Presuming Enough? Keeping the PACT Act's Promise

Meghan E. Brooks[*]

ABSTRACT: Sick veterans have long disproportionately borne the costs of scientific uncertainty as to whether military toxic exposures cause cancers and more. The relaxed evidentiary standards that make the "uniquely pro-claimant" veterans benefits system work for traditional battlefield injuries do not achieve the same results for toxic exposures, where causal relationships to disease require population-level data and years of study. This Article argues that, given this structure, core veterans' policy objectives are only fairly and efficiently vindicated by creating generous evidentiary presumptions for toxic-exposed veterans.

2022's blockbuster PACT Act is rightly celebrated for its momentous expansion of evidentiary presumptions for post-9/11 veterans. PACT is already delivering critical income and healthcare benefits for tens of thousands of sick veterans and their families. Yet its mechanism for creating new presumptions by rulemaking risks years of delay in benefits access for sick veterans left out of the Act, as has been the case for past generations of toxic-exposed veterans. PACT leaves the Secretary of the Department of Veterans Affairs the discretion to consider and create new presumptions, as guided by scientific study, but gives affected veterans little say as to what exposures and conditions should be considered.

This Article provides a principled basis for the Secretary to exercise his authority to create new presumptions generously, even as the PACT Act's price tag over its first decade is projected to hit $737 billion. The Article then proposes mechanisms to allow smaller groups of toxic-exposed veterans to force timely consideration of the presumptions that have been historically secured only by the most politically organized.

[*] Assistant Professor of Law and Director of the Veterans Legal Clinic, Joseph F. Rice School of Law, University of South Carolina. My thanks go to my colleagues at South Carolina, the faculty at Georgia State College of Law, James Ridgway, and the veterans law scholars and other participants of the 2022 and 2023 New York University Clinical Writers' Workshops for their thoughtful engagement and review. My thanks also go to the faculty at the Jerome N. Frank Legal Services Organization at Yale Law School for their engagement with an early draft—and especially to Mike Wishnie for bringing me into this work and getting me to the heart of the matter, here and elsewhere. I am also grateful to the *Iowa Law Review*, particularly Tobias Itriago Vallenilla, Nicholas Salas, and Sarah Wright, for their careful edits. All errors are my own.

INTRODUCTION

In 1966, the U.S. Air Force accidentally dropped four unarmed hydrogen bombs over Palomares, Spain, and ordered approximately fourteen hundred airmen to clear the fine white radioactive plutonium dust from the surrounding tomato fields, mostly without gloves or masks.[1] Up through the 1990s,

1. Dave Philipps, *Decades Later, Sickness Among Airmen After a Hydrogen Bomb Accident*, N.Y. TIMES (June 19, 2016), https://www.nytimes.com/2016/06/20/us/decades-later-sickness-among-airmen-after-a-hydrogen-bomb-accident.html (on file with the *Iowa Law Review*).

servicemembers studied foreign languages on top of what is now a superfund site at Fort Ord, California, where drums of industrial solvents like the known carcinogen Trichloroethylene ("TCE") were allowed to leach into the drinking water.[2] In the first years of the war in Afghanistan, thousands of troops worked, showered, and slept at a decommissioned Soviet airfield at Karshi-Khanabad, Uzbekistan, where the ponds glowed green and black goo oozed from the mud. Soil testing revealed clinically significant levels of toxicants, including enriched uranium, solvents, jet fuel, kerosene, and chemical weapons, and the post-9/11 era's omnipresent burn pits spewed smoke across the camp.[3]

Each such exposure was toxic, with the potential for long-term and even deadly health effects. But when it takes years, if not decades, to establish to a reasonable degree of scientific and medical certainty that U.S. military veterans' cancers, endocrine and respiratory disorders, and more were caused by in-service toxic exposures, who should bear the costs of uncertainty in the interim?

Department of Veterans Affairs ("VA") disability compensation is a taxpayer-funded benefit paid to veterans who can show that it is "at least as likely as not" that a current medical condition was incurred in or aggravated by service. For many veterans, a grant of "service connection" creates access not just to the monthly payments that can replace wages lost to disability but to lifesaving VA healthcare and money benefits for their spouses and dependent children if their condition kills them.

Yet, responding to impulses to guard the taxpayer purse and reserve veterans benefits only for those who truly "deserve" them—as well as to legitimate research limitations—policymakers have historically displaced the costs of scientific and medical uncertainty onto exposed veterans and their families. This Article argues that when policymakers substitute conservative interpretations of the science for liberal VA benefits standards, they contravene the pro-veteran ethos that has traditionally animated veterans benefits law to toxic-exposed veterans' disadvantage.

The core difficulty is that the actual medical etiology of a potentially toxigenic or radiogenic condition is typically impossible to prove for any one individual, even at the veterans benefits system's "near-equipoise" standard of proof. As a result, presumptive service connection is the gold standard response to toxic exposure events. Presumptions establish service connection where a veteran had sufficient presence at an enumerated exposure site and develops an enumerated medical condition. Official recognition of major exposures prior to this legislative session—Agent Orange, Gulf War Illness, Camp Lejeune, and certain "radiation-risk-activities"—follows a rough template that progresses from study orders and exposed veteran registries to healthcare monitoring and treatment for potentially toxicogenic conditions, to full

2. Martha Mendoza, Juliet Linderman & Jason Dearen, *What Lies Beneath: Vets Worry Polluted Base Made Them Ill*, ASSOCIATED PRESS (Feb. 23, 2022, 8:23 AM), https://apnews.com/c1078dd5 20322f2a4130e2f7077b7892 [https://perma.cc/GJA9-KA38].

3. Tara Copp, *Cancers Strike Veterans Who Deployed to Uzbek Base Where Black Goo Oozed, Ponds Glowed*, MCCLATCHY DC (Dec. 20, 2019, 4:23 PM), https://www.mcclatchydc.com/news/nation-world/national/national-security/article238510218.html (on file with the *Iowa Law Review*).

healthcare access, and finally to lowered evidentiary burdens for toxic-exposed veterans, up to and including presumptions.

The toxic exposure template has long included mechanisms for VA to establish new presumptions by rulemaking at the recommendation of contracted scientists studying associations between exposures and conditions. Establishing associations to a degree of reasonable scientific certainty can take years to decades beyond the first emergence of toxicogenic symptoms,[4] and VA has historically deferred to scientists' uncertainty until sustained pressure from veterans' advocates is too great to ignore.[5] Exposures affecting fewer veterans leave fewer survivors healthy enough to engage in the sustained advocacy that has been necessary to secure results. Veterans of smaller-scale toxic exposures or with less common or less understood conditions are left to pursue claims as individuals in the labyrinthine VA disability compensation system, a system in which VA continues to fight claimants' attempts at using discovery tools and the class action mechanism to counter the difficulty of securing precedent as to pure legal questions, let alone questions of law as applied to fact.[6]

After more than a decade of sustained advocacy, the post-9/11 generation of U.S. military veterans finally have their own blockbuster toxic exposure legislation. The Sergeant First Class Heath Robinson Honoring our Promises to Address Comprehensive Toxics Act of 2022 ("PACT" or "PACT Act") is $797 billion[7] over the next decade's worth of congressional recognition of

4. *See infra* note 185 and accompanying text. For example, although servicemembers began experiencing symptoms of what became known as "Gulf War Illness" during the Persian Gulf War in 1990 and 1991 and studies began soon after, researchers only showed that their symptoms were likely caused by exposure to sarin gas in 2022. Robert W. Haley, Gerald Kramer, Junhui Xiao, Jill A. Dever & John F. Teiber, *Evaluation of a Gene-Environment Interaction of* PON1 *and Low-Level Nerve Agent Exposure with Gulf War Illness: A Prevalence Case-Control Study Drawn from the U.S. Military Health Survey's National Population Sample*, ENV'T HEALTH PERSPS., May 2022, at 057001-1, 057001-2 (describing decades of inconclusive studies in literature review).

