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A Generation Curtailed

The Lifespans of Canada's Pensioned Veterans of the Great War

JONATHAN SCOTLAND

Abstract: Despite long-time interest in links between the Great War and concepts of a Lost Generation, there have been few efforts to study veteran lifespans. The death dates of Canadian pensioned veterans recorded in the Department of Veterans Affairs pensions files, combined with those recorded in department's death cards, offers an opportunity to quantify not just veteran life expectancy, but actual lifespans. The ensuing analysis of pensioned veteran lifespans suggests that research conducted in the mid 1930s by F. S. Burke for the Department of Veterans Affairs, which concluded that pensioned veteran life expectancy would exceed that of the average Canadian male, was incorrect. Instead of living longer than the average Canadian male, based on the Pension Sample compiled for this study, it appears that the number of pensioners who died young after the war is almost as high as the number of soldiers killed during the conflict.

GORDON DENT attested with the Canadian Expeditionary Force in 1914. He was 18 years old. Did he worry, like so many of his generation, that the war would end by Christmas, before he could fight? He need not have. Dent would spend five Christmases in uniform. Wounded by an exploding bomb, his time in service was split between the field and the hospital. After the war, pension officials determined that his vision and his abdominal wall had been weakened, but that he was otherwise healthy. Nothing in his pension file suggested that Dent would die young. Yet, at fifty-two

years of age, twenty years before the projected life expectancy of his generation, he did.¹

In dying early, Dent was not alone. Many other Canadian veterans never reached their early seventies. Fred Shoecraft, who enlisted in 1916 and served with the 20th Battalion, died in 1926, age twenty-nine. Willard Wilson also donned his uniform in 1916. He died in 1935, at thirty-six. Henry Coulter died in 1943, at forty-two, a veteran of the 26th Battalion.² Like Dent, these men were all disability pensioners—just four of the tens of thousands whose deaths between 1919 and the 1950s suggest that they belonged to a curtailed generation.

The lifespans and life expectancies of Canada's war veterans remain generally unstudied, with one important exception: those of pensioned veterans. In 1939, the federal Department of Pensions and National Health released an influential report, *Deaths Among War Pensioners* (hereafter *DAWP*), authored by F. S. Burke, chief of its Medical Investigation Division. Commissioned during a turbulent period defined by disputes over pension eligibility and fears that ex-soldiers had been prematurely aged by their war experience, Burke suggested that veterans were being well served by their pensions. He determined that war pensioners' life expectancies were similar to those of Canadian males generally and even projected that, after reaching age fifty, pensioners would live longer than similarly aged Canadian males not receiving a pension for war injuries.³

Having used Burke's report in earlier research, which argued that pensioned veterans lived longer than their unpensioned peers, when I set out to examine these and other pensioners' stories, I did not expect to find that many died young.³ To my surprise, and contrary to my

¹ Gordon Dent, Canadian Expeditionary Force [CEF] personnel file, RG 150, Accession 1992-93/166, Box 2449 – 23, Library and Archives of Canada [LAC]; and Gordon Dent, 126380, reel 991, Veterans Affairs Canada [VAC] pension files, Laurier Military History Archive [LMHA].

² Frederick Shoecraft, CEF personnel file, RG 150, Accession 1992-93/166, Box 8875 – 67, LAC; Frederick Shoecraft, 19217, reel 390, VAC pension files, LMHA; Willard Wilson CEF Personnel File, RG 150, Accession 1992-93/166, Box 10480 – 2, LAC; Willard Wilson, 14717, reel 146, VAC pension files, LMHA; Henry Coulter CEF personnel file, RG 150, Accession 1992-93/166, Box 2045 – 49, LAC; and Henry Coulter, 79720, reel 682, VAC pension files, LMHA.

³ Jonathan Scotland, "Making Sense of CEF and Veteran Death Card data: A Generation Curtailed?," paper delivered at the 2019 Canadian Military History Colloquium.

early expectation, that is exactly what I found. After re-examining *DAWP* and comparing its information to deaths recorded in the pension files, I realised that Burke incorrectly described the number of pensioners' deaths. He was also wrong about veterans' lifespans. For the families of veterans like Dent, Shoecraft, Wilson and Coutler, what the files of deceased pensioners reveal is that more than 50,000 pensioners did not reach life expectancy—a figure that represents approximately 85 per cent of all pensioned veterans' deaths between 1919 and the 1950s.

Published in 1939, *DAWP* considered pensioner deaths up to 1936. Its findings about lifespans are thus based on a minority of pensioner deaths—meaning that it was more a study of projected life expectancy than a study of pensioner deaths. To address why Burke's conclusions were wrong and to gain a fuller picture of pensioned veteran lifespans, this article is divided into two parts. The first addresses Burke on his own terms by comparing his report to the pension files. The findings: *DAWP* omits at least 6,784 pensioner deaths. The second speculates why *DAWP* does a poor job of projecting deaths beyond the 1930s. Burke is frustratingly vague about his methodology, noting only that he relied heavily on Canadian Life Tables to reach conclusions about life expectancy. Using the little that is known and what can be inferred, I have established a means of pushing analysis of pensioner deaths into the 1950s, which increases the approximate number of recorded deaths by 41,520—nearly three times more than Burke predicted.⁴ Increasing the number of actual lifespans under consideration also gives a more accurate picture of pensioner deaths after 1919.⁵ Both parts demonstrate that Canada's war pensioners were dying in greater numbers and at younger ages than has been realised.

⁴ Figure reached by subtracting Burke's recorded deaths plus the additional deaths indicated by the Pension Sample from 63,880.

⁵ The focus of this study is pensioner deaths that occurred during or after 1919. Pensioner deaths that occurred in 1914–18 are not considered because veterans who died before 1919 had different experiences than men who died later. They were generally discharged as unfit for service and died thereafter, or were re-hospitalised for war-related injuries, illness or wounds, and died soon after. As such, pensioners' dependents, not the veterans themselves, generally benefited from the pension. Further, pensioners whose died during the war had more in common with their comrades who were killed overseas than with ex-soldiers who lived as pensioned veterans, including not having to navigate the developing pension and health system.

