implicit or institutional, rather than explicit, but more serious examination is certainly warranted by researchers, the medical community, policy makers and program administrators regarding how the health care system and public health programs may influence racial disparities in health outcomes.

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