5. *See* Meghan E. Brooks, *Early Reflections on a New Cause of Action for Camp Lejeune Veterans*, 14 WAKE FOREST J.L. & POL'Y 157, 158–69 (2024) (detailing the timeline of research, advocacy, and government response to exposures to toxic water at Camp Lejeune, North Carolina). Similarly, post-9/11 veterans and their survivors started collecting medical and scientific evidence on the links between burn pit exposure and radiogenic and toxicogenic conditions organizing around difficulties accessing benefits related to burn pit exposure in the late 2000s. *See* BURN PITS 360 VETERANS ORG., https://burnpits360.org/pages/about-us [https://perma.cc/WQR8-V3AZ]. It took over a decade for VA to establish the first three presumptions related to burn pits by rulemaking under the Secretary of Veterans Affairs's ("Secretary") general rulemaking authority, and for Congress to pass the PACT Act. *See* Honoring our PACT Act of 2022, Pub. L. No. 117-168, 136 Stat. 1759. Tension between scientists and advocates can arise from differences in professional goals and values. Scientists tasked with studying the relationship between toxic exposures and medical conditions may over-credit the importance of scientific or medical accuracy in the VA benefits system. *See, e.g.*, Mark Brown, *The Role of Science in Department of Veterans Affairs Disability Compensation Policies for Environmental and Occupational Illnesses and Injuries*, 13 J.L. & POL'Y 593, 603 (2005) (expressing concerns, as the then-Director of the VA's Environmental Agents Service, that the generosity of certain Agent Orange and Gulf War presumptions undermines VA's and the National Academies of Science's scientific credibility).

6. *See infra* Section II.A.

7. J'NELL BLANCO SUCHY, CONG. BUDGET OFF., LEGISLATION ENACTED IN THE SECOND SESSION OF THE 117TH CONGRESS THAT AFFECTS MANDATORY SPENDING OR REVENUES 1 (2023), https://www.cbo.gov/publication/58999 [https://perma.cc/ZHQ2-UXW3].

servicemember exposures to dust and the open-air waste incineration sites known as "burn pits" common to most deployments overseas in the Iraq and Afghanistan era, and a handful of other discrete exposures. Similar to the Vietnam generation's hard-won Agent Orange legislation, the PACT Act establishes presumptive entitlement to service-connected disability compensation for certain conditions and exposures, including at Palomares and K2. It creates a presumption of exposure for certain others and creates a process for future designation of additional presumptive exposures and conditions. As with prior Agent Orange bills, exposed veterans without presumptive conditions receive expanded VA healthcare access and health monitoring, but must continue to individually prove that their medical conditions are at least as likely as not related to their in-service exposure to access benefits.

This Article celebrates the PACT Act's creation of new presumptions as the gold standard for recognizing and appropriately compensating mass military toxic exposures. However, it cautions that PACT's replication of certain discretionary rulemaking mechanisms may unduly slow the creation of additional presumptions, and so disadvantage veterans with rarer conditions and veterans of sites where fewer servicemembers were exposed, especially once the momentum of PACT's enactment and early implementation slows. It shows that more generous and speedier presumptions of service connection better align with the VA benefits system's adjudicatory structure and animating purpose, as well as the general legal principles underlying causation and the assignment of burdens of production and proof. This Article provides a principled basis for the Secretary to err on the side of generosity in exercising his authority to create presumptions under PACT and offers proposals that would create levers for veterans to force timely consideration of exposure events and conditions for new presumptive coverage and so improve the chances that VA delivers fair and speedy benefits access to veterans injured in mass toxic exposure events.

I. TOXIC EXPOSURE AND VA BENEFITS' PURPOSE AND ARCHITECTURE

Veterans with toxic exposure generally have two objectives. First, to secure recognition from their government that they were exposed to dangerous levels of toxic materials. And second, service connection, or a finding that it is "at least as likely as not" that a veteran's current disability is linked to service. Service connection opens the door not only to monthly disability compensation from the VA, but often to VA healthcare too, as well as to robust survivors' benefits for the dependents of veterans who die due to their toxicogenic or radiogenic conditions.[8] Unfortunately, VA service connection adjudications are

8. Monthly tax-free disability compensation payments which range from $171 per month for a single veteran whose service-connected medical condition is not due to combat, to well over $3,500 per month for severely disabled veterans with recognized dependents. *Current Veterans Disability Compensation Rates*, U.S. DEP'T VETERANS AFFS. (May 3, 2024), https://www.va.gov/disability/compensation-rates/veteran-rates [https://perma.cc/TC93-8A9W]. A service-connected

not designed to respond to toxic exposures, despite that they are just as much of a hallmark of twentieth and twenty-first-century military service injury as the combat and training injuries that most Americans are likely to associate with wounded veterans.

This Part first shows how compensating and treating the health effects of in-service toxic exposures should fall squarely in the heartland of what Congress designed the veterans benefits system to do: protect the dignity, health, and financial well-being of veterans with disabilities incurred or aggravated in service. It then describes the unique architecture of the law of service connection to ground later discussion of the sites at which "pro-veteran" adjudication principles disadvantage veterans with toxic exposure claims.

A. WHAT ARE VETERANS BENEFITS INTENDED TO DO?

A bronze plaque on the face of the VA white-marbled headquarters, situated on the northeast corner of Lafayette Square just a few hundred yards from the White House, bears the Abraham Lincoln quote at the heart of VA's mission statement: "To care for him who shall have borne the battle, and for his widow, and his orphan."[9] The modern VA has translated Lincoln's promise into a uniquely generous array of public benefits. In addition to the cash benefits to which the quote most directly alludes—the VA provides subsistence pensions for certain deeply impoverished veterans and their surviving spouses and higher monthly compensation to veterans with service-connected disabilities and their survivors, both of which pay out significantly more than their analogous Social Security programs—the VA also offers low-cost or free healthcare superior to Medicaid,[10] and education and job training benefits, low-cost mortgages, and priority public housing vouchers unavailable to the general public.

However, not all veterans are eligible for every VA benefit or at the same level of access. Most benefits require a minimum amount of time in service and an "honorable" characterization of discharge from service. Pension is not only means-tested, but is limited to disabled and older veterans, and requires service in a time of war. Disability compensation itself requires not only that the veteran be presently disabled but that the disability has been incurred in or aggravated by military service. This designation—service connection—is what toxic-exposed veterans principally seek.