STATISTICAL BREAKDOWN AND METHODOLOGY

Analysis for Parts I and II was based on a sample of 5,012 pension files,⁶ called the “Pension Sample,” and a random sample of the Veteran Death Cards, referred to as the “VDC Sample.” A random selection of the Pension Sample, called the “Birth Sample,” was used to compare birth dates in the VDCs to those in the pension files. All of the samples were grouped by birth year into five-year cohorts (1870–74, 1875–79, 1880–84, 1885–89, 1890–94 and 1895–99) to permit comparison of pensioners’ ages with the recorded ages of men in the CEF.⁷

The Pension Sample identified 2,232 recorded deaths between the war and the early 1950s.⁸ Of these, I identified 2,185 birth dates, representing 97.89 per cent of all pensioners whose deaths are recorded in the pension files. Both random samples (the VDC Sample and the Birth Sample) were derived using the following formula, a method commonly used to develop samples of populations that number in the hundreds of thousands:

$$n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\epsilon^2}$$

Where:

z is the z score (1.96 for 95 per cent confidence level)

ϵ is the margin of error

n is population size

\hat{p} is the population proportion (0.5 assumed)

⁶ This sample represents every fortieth file from the total number of microfilmed pension files from the war into the 1950s.

⁷ Those veterans born before the 1860s, in the 1860s and after 1900 are not included: there too few veterans to warrant a five-year cohort. Although a soldier’s birth date was recorded in his personnel file, compiled information includes only ages at enlistment, and information about enlistment ages is organised by age cohort. These cohorts do not directly align with the birth cohorts I have used, but they allow rough comparisons. Birth cohorts also help simplify the presentation of data for comparing the pension files, the veteran death cards and the findings in *DAWP*.

⁸ Of the 2,232 deaths identified in the Pension Sample, 1,597 pensioners died during or after 1919.

A sample of 384 files is considered representative for a pensioner population of approximately 200,000, with a confidence interval of +/- 5 per cent and a confidence level of 95 per cent (19/20).

To develop the Birth Sample, a random number formula was applied to the Pension Sample, regardless of whether a death date was recorded in a pensioner's file. I cross-referenced each pensioner against the CEF personnel database to determine his birth date. If a birth date was not listed in the CEF records or if a personnel file could not be located, census and birth registrations were searched. I identified 369 birth dates, representing 96 per cent of the Birth Sample.

The VDC Sample was developed similarly. The approximately 125,000 death cards were downloaded and 384 files were selected using a random number formula. Birth dates for the men recorded in the VDCs were established using CEF personnel files, censuses and birth registrations. I located birth dates for all veterans in the VDC Sample.

PART I: DEATHS AMONG WAR PENSIONERS

From almost the moment that the Board of Pension Commissioners was established in 1916, veterans complained about their treatment by its officials. Those denied assistance fumed at perceived injustice, while those awarded pensions were angry at the compensation rate and at the many bureaucratic obstacles in their path. Politicians feared that veterans' mounting anger would forge a voting bloc whose demands for greater, more costly assistance would bankrupt the treasury.⁹ Investigation after investigation considered the pensioners' fates. Two of the most influential were the Ralston commission, headed by Colonel James L. Ralston, a lawyer, and the Hyndman report, led by lawyer and president of the Pension Appeal Court James Hyndman. Both aimed to address veterans' concerns without straining federal government finances; neither considered the impact of pensions on the long-term health of Canadian veterans.

⁹ Demond Morton, "Resisting the Pension Evil: Bureaucracy, Democracy, and Canada's Board of Pension Commissioners, 1916-33," *Canadian Historical Review* 68, 2 (1987): 202-3; and Peter Neary, "'Without the Stigma of Pauperism': Canadian Veterans in the 1930s," *British Journal of Canadian Studies* 22, 1 (2009).

When he compiled *DAWP*, Burke was unconcerned with veterans' access to pensions or their general plight. The Department of Pensions and National Health sought instead to determine whether war pensioners were dying early—an issue of pressing concern in the 1930s. Besides complaining about mistreatment by pension officials, men also complained of physical restlessness and various ailments. By the end of the 1920s, countless former soldiers felt burnt-out and many became increasingly concerned that they had been prematurely aged by their war experience.

Newspapers reported widely on the problem; as the *Globe* explained in 1930, it was “harrowing” to see “a ‘burnt-out’ war victim, prematurely aged, broken in war and buffeted from pillar to post in peace.”¹⁰ Former Canadian Corps commander Sir Arthur Currie pleaded the case of “burnt-out” veterans before parliament that year and the *War Veterans Allowance Act* (1930), which assisted the “permanently unemployable by reason of physical and mental disability,” was itself dubbed the “burnt-out pension.”¹¹ For men and the families of men like Shoecraft and Wilson who died during this era, concern over pre-mature aging was very real indeed.

The author of *Deaths Among War Pensioners*, Frederick Sypher Burke (1882—1965) was well suited for his task. Born in Fergus, Ontario, Burke earned a medical degree from the University of Toronto in 1911. He enlisted with the Canadian Army Medical Corps in 1914, serving overseas with the No. 2 General Hospital, the No. 2 Field Ambulance and the No. 10 Stationary Hospital; twice mentioned in despatches, he was promoted major and served as deputy assistant director medical services.¹² According to a profile in the *Ottawa Journal*, his work in the latter position “earned him considerable praise.”¹³ After the war, he was civic director of medical services for the City of Toronto.¹⁴ In 1929, the federal government requested that Burke join the Department of Pensions and National

¹⁰ *Globe*, 18 January 1930. See also the *Vancouver Province*, 30 June 1929; *Montreal Gazette* 23 November 1929; *Saskatoon Star-Phoenix*, 2 December 1929; *Ottawa Journal*, 5 March 1930; *Edmonton Journal*, 28 March 1930; *Windsor Star*, 7 August 1931; *Winnipeg Tribune*, 18 August 1933; *Ottawa Journal*, 5 May 1934; and *Ottawa Citizen*, 9 February 1935.

¹¹ *Edmonton Journal*, 28 March 1930; and Neary, “‘Without the Stigma of Pauperism,’” 35.

¹² F.S. Burke CEF personnel file, RG 150, Accession 1992-93/166, Box 1282-36, LAC.

¹³ *Ottawa Journal*, 26 April 1941.

¹⁴ *Montreal Gazette*, 10 May 1929.

Health to help prepare the *War Veterans Allowance Act*.¹⁵ While with the pensions department, Burke undertook a study of illness in the civil service, which led to the development of Canada's Standard Morbidity Code—research that anticipated his work on *DAWP*.¹⁶

In *DAWP*, Burke acknowledged the “conjecture concerning the pre-aging of war veterans” with “rough estimates ranging from five to ten years of lessened expectancy of life.” He also determined that veterans, especially younger veterans, had died at higher rates than their non-combatant contemporaries “just at the end of the war.” But he dismissed concerns that pensioners were dying early, asserting instead that since 1919 there had been a “steady decline” in the pensioner death rate and that by 1936 it was comparable to that of Canadian males generally.¹⁷ Burke further determined that veterans aged thirty and older were easier to rehabilitate than those younger than twenty-four and that nearly a quarter of pensioners died of tuberculosis.¹⁸ The latter assertion explains Burke's recommendation, which no doubt considered deteriorating international relations in the late 1930s, that another large-scale mobilization effort should include chest X-rays.¹⁹ For this research he was awarded the Professional Institute Medal in 1941. The pension study was praised and newspapers highlighted how *DAWP* had already influenced enlistment policy during the Second World War. Many articles also remarked that Burke's recommendation to X-ray recruits had saved the federal government \$500,000,000 in future pension costs.²⁰

Burke dismissed concerns about premature aging by comparing the total number of pensioners, the number of recorded deaths and the number of expected pensioner deaths. In his report (see Figure 1) he detailed the declining ratio of the difference between the number of actual and expected pensioner deaths between 1921 and 1936, which

¹⁵ *Ottawa Journal*, 26 April 1941.

¹⁶ F.S. Burke, “The Medical Investigation Division,” *Canadian Public Health Journal* 30, 3 (March 1939); and Stewart Murray, A. Margeurite Swan and R. D. Defries, “The Association's Work During 1940-41: (Part IV),” *Canadian Public Health Journal* 32, 9 (1941): 485.

¹⁷ F.S. Burke, *Death Among War Pensioners: 1918-1936*, (Ottawa: Department of Pensions and National Health, 1939), 2.

¹⁸ Burke, *DAWP*, 7.

¹⁹ F.S. Burke, “Deaths Among War Pensioners,” *The Canadian Medical Association Journal* 41, 5 (1939): 457-65.

²⁰ *Ottawa Citizen*, 21 April 1941.

Figure 1. Department of Pensions and National Health Deaths Among War Pensioners, 1918-1936*

Year	Pensioner population	Actual deaths among pensioners	Expected deaths Canadian Life Table 1930-32	Ratio of actual to expected deaths
1918	15,335	-	-	-
1919	42,932	1,796	577	3.28
1920	69,203	-	-	-
1921	51,452	530	246	2.16
1922	45,133	729	225	3.24
1923	43,263	536	225	2.38
1924	43,300	537	236	2.28
1925	44,598	505	255	1.98
1926	46,385	590	278	2.12
1927	48,027	605	305	1.99
1928	50,635	671	339	1.98
1929	54,620	637	388	1.64
1930	56,996	723	430	1.68
1931	66,669	719	532	1.35
1932	75,878	845	645	1.31
1933	77,967	874	704	1.24
1934	77,855	927	749	1.24
1935	78,404	990	806	1.23
1936	79,124	1,040	869	1.2

* "Table 1," F. S. Burke, *Deaths Among War Pensioners* (Ottawa, 1939), 2.

he cited as proof that by the mid-1930s pensioners' life expectancy was on a par with that of Canadian males generally.²¹

To establish the expected number of pensioner deaths, Burke used the life expectancy calculations in Canadian Life Table No. 1A (1931) for Canadian males, compiled by the Dominion Bureau of Statistics. It details by age the probability of a man dying during

²¹ Burke, *DAWP*, 2.

the subsequent year. While Burke notes his reliance on the table to establish the number of expected deaths, he does not explain the criteria used to reach his figures. He states only:

We first took the number of pensioners and total deaths among them by calendar years, and had a table prepared by an actuary, in order to find the trend in deaths of pensioners against the Canadian male population of similar age-structure. Owing to a large movement in and out of the pension group between the years 1920 and 1932, the first table was prepared by using certain ‘smoothing’ procedures. ...

[Upon] the advice of the Dominion Bureau of Statistics a second table was prepared by them, using only the exact figures for the number of pensioners and deaths by calendar years, and from the latter the various rates were struck.²²

Which “smoothing” procedures were used and how the Life Table was used to calculate the expected number of deaths are not made clear.²³ The number of pensioner deaths cited in *DAWP* are the same as those recorded in the Department of Pensions and National Health’s annual reports.²⁴ Presumably, Burke considered pensioners’ ages, consulted the appropriate age range in the Life Table and then adjusted his calculations to account for deaths, commuted pensions and new pensions in a given calendar year.

DAWP lists two different figures for the number of dead: 13,254 and 15,576. No explanation is given for the difference.²⁵ Yet, according to the Pension Sample, 22,300 pensioners died between

²² Burke, *DAWP*, 1.

²³ Various calculations were attempted to recreate the numbers used in Burke’s report: the average Q_x for ages, ranging from the most common to the least, multiplied by both the total pensioner population and the population less the actual deaths as reported by Burke; various weightings of the pension population, based on the ages of pensioners who died as well as the birth cohorts of the CEF. The closest approximation, which still differs from that of Burke’s finding, is the one employed in this section, which weights the average Q_x figures according to the percentage of the population in each birth cohort. See Part II for a fuller discussion of methodology and findings.

²⁴ Department of Pensions and National Health, annual reports, 1927-36.

²⁵ In Table 1 on page 4 of *DAWP* (reproduced in this article as Figure 1), “Actual deaths among pensioners” totals 13,254, while Table 3 on page 6 reads “Total deaths among pensioners - 15,576 1918 to 1936 inclusive.” The higher number of dead may include the deaths not recorded for 1918 and 1920 in Table 1.

Figure 2. Comparison of deaths reported in DAWP and those recorded in the Pension Sample

Year	Pensioner population	DAWP reported deaths	Pension Sample recorded deaths
1919	42,932	1,796	1,520
1920	69,203	-	1,800
1921	51,452	530	1,160
1922	45,133	729	1,000
1923	43,263	536	1,000
1924	43,300	537	800
1925	44,598	505	960
1926	46,385	590	1,240
1927	48,027	605	920
1928	50,635	671	880
1929	54,620	637	880
1930	56,996	723	1,160
1931	66,669	719	1,160
1932	75,878	845	1,160
1933	77,967	874	1,480
1934	77,855	927	1,720
1935	78,404	990	1,840
1936	79,124	1,040	1,680

1919 and 1936—meaning there are either 6,784 or 9,106 deaths that are unrecorded in Burke’s report (see Figure 2).²⁶

Because *DAWP* provides only a general overview of its methodology, it is impossible to do more than speculate about why its findings differ from those drawn from the pension files. Some deaths likely went unreported to pension officials, while others may have been reported later—deaths that would not have been counted

²⁶ Although an extrapolation, the 22,300 figure is corroborated by the number of VDCs from the same period, which number approximately 23,400. The 1,110 discrepancy between the two sets of sources can be partly explained by the fact that the VDCs record veteran deaths of the pensioned and non-pensioned.

in the department's annual reports. Burke's note that the VDCs were used to establish the number of pensioner deaths may also explain the discrepancy. The cards are incomplete. At least 13 per cent of pension sample deaths are not recorded therein and, for those that are, in certain cases the recorded deaths were clearly entered at a later date.²⁷ As a result, there is a distinct possibility that the VDCs as they exist today are more complete than what was available to Burke in the 1930s. A fluctuating pensioner population, which included dying veterans, new applicants, veterans who commuted their pensions and those who were reapplying, would also have made it difficult to accurately assess the number of dead compared to the overall number of pensioners. There is also the possibility that the department interpreted its data so as to reduce the number of deaths.