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condition rated at a certain degree of severity is a criterion of eligibility for multiple additional VA benefits not otherwise available.

9. *About the Department*, U.S. DEP'T VETERANS AFFS. (Sept. 20, 2023), https://www.va.gov/about_va/mission.asp [https://perma.cc/F9VC-3ZJD]. VA's mission statement has been updated to include all veterans, reading: "To fulfill President Lincoln's promise to care for those who have served in our nation's military and for their families, caregivers, and survivors." Press Release, U.S. Dep't of Veterans Affs., New VA Mission Statement Recognizes Sacred Commitment to All Veterans, Their Families, Caregivers and Survivors (Mar. 17, 2023), https://news.va.gov/117260/new-mission-statement-commitment-all-veterans [https://perma.cc/99MR-HG7A].

10. Rebecca Anhang Price, Elizabeth M. Sloss, Matthew Cefalu, Carrie M. Farmer & Peter S. Hussey, *Comparing Quality of Care in Veterans Affairs and Non-Veterans Affairs Settings*, 33 J. GEN. INTERNAL MED. 1631, 1633 (2018).

Because past military service alone does not entitle former servicemembers to veterans benefits, toxic-exposed veterans who are unable to show that their condition was definitively caused by an in-service exposure must make a claim on deservingness. This deservingness claim is distinct from the "fault" claims characteristic of tort. To secure service connection presumptions, veterans must make a policy argument that the VA benefits system's architecture and goals require overinclusive benefits delivery. In other words, veterans must convince policymakers that in order to reach toxic-exposed veterans whose medical conditions are caused by toxic exposure in fact, they must also award benefits to some higher-than-typical percentage of veterans whose medical conditions are not actually related to their military service at all.

The differences among various benefits' eligibility requirements reflect that there is no one unifying theory of purpose or deservingness animating veterans benefits. Rather, modern VA benefits spring from a few related but distinct ideas about the value of military service and what is owed to veterans in return. Different concepts of deservingness have been expressed in benefits programs and eligibility determinations as tort causation evolved, progressives made advances in establishing a social welfare system, and the administrative state continued to develop. These concepts were tested and reshaped as the military's image came under stress during the Vietnam era and during the recruitment crisis created by the new all-volunteer force, and as public benefits became a major political target in the 1980s.[11] Today, the mechanics of the VA benefits system pull from narratives that variously privilege bodily sacrifice, an old soldier's dignity, the welfare of mothers raising young children, avoidance of "dependency," and promises made to recruits.

1. Dignity, Charity, and Munificence

The oldest idea underlying veterans benefits—that poverty is beneath the dignity of a war veteran, to whom the nation owes a deep and abiding moral debt—supported pensions for the worst off among veterans of the Continental Army after the Revolution, as well as a series of post-Civil War pension programs for veterans with disabilities, elderly impoverished veterans, and dependent survivors.[12] Indeed, the veterans benefits system itself is the genesis of largescale, centralized social spending in the United States and is recognized to have begun in earnest with veterans' pension programs after the Civil War.[13] While Revolution-era pensions were awarded only to those injured in service, and to their widows and orphans, Congress began providing pensions to deeply impoverished veterans of the American Revolution in 1818. The 1818 Pension Act first required no evidentiary showing and then required only proof of impoverishment after an initial run on pension

11. JENNIFER MITTELSTADT, THE RISE OF THE MILITARY WELFARE STATE 4–13 (2015).

12. *See* THEDA SKOCPOL, PROTECTING SOLDIERS AND MOTHERS: THE POLITICAL ORIGINS OF SOCIAL POLICY IN THE UNITED STATES, at vii (1992).

13. *See id.*

claims.[14] The animating spirit was munificence; a new nation needed to prove that it could take care of its own.[15]

By the Civil War, Congress had begun linking veterans benefits directly to disabling conditions again. In 1862, Congress awarded pensions to veterans with disabilities "incurred as a direct consequence of . . . military duty," or "from causes which can be directly traced to injuries received or disease contracted while in military service."[16] If a connection was established using service medical records and evidence the claimant provided, veterans then submitted to physical examinations every two years to assess the extent to which their disabilities prevented work, per a complex scheme that assigned specific monetary values to different disabilities.[17] Members of Congress's stated rationales for the 1862 move from a means-based to disability-based pension regime were not uniform, but the idea that veterans benefits were a "bounty" gifted from a grateful nation in recognition of bodily sacrifice[18] was later adopted by the Supreme Court.[19]

As Civil War veterans aged, the Republican Party—which enjoyed a high share of veteran support—succeeded in decoupling pensions for disabled and elderly veterans from service-connected disability.[20] The relative generosity of Civil War pensions was expensive, and therefore consistently politically divisive over the decades despite popular rhetoric characterizing pensions to keep veterans out of poverty as paying out the nation's moral debt.[21] That said, Civil War pensions' expansion to all disabled veterans was also driven by recognition that service connection relied on "establishment of facts largely within the knowledge of the claimants alone," as President Grover Cleveland said in vetoing

14. *Id.* at 105; *see also* Erin Blakemore, *Pensions for Veterans Were Once Viewed as Government Handouts*, HISTORY (Sept. 28, 2021), https://www.history.com/news/veterans-affairs-history-va-pension-facts [https://perma.cc/955M-NDBF]. In 1832, Congress authorized a pension for *any* veteran who had served at least two years in the "continental line" during the Revolution, regardless of financial status or disability. Act of June 7, 1832, ch. 126, 4 Stat. 529, 529–30.

15. *See* Hayburn's Case, 2 U.S. (2 Dall.) 409, 414 (1792) ("[T]he objects of this [early veterans pension] act are exceedingly benevolent, and do real honor to the humanity and justice of Congress.").

16. Theda Skocpol, *America's First Social Security System: The Expansion of Benefits for Civil War Veterans*, 108 POL. SCI. Q. 85, 93 (1993).

17. For example, loss of an eye was valued at a set amount, loss of a leg below the knee at another amount, and loss of a leg above the knee at another altogether, etc. Claire Prechtel-Kluskens, "*A Reasonable Degree of Promptitude": Civil War Pension Application Processing, 1861–1885*, NAT'L ARCHIVES (May 5, 2023), https://www.archives.gov/publications/prologue/2010/spring/civilwarpension.html [https://perma.cc/N3KF-QX66].

18. *See* STAFF OF H. COMM. ON VETERANS' AFFS., 84TH CONG., THE PROVISION OF FEDERAL BENEFITS FOR VETERANS: AN HISTORICAL ANALYSIS OF MAJOR VETERANS' LEGISLATION, 1862–1954, at 7 (Comm. Print 1955) (citing CONG. GLOBE, 37th Cong., 2d Sess. 2101 (1862) (statement of Rep. William Steele Homan)).

19. United States v. Teller, 107 U.S. 64, 68 (1882) ("Pensions are the bounties of the government, which congress has the right to give, withhold, distribute, or recall, at its discretion."). *But see* Cushman v. Shinseki, 576 F.3d 1290, 1298 (Fed. Cir. 2009) (finding a property right in veterans benefits).

20. Dependent Pension Act of 1890, ch. 634, 26 Stat. 182, 182–83 (amended 1906).

21. *See* SKOCPOL, *supra* note 12, at 149.

a further proposed 1887 expansion.[22] Overinclusion reflected evidentiary realities as much as it did politics.

2. The Modern Move to Compensation

As a result of public backlash to the generosity of Civil War pensions, the financial support system enacted for veterans of the First World War swung away from the need-based pension model to a model that aimed to compensate veterans for the disabling effects of injuries in service.[23] Here, for the first time, Congress explicitly used the term "compensation" to signal a move away from the munificence-motivated pension system to a system where only the veterans actually *owed* for some specific injury beyond service alone would receive money benefits.[24] Nonetheless, VA maintained a separate, significantly less generous "pension" for low-income wartime veterans and widows disabled by conditions not connected to service, including old age. While a nation indebted to veteran sacrifice remained a motivating concept behind the new benefits program, its conditioning on disability actually incurred in service reflected understandings of deservingness and causation foregrounded in emerging state workers' compensation schemes and turn-of-the-century tort reform. Veterans were owed respect but were not excused from working for a living whenever able.[25] From a tort perspective, one might say the State was only willing to subsidize veterans where it was at "fault" for their inability to work.[26]

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22. WILLIAM H. GLASSON, FEDERAL MILITARY PENSIONS IN THE UNITED STATES 211 (David Kinley ed., 1918) (quoting 18 CONG. REC. 1639 (1887) (veto message of Grover Cleveland regarding H.B. 10457)).

23. Act of Oct. 6, 1917, ch. 105, § 300, 65 Stat. 398, 405 ("That for death or disability resulting from personal injury suffered or disease contracted in the line of duty, by any commissioned officer or enlisted man or by any member of the Army Nurse Corps (female) or of the Navy Nurse Corps (female) when employed in the active service under the War Department or Navy Department, the United States shall pay compensation as hereinafter provided; but no compensation shall be paid if the injury or disease has been caused by his own willful misconduct.").

24. James D. Ridgway, *Caring for Those Who Have Borne the Battle: Exploring the Myths and Realities of Veterans' Benefits Since the Revolution*, 6 J. FED. CIR. HIST. SOC'Y 73, 80–81 (2012) [hereinafter Ridgway, *Caring for Those Who Have Borne the Battle*]; *see also* James D. Ridgway, *Recovering an Institutional Memory: The Origins of the Modern Veterans' Benefits System from 1914 to 1958*, 5 VETERANS L. REV. 1, 16–20, 42–43 (2013) (describing changes to disability compensation eligibility and evidentiary development during this period); *id.* at 20 (quoting the Veterans' Bureau's Director as saying in 1924: "[T]he problem of determining the service origin of veterans' disabilities is the most difficult and involved question confronting the Veterans' Bureau").

25. *See* Daniel L. Nagin, Essay, *The Credibility Trap: Notes on a VA Evidentiary Standard*, 45 U. MEM. L. REV. 887, 888 (2015) ("VA's system was originally designed to consider average loss of earning capacity based on disability within the context of a mostly agrarian and industrial economy . . . .").

26. Note though that a disability's effect on a veteran's ability to work is not the sole factor in determining the rate of compensation today. Each compensable service-connected disability has its own "rating schedule" that sets out which constellation of symptoms at what severity make the veteran eligible for a ten percent rating, a thirty percent rating, a sixty percent rating, etc. A higher rating corresponds to higher compensation on a quasi-logarithmic scale, such that a ten percent rating translates to approximately $170 per month, and a one hundred percent rating to over $3,700. While a significant portion of the rating schedule is focused on the disability's impact on the veteran in the workplace, many considerations are tied to pain or some other loss—

The WWI switch to a compensation-based system coincided with the rise of veterans' advocacy organizations that would eventually become the congressionally chartered Veterans Services Organizations ("VSOs"), which soon adopted a mission of guarding the special benefits that Congress had set aside for veterans, and especially disabled veterans unable to work. In fact, when President Roosevelt attempted to create a unitary disability system for veterans and non-veterans alike, veterans' groups blocked his efforts. Veterans' organizations were opposed as well when, in the 1950s, it was suggested that veteran-specific programs be absorbed into the broader social safety net. "[V]eterans' groups fiercely resisted the notion that veterans be treated the same as other citizens or that their special status as former service members be diminished in any way."[27] Instead, they defined their own deservingness against the general public's[28] and perpetuated hierarchies of deservingness among veterans themselves.

After the Depression-era "Bonus Army's" short burst of organizing energy grounded in the old idea that poverty was beneath the dignity of any war veteran was crushed on the National Mall with machine guns and tanks,[29] the idea that the most generous monthly compensation for veterans should be reserved for those disabled on active duty won the day. As the disability compensation system became entrenched in conflict after conflict over the twentieth century, veterans benefits took on the features of a pact or promise, too. The promise is that if you dutifully serve, giving up personal freedoms and taking on the risk that you will be wounded or die for your country—your country will take care of you in return. Veterans benefits advocates have resultingly deployed the "promises made and broken" narrative to great effect.[30] Even as some in senior leadership—both military and civilian—have characterized the generosity of veterans benefits over the decades as merely another facet of an anti-American welfare state,[31] the rhetoric of military sacrifice

total amputation of a leg is automatically rated at one hundred percent, for example, regardless of the amputation's impact on the veteran's life. *See* 38 C.F.R. § 4.71a (2023). In fact, for many medical conditions, a veteran could receive a one hundred percent rating while working fulltime. *See id.* (listing the ratings for various medical conditions).

27. Michael J. Wishnie, *"A Boy Gets into Trouble": Service Members, Civil Rights, and Veterans' Law Exceptionalism*, 97 B.U. L. REV. 1709, 1718 (2017).

28. Veterans of Foreign Wars's ("VFW") vision, for example, is to "[e]nsure that veterans are respected for their service, always receive their earned entitlements, and are recognized for the sacrifices they and their loved ones have made on behalf of this great country." *About Us*, VFW: VETERANS FOREIGN WARS, https://www.vfw.org/about-us [https://perma.cc/JB4F-NTA7].

29. The argument was, specifically, that war veterans should be made whole for economic opportunities they lost fighting overseas. *See* Ridgway, *Caring for Those Who Have Borne the Battle*, *supra* note 24, at 81–82.

30. This is exemplified in Vietnam Veterans of America's motto, "Never again will one generation of veterans abandon another," which was aimed at both the Second World War and Korea-era veterans in power who ignored returning Vietnam veterans' pleas for help, including as to recognition of the health effects of Agent Orange exposure. *About Us*, VIET. VETERANS AM., https://vva.org/who-we-are/about-us-history [https://perma.cc/2RK2-S7V7].

31. *See* MITTELSTADT, *supra* note 11, at 86–89.

largely overcame Reagan-era "welfare queen" comparisons in the wave of patriotic sentiment that followed 9/11.