Using Burke's expected death figures to compare the ratio of reported deaths to expected deaths in *DAWP* and the Pension Sample reveals how under-reporting pensioner deaths skews the relationship between the life expectancies of pensioners and of Canadian males generally. While Burke's figures portray a declining number of deaths (the numbers are nearly on a par by the mid-1930s), the Pension Sample ratio is consistently greater than that in *DAWP*, with notable spikes in the mid-1920s, in 1930 and in 1933-34 (see Figure 3). *DAWP* also concludes that the average total number of pensioners' deaths was 1.70 times greater than the number expected based on Canadian Life Table No. 1A (1931). This finding is inexplicable. The average of the report's ratio of actual and expected deaths is 1.90, a .20 difference.²⁸ The average difference between the actual number of deaths recorded in the Pension Sample and Burke's expected number of pensioner deaths is 3.0, 1.30 times higher than the ratio in *DAWP* and twice as high as that of Canadian males.

Although the ratio of difference between the expected number of pensioner deaths and the actual number of deaths recorded in the Pension Sample declines between 1921 and 1936, the rate of decline is significantly lower than that in *DAWP*. According to the Pension Sample, in 1936 the ratio had only reached 1.93, approximately the same recorded by Burke for 1927. The Pension Sample thus indicates that not only did more pensioners die than reported in Burke (or by

²⁷ The entries on individual cards are sometimes in different pens and writing styles.

²⁸ Burke, *DAWP*, 13.

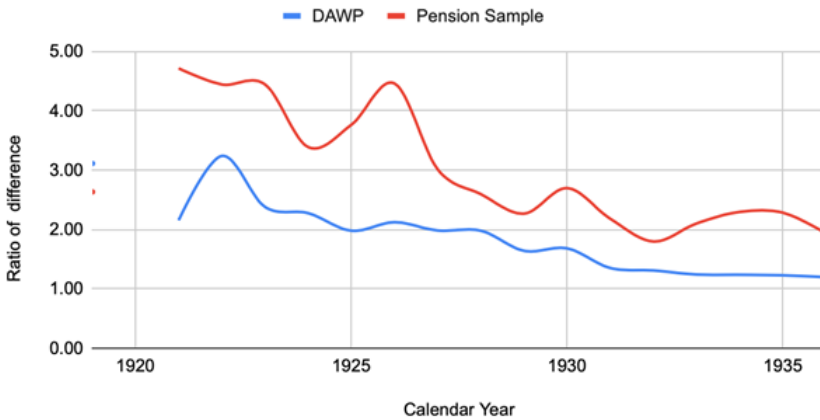


Figure 3. Comparison of the ratio of actual to expected deaths from DAWP and the Pension Sample.

the Department of Pensions and National Health in its reports), but that the yearly pensioner death rate was also consistently higher.

Since it appears Burke used the number of actual pensioner deaths to determine the expected number of pensioner deaths, more than just his death figures are suspect. All his conclusions about the total number of pensioner deaths, the number of expected deaths and the ratio of difference between actual deaths and the expected number of pensioner deaths must be called into question.

PART II: PENSIONERS' LIFESPANS, 1919–50

There has as yet been no effort to test Burke's findings or to determine pensioners' lifespans—likely because there has been no easy way to establish veterans' death dates. Attempts to account for the war's dead have been ongoing since the 1920s, but the first substantive efforts to analyse the war and its effect on life expectancy were carried out only in the 2000s. A 2004 paper examining South Australian soldiers estimated that the life expectancy at birth for men born between 1881 and 1900 was 85 to 90 per cent of their peers who did not serve; men born in 1895 faced a reduced life

expectancy of approximately 8 per cent.²⁹ A New Zealand study reached similar conclusions. It compared the mortality rates of 350 men who enlisted in 1914 and in 1918 (the latter not seeing any service) and determined that overseas service led to an “increased risk of premature death” among the country’s soldiers, which led to a shortened overall life expectancy of approximately eight years.³⁰ These findings hint that the war had an appreciable impact on life expectancy. Yet, relying as they do on either very small sample sizes or entirely on estimates, these previous studies were unable to track specific veteran deaths. Nor could they determine when or at what ages ex-soldiers died. Without such information, it is not possible to study the lifespans, rather than life expectancies, of veterans.

Canada is something of an outlier when it comes to the dearth of research into veterans’ lifespans. In addition to Burke’s work, there is also that of Michael Wert³¹, which offers a small-scale analysis of the lives of fifty-two Canadian soldiers, and Kellen Kurschiski’s dissertation—by far the most detailed study of disabled pensioners.³² The latter’s analysis of a random sampling of pension files includes a discussion of mortality that finds that pensioners’ average lifespans were approximately 68.9 years of age, roughly three years below Canadian male life expectancy. Kurschinski does not appear to have consulted the VDCs and could only locate death dates for 42 per cent of the pensioners sampled—a reminder of the importance of death dates in understanding veteran’ lifespans. He also relied heavily on Burke’s figures to frame his analysis and does not critique the validity of the figures in *DAWP*. As noted at the outset, I previously made similar assumptions. My earlier research on the VDCs took Burke’s death figures at face value, which led me to conclude that pensioner deaths comprised only about half of those recorded in the death cards. That assumption now appears to have been a mistake. It is likely that at least 85 per cent of deaths recorded in the VDCs

²⁹ See P. Leppard, G.M. Tallis and C.E.M. Pearce, “The Effect of World War I and the 1918 Influenza Pandemic on Cohort Life Expectancy of South Australian Males Born in 1881-1900,” *Journal of Population Research* 21, 2 (2004): 161-76.

³⁰ See Nick Wilson, Christine Clement, Jennifer A. Summers, John Bannister and Glynn Harper, “Mortality of first world war military personnel: comparison of two military cohorts,” *British Medical Journal* 349 (2014).