3. First Presumptions to the PACT Act

Importantly for toxic-exposed veterans, provisions creating presumptive service connection for certain conditions and in-service experiences were built into the modern compensation system from the beginning. The WWI disability compensation scheme initially narrowly defined the window in which compensable disabilities could emerge as no later than one year following discharge[32] but did not define veterans' evidentiary burden. This short time horizon—and the WWI system's reliance on in-service incurrence itself—reflects medicine's limited ability to identify causation at the time.[33] Within just five years, Congress enacted the first presumptions of service connection for veterans who were finding it increasingly difficult to prove service connection as the distance in time from the end of the war grew.[34] The first presumptions covered psychosis and tuberculosis, and critically, gave the then-Veterans Bureau the power to establish additional presumptions by regulation.[35] The VA Secretary has retained this power through the present.[36]

Congress subsequently created presumptions of service connection for dysentery, for what is now known as Parkinson's disease, for tuberculosis, and a form of encephalitis.[37] Over the next decades, additional presumptions were created by VA regulations and by executive orders. Congress codified regulatory and executive order presumptions in 1948 following the Second World War, and created the first toxic exposure presumptions as a result of sustained advocacy from Agent Orange-exposed veterans beginning in the late 1970s, along with presumptions for ionizing radiation exposure during the Cold

32. Act of Oct. 6, 1917, ch. 105, § 306, 65 Stat. 398, 407 ("That no compensation shall be payable for death or disability which does not occur prior to or within one year after discharge or resignation from the service, except that where, after a medical examination made pursuant to regulations, at the time of discharge or resignation from the service, or within such reasonable time thereafter, not exceeding one year, as may be allowed by regulations, a certificate has been obtained from the director to the effect that the injured person at the time of the discharge or resignation was suffering from injury likely to result in death or disability, compensation shall be payable for death or disability, whenever occurring, proximately resulting from such injury.").

33. James D. Ridgway, *A Benefits System for the Information Age*, *in* GLIMPSES OF THE NEW VETERAN: CHANGED CONSTITUENCIES, DIFFERENT DISABILITIES, AND EVOLVING RESOLUTIONS 131, 134–37 (Alice A. Booher ed., 2015).

34. SIDATH VIRANGA PANANGALA, CHRISTINE SCOTT, DOUGLAS REID WEIMER, UMAR MOULTA-ALI & JAMES E. NICHOLS, CONG. RSCH. SERV., R41405, VETERANS AFFAIRS: PRESUMPTIVE SERVICE CONNECTION AND DISABILITY COMPENSATION 5–6 (2010), https://digital.library.unt.edu/ark:/67531/metadc491018/m1/1/high_res_d/R41405_2010Sep13.pdf [https://perma.cc/6AZG-YRQ5].

35. *Id.* at 5 (citing Act of Aug. 9, 1921, ch. 57, sec. 18, § 300, 42 Stat. 147, 153–54).

36. 38 U.S.C. § 501 (2018); *see also infra* Section III.A (describing the VA rulemaking and consultation process).

37. PANANGALA ET AL., *supra* note 34, at 5 (citing World War Veterans Act of 1924, Pub. L. No. 68-242, § 200, 43 Stat. 607, 615–16).

War.[38] Veterans subjected to newly declassified Cold War-era mustard gas experiments were next, followed by: veterans exposed to oil fires and chemical weapons during the first Gulf War; Marine Corps veterans exposed to toxins in the water stateside at Camp Lejeune, North Carolina; and finally post-9/11 veterans exposed to the harsh smoke of the all-purpose "burn pits" used in the wars in Iraq and Afghanistan to incinerate all manner of industrial and biological waste.[39]

Congress and VA have continued creating presumptions for toxicogenic and certain other conditions (like amyotrophic lateral sclerosis, or ALS) as the system has evolved greater due process and claim development protections for veterans: including finally authorizing judicial review of benefits determinations in the Veterans' Judicial Review Act of 1988; the expansion of VA's duty to assist veterans in identifying records related to their claims in the Veterans Claims Assistance Act of 2000; and the recognition that veterans have a constitutional property interest in their disability compensation benefits in 2009.[40] The simplicity of new presumptions should offset some of the inefficiency of greater entitlement to process.

Despite that presumptions have long been integrated into the VA benefits system, the post-9/11 generation had to pull on multiple narrative threads for years to make the political case for burn pit presumptions. The bill title for the winning omnibus proposal—the Sergeant First Class Heath Robinson Honoring our Promises to Address Comprehensive Toxics Act—explicitly evokes the "promises made and broken" narrative and implicitly invokes the "bodily sacrifice" narrative by invoking the name of a young veteran who died of burn pit-related lung cancer.

However, it was the leading alternative proposal—the Cost of War Act—that initially captured organizers and headlines.[41] Burn pit veteran and survivor organizers and their allies coalesced around the message that toxic exposure-related conditions are "wounds of war" and that disability compensation, payments to surviving dependents, and comprehensive healthcare are the

38. The Veterans' Dioxin and Radiation Exposure Compensation Standards Act of 1984 was the blockbuster bill that established presumptive service connection for veterans exposed to Agent Orange and the so-called "Atomic Veterans" for the first time. Veterans' Dioxin and Radiation Exposure Compensation Standards Act, Pub. L. No. 98-542, 98 Stat. 2725 (1984). The Veterans Court has explained that due to advocate pressure: "Congress enacted the Radiation Compensation Act in an atmosphere of scientific and medical uncertainty about the long-term health effects of exposure to dioxin and ionizing radiation. . . . Due to this uncertainty, veterans exposed to radiation were rarely successful in proving a service connection for their maladies." Combee v. Brown, 34 F.3d 1039, 1041 (Fed. Cir. 1994) (citing 130 CONG. REC. 13147–49 (1984) (statement of Sen. Alan Cranston)); *see also* PANANGALA ET AL., *supra* note 34, at 13 n.51 (quoting Rep. Tom Ridge and Sen. John Kerry in 1988 pushing the need to create a presumption of service-connected disability compensation now, before waiting for decades on studies).

39. *See infra* Section III.A. In 2008, the Institute of Medicine found that "[s]ince 1921, nearly 150 health outcomes have been service connected on a presumptive basis." BD. ON MIL. & VETERANS HEALTH, INST. OF MED. OF THE NAT'L ACADS., IMPROVING THE PRESUMPTIVE DISABILITY DECISION-MAKING PROCESS FOR VETERANS 10 (Jonathan M. Samet & Catherine C. Bodurow eds., 2008) [hereinafter NASEM REPORT 2008].