³¹ Michael Wert, “From Enlistment to the Grave: the Impact of the First World War on fifty-two Canadian Soldiers,” *Canadian Military History* 9, 2 (2000): 45-58.

³² Kellen Kurschiski “State, Service, and Survival: Canada’s Great War Disabled, 1914-44,” (PhD, McMaster, 2016).

were those of pensioners (at least until the 1940s, the last full decade of available pension files in the Pension Sample).

Why lifespans are difficult to establish is simple. While a man's life as a soldier was extraordinarily well documented, including details of his health, finances and military service, the collection and collation of documents in his personnel file ended with his demobilisation. Provincial death registrations did not record whether the deceased was a veteran and there is no veterans' database comparable to the Personnel Records of the First World War at Library and Archives Canada. Veteran deaths have thus remained enveloped in a documentary fog and Burke's report remains the sole source of information on their life expectancy.

Two groups of related records can help establish veteran lifespans: the veteran death cards and the pension files. The former contain information on approximately 125,000 deaths from the end of the war until the early 1960s. Unlike pension files, a death card notes only a veteran's name, year of death, unit and rank. (A minority also detail the location and cause of death and whether it was attributed to service.) These index cards do not list a birth date or, significantly, if a veteran was a pensioner. Pension files also generally lack birth dates, but they can contain a far richer documentary record about a veteran's post-discharge life, including details on medical, family and employment history, as well as occasionally forms or letters written by a veteran or on his behalf.

The Pension Sample makes it possible to track mortality rates from 1919 into the early 1950s, but without a description of how Burke established the ratio of difference between the numbers of actual and expected pensioner deaths, it is difficult to estimate how they compared to those of Canadian males generally. Moreover, although *DAWP* uses ten-year age cohorts to analyse pensioner mortality and life expectancy, it does not provide a wider demographic portrait of Canada's Great War pensioners. As a result, without knowing how many veterans were of a certain age, Burke's report cannot be used to contextualise the life expectancy of pensioners. Yet, because so many of Burke's sources are extant (VDCs, total number of pensioners in a calendar year³³, the pension files and the Canadian Life Tables), figures can be calculated and compared to those used in *DAWP*.

³³ Canada Year Books, 1941-59. Accessed 1 Feb 2021. https://www66.statcan.gc.ca/acyb_000-eng.htm

Pensioner five-year birth cohorts



Figure 4. Pensioner five-year birth cohorts. Birth figures derived from the Birth Sample.

CEF enlistment, five-year cohorts

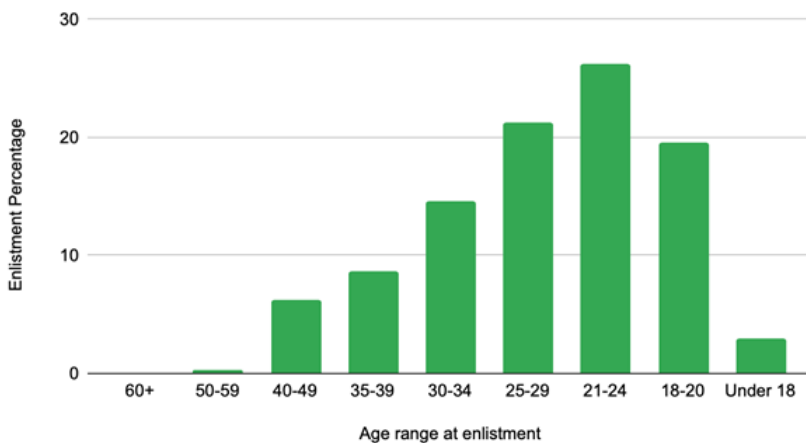


Figure 5. CEF enlistment, five-year cohorts. Data derived from the “Soldiers by Enlistment Age” dataset available at www.canadiangreatwarproject.com. Accessed: 5 January 2021.

They can also be extended past 1936 into the 1950s, giving a fuller picture of pensioner lifespans.

According to the Birth Sample, pensioners were born between the mid-1860s and the late 1890s, with the majority being born between 1887 and 1899 and 75 per cent—including Dent, Shoecraft

Pensioned veteran deaths (1919-1953)

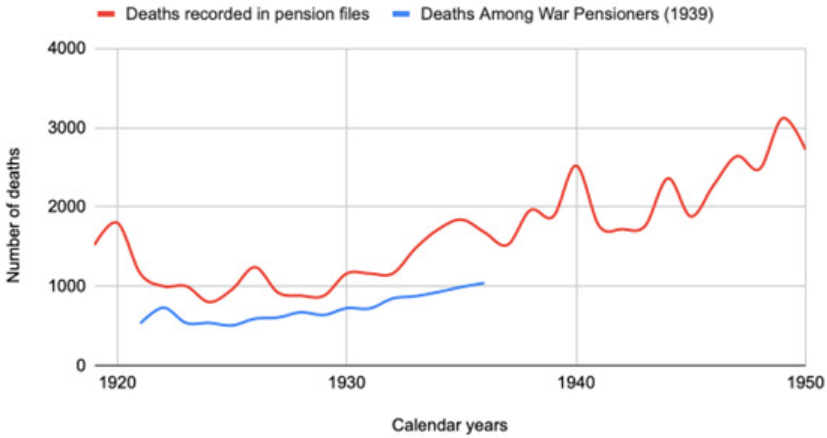


Figure 6. Comparison of pensioned veteran deaths between those recorded in the pension files (based on extrapolated data) and those recorded in F. S. Burke, *Deaths Among War Pensioners*.

Lifespan of pensioned veterans

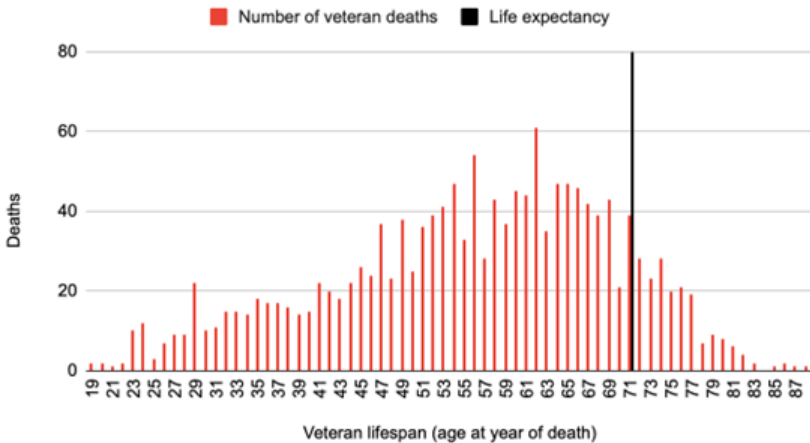


Figure 7. Lifespan of pensioned veterans, based on extrapolated data from the Pension Sample.

and Wilson—being born between 1880 and 1899. In 1919, most of these pensioners would have been between 20 and 39 years old. Their relative youth is in keeping with the average age of enlistment in the CEF (see Figures 4 and 5) and demonstrates that those awarded disability pensions were not disproportionately older veterans.