40. Cushman v. Shinseki, 576 F.3d 1290, 1298 (Fed. Cir. 2009).

41. Cost of War Act of 2022, H.R. 7147, 117th Cong. (2022).

cost of it.[42] Advocates countered cost estimates in the hundreds of billions of dollars with affecting personal stories of sick and dying Iraq and Afghanistan veterans in their 20s, 30s, and 40s, focusing on their lack of access to adequate care and their families' economic hardship. News stories centered on widows and orphaned children.[43] The August 2021 total withdrawal from Afghanistan and December 2021 withdrawal of combat presence in Iraq marked the end of two decades of war—its bill had come due. Between that timing and President Biden's attribution of his Army officer son Beau's death to burn pit exposure,[44] what became the PACT Act was a juggernaut in the 2021–2022 legislative session, ultimately passing eighty-six to eleven in the Senate.[45]

The bill's opponents had two primary, interrelated objections: the eye-watering cost and its contributions to the national budget deficit[46] and, less commonly, lack of proof that the proposed presumptive conditions were, in fact, caused by burn pits and, therefore, service-connected. Senator Rand Paul of Kentucky, a physician, had put forth his own bill earlier in the legislative session providing healthcare but no compensation for burn pit-exposed veterans and had supported several other bills that did the same.

In explaining his "no" vote on the final PACT Act, Senator Paul said, "[T]his bill puts our economy at risk by creating presumptions of service connection for the most common of ailments."[47] He opposed the presumption of service connection created for Agent Orange-exposed veterans with hypertension, noting that sixty percent of Americans in the Vietnam generation's age bracket have the condition. He similarly opposed creating a presumption of service connection for burn pit-exposed veterans with asthma,

42. For example, see the language used by Senator Jon Tester (D-MT)—the primary sponsor of the PACT Act. Jon Tester, *Tester: Paying the Cost of War at Last for Veterans with the PACT Act*, MISSOULA CURRENT (Aug. 10, 2022), https://missoulacurrent.com/teter-paying-the-cost-of-war-at-least-for-veterans-with-the-pact-act [https://perma.cc/T76X-LQYV] ("[W]e have ignored the wounds of war from toxic exposure for far too long.").

43. *Id.*

44. Dan Sagalyn, *Biden Addresses Possible Link Between Son's Fatal Brain Cancer and Toxic Military Burn Pits*, PBS NEWS (Jan. 10, 2018, 4:02 PM), https://www.pbs.org/newshour/health/biden-addresses-possible-link-between-sons-fatal-brain-cancer-and-toxic-military-burn-pits [https://perma.cc/KN4U-FN4A].

45. *Roll Call Vote 117th Congress - 2nd Session*, U.S. SENATE, https://www.senate.gov/legislative/LIS/roll_call_votes/vote1172/vote_117_2_00280.htm [https://perma.cc/6467-UG9N].

46. The cost objections manifested in their ultimate form as an objection to the budgeting mechanism used to create mandatory funding for the PACT Act's new benefits entitlements. Republicans charged that the mechanism was a "budgetary gimmick" that would allow for uncorralled spending on unrelated items, which Democrats strongly denied. *See, e.g.*, Tory Lysik & Li Zhou, *Senate Republicans Threatened to Burn a Bill that Would Have Helped Veterans. Here's Why.*, VOX (Aug. 2, 2022, 11:22 AM), https://www.vox.com/2022/7/30/23284976/senate-republicans-pact-act-veterans [https://perma.cc/F543-DSGA] (quoting congressional Republicans).

47. Gerrard Kaonga, *Video of Rand Paul Arguing Against Veterans' PACT Act Goes Viral*, NEWSWEEK (Aug. 3, 2022, 12:41 PM), https://www.newsweek.com/rand-paul-veterans-bill-pact-armed-forces-healthcare-viral-video-1730284 [https://perma.cc/SV2Q-K9CN].

noting that one in twelve Americans have the condition.[48] Senator Paul stated that he would have been willing to vote for PACT if its costs were offset by cuts to foreign aid, but his objection's focus was clear. His objection was to paying out disability compensation for conditions that an individual veteran can almost certainly never show were *actually* caused by exposure in service in their case. The objection is to being overinclusive rather than underinclusive. The objection is to the likelihood that some significant percentage of these veterans' conditions are not, in fact, related to their military service at all.

These objections undoubtedly have roots in certain veterans benefits system narrative threads and are reflected in the very fact that there is a robust administrative structure for investigating and adjudicating entitlement to veterans benefits in the first place. This Article argues that in the toxic exposure context, veterans' inability to prove actual service connection on the individual and even on the exposed-population levels nonetheless supports generous creation of presumptions of service connection. Some of the oldest conceptions of what veterans benefits are intended to do are still reflected in the adjudication system's architecture and support as much.

B. FEATURES OF A "PRO-VETERAN" ADJUDICATION STRUCTURE

The modern veterans benefits system ultimately places the burdens of production and persuasion for each element of a claim for service-connected disability compensation with the veteran.[49] Yet, the statutory "duty to assist," which requires VA to "make reasonable efforts to assist a claimant in obtaining evidence necessary to substantiate the claimant's claim for a benefit," operates such that the veteran does not shoulder evidentiary burdens alone.[50] The duty to assist, along with the centrality of simple temporal incurrence[51] and

48. *Id.* For discussion of the risk that overinclusiveness in presumptive service connection delegitimizes the disability compensation system, see Meagan E. Fassinger, Note, *Striking a Better Compromise: Suggested Revisions to the Agent Orange Act of 1991*, 21 FED. CIR. BAR J. 193, 211–13 (2011). *See also* Brown, *supra* note 5, at 605–06 (objecting to presumptive service connection for Agent Orange-exposed veterans with diabetes on overinclusiveness grounds).

49. "Except as otherwise provided by law, a claimant has the responsibility to present and support a claim for benefits under laws administered by the Secretary." 38 U.S.C. § 5107(a).

50. *Id.* § 5103A(a); *see also* Skoczen v. Shinseki, 564 F.3d 1319, 1325 (Fed. Cir. 2009) (discussing the duty to assist's effect on the VA claimant's burdens of production and persuasion, and characterizing VA's statutory notice duties per 38 U.S.C. § 5103(b) as further facets of a shared burden). Specifically, courts have found that:

> [I]n veterans proceedings, VA has an affirmative duty to obtain the evidence it reasonably can that is necessary to substantiate the claim. Often, that extends only to government records, such as military, labor, and social security records, and VA's "efforts to obtain those records shall continue until the records are obtained unless it is reasonably certain that such records do not exist or that further efforts to obtain those records would be futile."

Id. (quoting 38 U.S.C. § 5103A(b)(3)).

51. *See infra* Section I.B.3.

other key elements of the "uniquely pro-claimant" VA benefits system,[52] are rooted in the "special solicitude" that Congress has for those who "have been obliged to drop their own affairs to take up the burdens of the nation."[53] These uniquely pro-claimant features apply equally to all veterans seeking service connection.

Although recent opinions have called into question the legitimacy of the pro-veteran canon of statutory interpretation,[54] the U.S. Supreme Court has traditionally recognized Congress's "special solicitude" for veterans across statutory schemes and in the structure of the VA benefits system and adjudicatory structure itself. The Court found "that solicitude is plainly reflected in the [Veterans' Judicial Review Act of 1988]," which created the Article I U.S. Court of Appeals for Veterans Claims and the modern appellate review structure,[55] "as well as in subsequent laws that 'place a thumb on the scale in the veteran's favor in the course of administrative and judicial review of VA decisions.'"[56] Holding that statutory deadlines for appealing benefits denials are subject to equitable tolling, the Court has explained:

> The contrast between ordinary civil litigation . . . and the system that Congress created for the adjudication of veterans' benefits claims could hardly be more dramatic. . . . [A] veteran seeking benefits need not file an initial claim within any fixed period after the alleged onset of disability or separation from service. When a claim is filed, proceedings before the VA are informal and nonadversarial. The VA is charged with the responsibility of assisting veterans in developing evidence that supports their claims, and in evaluating that evidence,

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52. Hodge v. West, 155 F.3d 1356, 1362 (Fed. Cir. 1998); *see* Henderson *ex rel.* Henderson v. Shinseki, 562 U.S. 428, 440 (2011) (describing how the very structure of the VA benefits system reflects the pro-veteran canon); *see also* King v. St. Vincent's Hosp., 502 U.S. 215, 220 n.9 (1991) ("[P]rovisions for benefits to members of the Armed Services are to be construed in the beneficiaries' favor.").

53. Boone v. Lightner, 319 U.S. 561, 575 (1943) (regarding the Soldiers' and Sailors' Civil Relief Act).

54. In *George v. McDonough*, Justice Amy Coney Barrett rejected arguments for veterans law exceptionalism by applying standard finality doctrine to veterans benefits decisions. *See* George v. McDonough, 596 U.S. 740, 753 (2022). She did so over the objections of Justice Neil Gorsuch, who would have applied the traditional pro-veteran canon to relax the standard. *Id.* at 762 (Gorsuch, J., dissenting). And in *Rudisill v. McDonough*, Justice Ketanji Brown Jackson avoided taking up the pro-veteran canon, while Justice Brett Kavanaugh argued for its elimination as a substantive canon of construction in his concurrence. *See* Rudisill v. McDonough, 601 U.S. 294, 314 (2024); *id.* at 314–18 (Kavanaugh, J., dissenting).

55. *Henderson*, 562 U.S. at 440. VA claims progress from the hands of non-lawyer front line claim "raters" at the Regional Office (including the supervisors who hear "Higher-Level Review" appeals), to the Veterans Law Judges ("VLJs") of the administrative Board of Veterans' Appeals ("Board"), to the Article I judges of the Court of Appeals for Veterans Claims ("Veterans Court"), to the Article III judges at the Federal Circuit, and then finally to the Justices of the U.S. Supreme Court.

56. *See id.* (citing Shinseki v. Sanders, 556 U.S. 396, 416 (2009) (Souter, J., dissenting); Veterans Claims Assistance Act of 2000, Pub. L. No. 106-475, 114 Stat. 2096; Act of Nov. 21, 1997, Pub. L. No. 105-111, 111 Stat. 2271; Veterans' Judicial Review Act, Pub. L. No. 100-687, § 103, 102 Stat. 4105, 4106–07 (1988)).

> the VA must give the veteran the benefit of any doubt. If a veteran is unsuccessful before a regional office, the veteran may obtain de novo review before the Board, and if the veteran loses before the Board, the veteran can obtain further review in the Veterans Court. A Board decision in the veteran's favor, on the other hand, is final. And even if a veteran is denied benefits after exhausting all avenues of administrative and judicial review, a veteran may reopen a claim simply by presenting "new and material evidence."[57]

Although the elements of the pro-veteran VA benefits system are many, this Section focuses on the pro-veteran features that toxic-exposed veterans cannot take advantage of to the same extent as veterans with conditions connected to other in-service injuries.

1. The Near-Equipoise Standard of Proof

Chief among the elements of the VA benefits system that consistently work in claimants' favor is their statutory entitlement to the "benefit of the doubt" as to each element of a claim for benefits. Claimants need only show "an approximate balance of positive and negative evidence" for the existence of each, or that it is "at least as likely as not" that each element is met.[58] Unlike with civil litigation's preponderance of the evidence standard, under the VA benefits system's "near-equipoise" standard of proof,[59] where there is only an approximately fifty percent likelihood that a veteran's medical condition is service-connected, the veteran wins.

The benefit of the doubt exists because the nation, "in recognition of our debt to our veterans," has "taken upon itself the risk of error" in awarding such benefits, the Veterans Court has explained.[60] "[I]n any given proceeding, the minimum standard of proof tolerated by the due process requirement reflects not only the weight of the private and public interests affected but also a societal judgment about how the risk of error should be distributed between the litigants."[61] Thus, "[b]y tradition and by statute, the benefit of the doubt belongs to the veteran."[62]

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57. *Henderson*, 562 U.S. at 440–41 (emphasis omitted). The Appeals Modernization Act has replaced claims to reopen with "supplemental" claims, and the "new and material evidence" standard with the seemingly equivalent or even more liberal "new and relevant evidence" standard. 38 U.S.C. § 5108.

58. 38 U.S.C. § 5107(b) ("The Secretary shall consider all information and lay and medical evidence of record in a case before the Secretary with respect to benefits under laws administered by the Secretary. When there is an approximate balance of positive and negative evidence regarding any issue material to the determination of a matter, the Secretary shall give the benefit of the doubt to the claimant."); *see also* 38 C.F.R. § 3.102 (2023) ("By reasonable doubt is meant one which exists because of an approximate balance of positive and negative evidence . . . .").

59. *See* Lynch v. McDonough, 21 F.4th 776, 781 (Fed. Cir. 2021) ("[I]f the positive and negative evidence is in approximate balance (which includes but is not limited to equipoise), the claimant receives the benefit of the doubt.").

60. Gilbert v. Derwinski, 1 Vet. App. 49, 54 (1990).

61. *Id.* at 53 (citing Santosky v. Kramer, 455 U.S. 745, 754–55 (1982)).

62. *Id.* at 54.

Although the benefit of the doubt is intended to apply equally to veterans with toxic exposure-related claims, Part II shows how the difficulties inherent to weighing complex scientific and medical evidence are compounded by the veterans benefits system's architecture. The result is that absent presumptions, veterans with toxic exposure claims may not actually benefit from the "benefit of the doubt" in their individual adjudications.

2. Liberalized Evidentiary Rules

In keeping with the "paternalistic" informality of the system, and in recognition that government records hold much of the evidentiary support for a veteran's claim,[63] the rules of evidence do not apply in veterans benefits adjudications.[64] Any evidence the veteran offers is "admissible" and subject only to a VA adjudicator's findings of credibility.

Certain veterans enjoy liberalized evidentiary rules even as compared to the service connection schema as a whole, too. Recognizing that recordkeeping is more difficult in active combat situations, for example, Congress has provided that a veteran's own testimony is sufficient to establish service connection for a disease or injury alleged to have been incurred in combat, "if consistent with the circumstances, conditions, or hardships of such service" and in the absence of "clear and convincing evidence to the contrary."[65]

VA has explicitly extended that lowered evidentiary burden by regulation to post-traumatic stress disorder ("PTSD"), which like many toxicogenic and radiogenic conditions, can emerge or only be recognized years after the precipitating in-service event.[66] VA regulation provides that if the record shows that a veteran engaged in combat, was a prisoner of war, or served in an area where they experienced "fear of hostile military or terrorist activity," and if the veteran claims a PTSD stressor consistent with their service and

63. In addition to the general duty to assist, which requires VA to "make reasonable efforts to obtain relevant private records that the claimant adequately identifies to the Secretary," 38 U.S.C. § 5103A(b)(1), Congress has also explicitly required VA to obtain "[t]he claimant's service medical records and, if the claimant has furnished the Secretary information sufficient to locate such records, other relevant records pertaining to the claimant's active military, naval, air, or space service that are held or maintained by a governmental entity." *Id.* § 5103A(c)(1)(A).