Average age of pensioners at time of death (1919-1954)

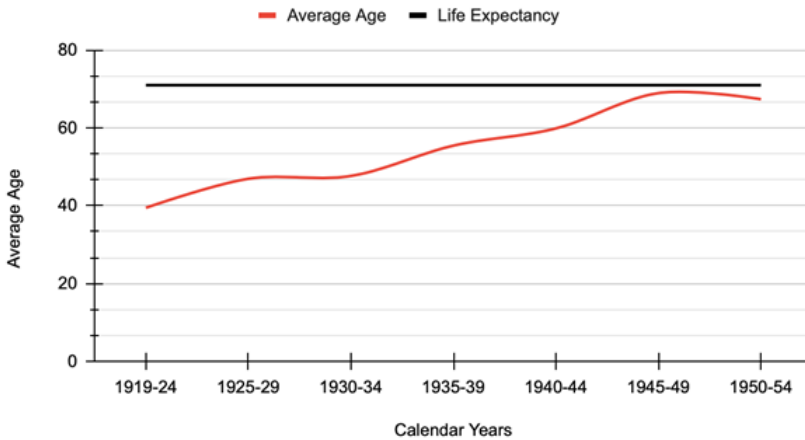


Figure 8. Average lifespan of veterans derived from the Pension Sample.

All told, the Pension Sample suggests that 63,880 pensioners died between 1919 and the mid-1950s. These deaths occurred at an increasing rate from the early 1920s onwards, with spikes in the mid-1920s, the mid-1930s and towards 1950 (see Figure 6). The biggest spike is in 1940. Very few of these pensioners reached 71 years, the life expectancy for their generation (see Figure 7).

If pensioners did not die younger than expected, as Burke's report suggests, then deaths recorded in the Pension Sample should skew towards the oldest veterans awarded disability pensions. But that is not the case. According to the Pension Sample, nearly 85 per cent of pensioned veterans who died between 1919 and 1950 did so before reaching the age of their generation's life expectancy. When their lifespans are averaged over this period, they peak at 68 years of age, three years shorter than the expected 71 years (see Figure 8). An even starker trend is evident when average lifespans are tracked by five-year birth cohort. Only by 1945 did the average lifespan for any birth cohort (aside from the very small minority of those born before 1860) begin to exceed life expectancy. The lifespans of those born after 1880 never did.

Not all pensioners died young and some undoubtedly lived beyond the 1950s. But a significant number of pensioners from younger birth cohorts died far earlier than expected. Between 1919 and 1924, for instance, the deaths of men in the 1890–94 birth cohort comprised

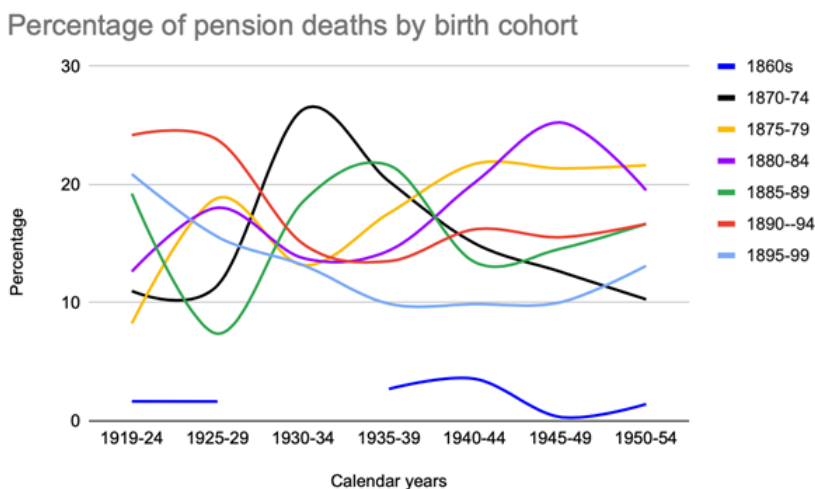


Figure 9. Data derived from the “pension sample.” Note that the 1860s are incomplete.

24 per cent of pensioner deaths and those in the 1895–99 cohort comprised nearly 21 per cent of pensioner deaths—meaning that in the first six years after the war’s end, 45 per cent of the pensioners who died were aged 30 to 39 (see Figure 9).

The primary causes of death between 1919 and 1949 were respectively cardiovascular disease, cancer (all types), tuberculosis, and respiratory disease. The ordering varied slightly in each decade. Between 1919 and 1929 it was tuberculosis, cardiovascular disease, respiratory disease, and cancer (all types). In 1930–39, the leading causes were cardiovascular disease, cancer (all types), tuberculosis, and respiratory disease. Tuberculosis was less of a killer by 1940–49; during this period the leading causes were cardiovascular disease, cancer (all types), respiratory disease, and cerebral hemorrhage. For the cohorts born between 1870 and 1894, the three leading causes of death were cardiovascular disease, cancer (all types), and respiratory disease. Pensioners in the 1895–99 cohort were slightly more likely to die from tuberculosis, followed by cardiovascular disease and then a combination of three causes: respiratory disease, cancer (all types), and accidental death.

An examination of the years in which pensioners were dying and the birth cohort to which they belonged may explain Burke’s inaccurate depictions of pensioner mortality. Deaths across all birth cohorts declined in the 1920s, in keeping with his findings, but they

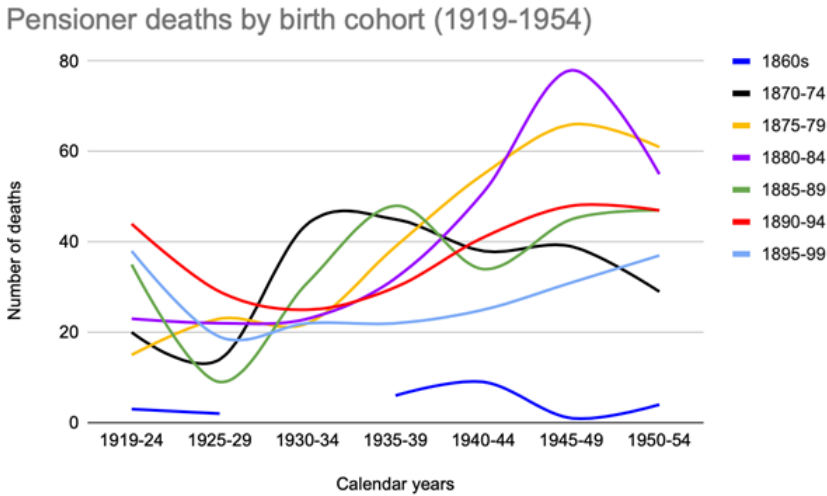


Figure 10. Data derived from the “pension sample.” Note that the 1860s are incomplete.

began to climb during the 1930s, a rise unrecorded in *DAWP*. This increase, however, did not occur uniformly across cohorts (see Figure 10). Deaths in the 1890–94 cohort plateaued until the latter half of the 1930s and deaths in the 1895–99 cohort did not increase until the 1940s. The uneven nature of pensioner mortality, at least according to birth cohorts, thus suggests that Burke’s calculations either over-emphasised the downward trend of the 1920s or failed to account for this up-tick in deaths in the 1930s.

The Pension Sample and Birth Sample bear out Burke’s finding that age and mortality were linked, with younger pensioners dying in greater numbers and with shorter lifespans than their older comrades. Where Burke erred was in the total number of deaths and the annual rates at which men were dying. He concluded that pensioners’ death rates were coming into line with those of the general male population. But analysis of the information in the Pension Sample and VDC Sample leads to a radically different conclusion: tens of thousands of pensioners died long before other men in their generation.

Comparing the samples of pensioner deaths to those of Canada’s male population (as Burke did with his ratio of actual and expected numbers of pensioner deaths) requires revised expected death figures. To establish these, I divided the Birth Sample by cohort and noted the percentage of each age group. Each cohort was then cross-referenced to the 1931 Canadian Life Table for males to calculate each birth

Ratio of actual to expected deaths

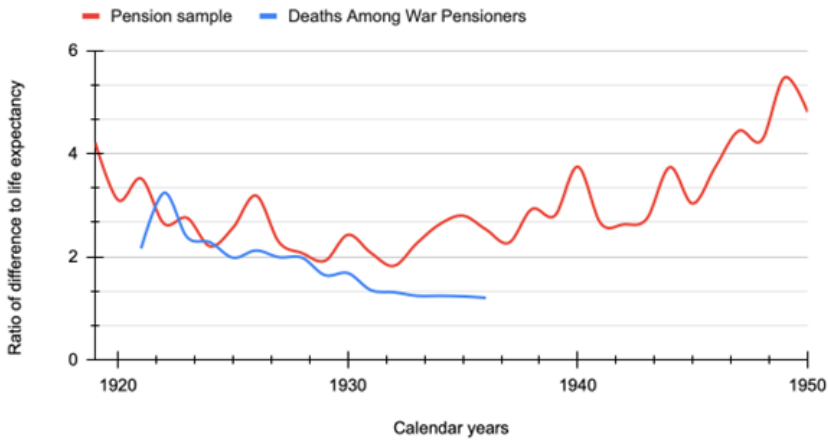


Figure 11. Ratio of difference between actual and expected deaths, as calculated in F. S. Burke, *Deaths Among War Pensioners* (1939), and the revised data using the pension sample, and the birth sample and 1931 Canadian life tables.

year's average probability of mortality (Q_x). Next, the average Q_x was multiplied by the corresponding cohort's percentage of a given year's pension population. The resulting figures for each cohort were then added, the sum representing a given year's expected number of deaths. The ratio of difference between the numbers of actual and expected pensioner deaths was reached, as in Burke, by dividing the number of actual deaths by the number of expected deaths.

The revised ratios detail a decline in the difference between the actual and expected death rates between 1921 and 1932, although the overall difference is higher than that in Burke's report by an average of 1.30. This revised rate, however, begins to move upward in the second half of the 1930s. By the 1940s it is significantly higher, on a par with that in 1919–21, the highest period in Burke's study. It continues to rise into the 1950s (see Figure 11).

Differences in the ratios cited in Burke's report and those derived from the Birth Sample may be partly explained by variations in the pensioner population. The Birth Sample is based on pension files dating from 1919 to the mid 1950s. However, Burke examined only the records for veterans awarded a pension prior to 1936. Nonetheless, there is no obvious reason why pensions awarded after 1936 would affect a man's life expectancy: veterans continued to join, or rejoin, the pensioner population from the 1940s onwards, but the number of

pensioners had largely stabilised by the early 1930s. On the whole, there appears to be no relationship between the date of a pension application and a veteran's lifespan. Variation in the Q_x averages may also have had a slight impact on the overall figures.

In all likelihood, the best explanation for the differing ratios is not variations in the pensioner population, but the higher number of deaths recorded in the pension files. If the revised death figures were wildly inaccurate, discrepancy between the two datasets should be resolved by recalculating the revised ratios using the expected death figures from Burke's report. (This is the calculation used in Figure 1, which also records a higher ratio of difference than in Burke.) Nor can the differences be explained by inaccuracies introduced by extrapolating from the 5,012 files in the Pension Sample. While extrapolated figures are only approximate, the findings are corroborated by the deaths recorded in the VDCs. As noted earlier, approximately 87 per cent of pensioner deaths are recorded in the cards and an extrapolated number of 61,480 deaths is in keeping with the approximately 65,000 deaths recorded in the VDCs prior to 1950.

Tracking the deaths recorded in the VDCs over time further demonstrates that veterans were dying at a greater rate than is indicated in *DAWP*. As in Burke and the Pension Sample, the VDCs reveal a sharp spike in deaths in 1918 and 1919, likely the result of influenza and veterans succumbing to wartime injuries. The number of recorded deaths then begins to rise steadily from the 1930s onwards (see Figure 12). When the VDC tallies are compared with the number of pensioner deaths (as in Figure 13), the two groups of records track very closely, as can perhaps be expected with so many pensioner deaths recorded in the VDCs.

Breaking the cards in the VDC Sample into the same five-year birth cohorts used in the Pension Sample also confirms that large numbers of young men died between 1919 and the early 1960s. Subdividing the VDCs by decade of death, for instance, reveals that in the 1920s, 56 per cent of the veterans who died were men aged eighteen to thirty-nine. No veteran who died during the decade reached his early seventies, the average life expectancy for this generation of Canadian males. As the number of veterans who died during the 1930s increased, the trend of youthful mortality continued: 43 per cent died at or before forty-nine, with less than 1 per cent of veteran deaths occurring at or after the average life expectancy. The number of veterans who reached their seventies increased in the

Recorded veteran deaths (1919-1963)

Veteran Death Cards

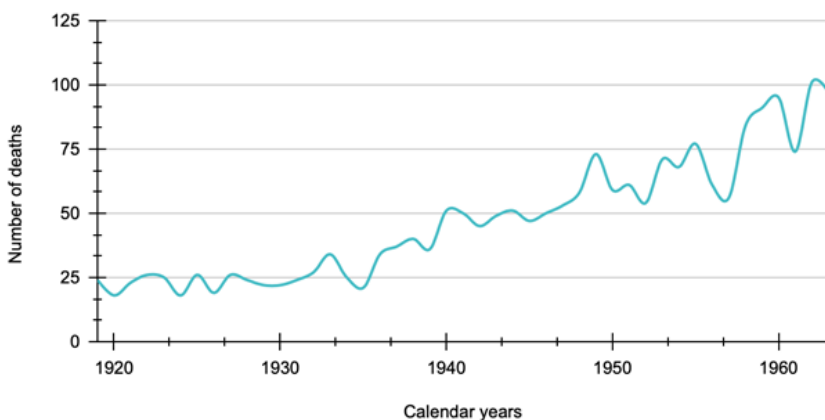


Figure 12. Deaths recorded in the veteran death card sample..

Veteran deaths: Pension files and veteran death cards

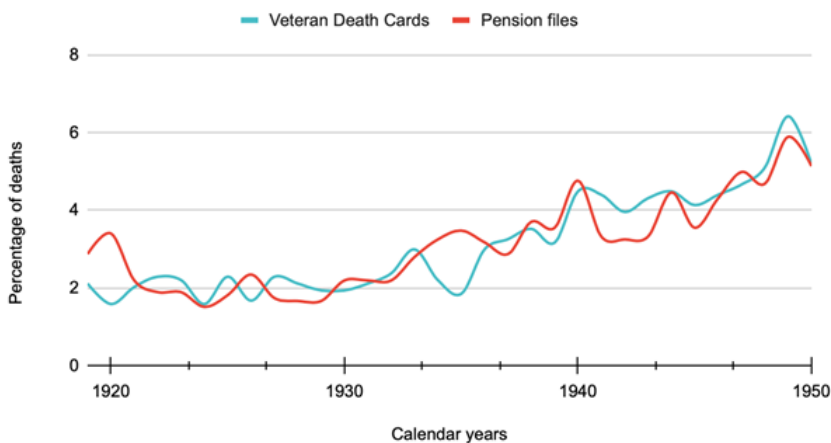


Figure 13. Comparison of the percentage of yearly deaths recorded in the pension sample and in the veteran death cards sample.

1940s; however, a significant number—42 per cent—died at or before age fifty-nine. By the 1950s, the last decade for which a full ten years of VDCs exist, 57 per cent of veterans died at or before sixty-nine years of age.

When the VDC Sample is divided by five-year cohorts, the war's effect on the death rates of younger men becomes clearer still. As with pensioners, the VDCs indicate that those born in the 1850s and 1860s were the most likely to attain or exceed the lifespan of an average Canadian male (these were atypical soldiers, being few in number and generally filling less strenuous positions than those who enlisted in their late teens, twenties, or even their thirties). Men from birth cohorts in the 1870s through the 1890s did not fare as well as their older comrades. The lifespans of those born in the 1870s was approximately five to seven years shorter than expected and the gap increased to between eight and eleven years for veterans born in the 1880s. The average age of men born between 1890 and 1894 was shorter still—approximately fifteen years less than the male life expectancy for their birth cohort. And for those born between 1895 and 1900, the discrepancy between their lifespans and their average life expectancy reached upwards of twenty-one years.

As the deaths of Dent, Shoecraft, Wilson and Coulter attest, the pension files show even shorter lifespans than of those of veterans whose deaths are recorded in the VDCs. Only men in birth cohorts for the 1860s and earlier met or exceeded their generation's life expectancy; the vast majority of those born later did not. For men born after 1880, a group comprising more than two-thirds of pensioned veterans, those who died did so more than fifteen years before reaching their early seventies; the youngest died roughly thirty or more years before the average Canadian male of a similar age. These facts do not mean that all pensioned veterans born between 1880 and 1900 died young. But they do suggest, based on the Pension Sample, that at least 28,000 pensioners died before reaching fifty-five, that 45,300 died before they were sixty-five years of age, and that 53,000 died by seventy years of age.³⁴

Gordon Dent died of an intestinal obstruction. He had fought with the infantry, surviving early battles at Ypres, Festubert and Givenchy and seeing further action in October and November 1918 during the war's Last Hundred Days. Frank Shoecraft died of heart failure, as did Willard Wilson. The former had also served with

³⁴ According to the Pension Sample, the leading cause of veterans' deaths was cardiovascular disease, followed by cancer, respiratory disease and tuberculosis. Causes not directly related to disease such as accident, murder and suicide appear infrequently in the records.

the infantry; he was at the front between April and November 1916 and survived the fighting at the Somme. The latter enlisted as a student at eighteen, but he never left Canada. He was still in training when he was discharged as unfit for service after suffering attacks of rheumatism and contracting measles. Alcoholism, the anecdotal scourge of many Great War veterans,³⁵ was the stated cause of death in Henry Coulter's file. He too had fought with the infantry, serving behind the lines for a year and in the trenches for approximately four months before it was discovered that he had enlisted underage.

These four men and their comrades were all veterans of the same war, but each experienced it differently. In some cases, the links between postwar health and wartime sacrifice are clear; in others, they are less obvious. What is also clear is that the number of pensioners who died young after the war is almost as high as the number of soldiers killed in the war and the first number does not account for pensioners who died before 1919. This fact must raise questions about pensioners' mortality and especially about interwar concerns over premature aging and burn-out. Certainly, it means that the findings in *Deaths Among War Pensioners*, and by extension the figures cited in the Department of Pensions and National Health's annual reports, need to be reconsidered. And while lifespans do not reveal everything—including whether a pensioner was burnt-out—and although they do not necessarily prove that a man's wartime service reduced his life expectancy, the knowledge that pensioners died younger than other Canadian men in their generation does help to clear away some of the fog that surrounded their lives after the war, revealing just enough to suggest that Canada's Great War pensioners were members of a generation curtailed.



ABOUT THE AUTHOR

Jonathan Scotland is a historian and editor with the Dictionary of Canadian Biography. He holds a doctorate from Western University.

³⁵ For more on veterans' alcohol abuse, see Jonathan Vance, "‘When wartime friends meet’: Great War Veteran Culture and the (Ab)Use of Alcohol," *Canadian Military History* 32, 1 (2023).