64. This is, of course, true for many informal agency adjudications where procedural efficiency and general accessibility to pro se claimants are prized.

65. 38 U.S.C. § 1154(b).

66. *See generally* Bernice Andrews, Chris R. Brewin, Rosanna Philpott & Lorna Stewart, *Delayed-Onset Posttraumatic Stress Disorder: A Systematic Review of the Evidence*, 164 AM. J. PSYCHIATRY 1319 (2007) (discussing the prevalence of delayed onset PTSD in veterans stemming from exacerbations of underlying prior symptoms); Catherine Hitch, Paul Toner & Cherie Armour, *Enablers and Barriers to Military Veterans Seeking Help for Mental Health and Alcohol Difficulties: A Systematic Review of the Quantitative Evidence*, 28 J. HEALTH SERVS. RSCH. & POL'Y 197 (2023) (finding that United Kingdom military veterans often waited until symptoms reached a crisis to seek mental healthcare); Natalie Mota et al., *Late-Life Exacerbation of PTSD Symptoms in US Veterans: Results from the National Health and Resilience in Veterans Study*, 77 J. CLINICAL PSYCHIATRY 348 (2016) (suggesting that cognitive aging may drive the finding that ten percent of older veterans experienced exacerbated PTSD symptoms approximately three decades after their worst trauma).

there is no clear and convincing evidence to the contrary, VA may deem the stressor established.[67]

Similarly, veterans who experienced military sexual trauma or another personal assault need not have reported it in service to establish the occurrence of the assault but can rather corroborate the assault by pointing to "markers" in the record, such as visits to medical or mental health providers following the assault or changes in behavior, and other corroborating evidence.[68] It is no coincidence that rules constraining VA adjudicators' ability to make negative credibility findings have been established for classes of veterans of special interest to policymakers—while Congress has long sought to recognize the sacrifice of combat veterans, advocates of survivors of military sexual trauma have successfully organized and leveraged media to capture sustained congressional attention over the past decade as well.[69]

Additionally, both Congress and VA lower evidentiary burdens where they recognize that direct evidence is harder to procure or less likely to exist. They also lower evidentiary burdens where the accuracy advantages of truly individualized adjudications of service connection are judged to be less valuable than the efficiency advantages of presumptions and similar mechanisms, for moral or economic reasons. They have created presumptions for multiple diverse categories of benefits claimants.[70] Section II.B describes how presumptions achieve this effect for toxic-exposed veterans.

3. Service Connection for Any Medical Condition "Resulting from" Service

Congress has provided that veterans be compensated "[f]or disability resulting from personal injury suffered or disease contracted in line of duty, or for aggravation of a preexisting injury suffered or disease contracted in line of duty"—or in other words, for disabilities that are "service-connected."[71] The

67. 38 C.F.R. § 3.304(f)(2)–(4) (2023).

68. *Id.* § 3.304(f)(5).

69. *See, e.g.*, *Policy Achievements*, PROTECT OUR DEFS. FOUND., https://www.protectourdefenders.com/policy-achievements [https://perma.cc/T5Y4-GBJW] (describing advocacy results since 2013).

70. For example, Congress has provided that a number of additional conditions be presumptively service-connected if they manifest to a compensable level—meaning if they would be rated as at least ten percent disabling—within a given period of time following discharge from service, typically one year. *See* 38 C.F.R. § 3.309(a)–(c). Former prisoners of war are entitled to presumptive service connection if a mental health disorder or certain heart conditions or strokes, among other conditions, manifest to a compensable level after discharge. 38 U.S.C. § 1112(b). Veterans with service in tropical climates are similarly entitled to presumptive service connection for a number of diseases and chronic infections endemic to tropical regions of the world, as well as the long-term effects of treatment. *Id.* §§ 1112(a)(2), 1133. And "psychosis" that develops within two years of discharge for a veteran of World War II, the Korean War, the Vietnam War, and the Persian Gulf War is presumptively service connected. *Id.* § 1702(a).

71. 38 U.S.C. § 1110 (for veterans with wartime service); *see also id.* § 1131 (same, for veterans with peacetime service only). Congress has further defined the term "service-connected" to mean "with respect to disability or death, that such disability was incurred or aggravated, or that the death resulted from a disability incurred or aggravated, in line of duty in the active military, naval, air, or space service." *Id.* § 101(16).

Federal Circuit recently clarified just how broad the concept is. It held in *Spicer* that the plain meaning of the statutory phrase "'resulting from'" calls for but-for causation, a standard "not limited to a single cause and effect, but rather [one that] contemplates multi-causal links, including action and inaction."[72] VA causation merely requires that the personal injury suffered or disease contracted in service be a but-for cause of a veteran's current disability or its severity beyond the condition's natural progression. It does not, as the government argued, "require[] a veteran's service to be the onset or etiological link of a disability."[73] Service connection is therefore appropriate where the condition developed or was aggravated during service, as a result of something that happened during service, or as a result of another service-connected medical condition.[74]

Importantly, service connection does not necessarily ask whether a veteran would have developed a given disability *regardless of whether they had served in the military*. Congress has defined service connection to encompass conditions developed or aggravated "*in* line of duty," not "*due to* line of duty."[75] "[L]ine of duty" is itself a broad concept, encompassing any time a servicemember spends on "active" duty, excluding "willful misconduct or abuse of alcohol or drugs."[76] Members of the reserve components and National Guard's injuries are incurred in the "line of duty" when called up for periods of active duty federal service—including overseas deployments—and during certain training periods (including travel to and from certain military obligations).[77] Members of the regular forces are on active duty for the entire duration of an enlistment or an officer's career. The idea is that active duty servicemembers can be called to perform military duties at any time by their chain of command. They can be roused from their beds at home in the middle of the night, restricted from leaving base even on weekends, and pulled back from leave (vacation) approved months in advance. They are governed at all times by the Uniform Code of Military Justice and its criminalization of failure to obey orders, absence without explicit authorization, and any "[c]onduct unbecoming an officer" or "to the prejudice of good order and discipline" as their chain of command sees fit.[78]

The key question for service connection, then, is simply whether the injury or precipitating factors are "coincident" with active-duty service.[79] Service

72. Spicer v. McDonough, 61 F.4th 1360, 1364 (Fed. Cir. 2023).

73. *Id.*

74. *See* 38 C.F.R. § 3.304 (providing for "direct" service connection); *id.* § 3.306 (providing for "[a]ggravation of preservice disability"); *id.* § 3.310 (providing for "[d]isabilities that are proximately due to, or aggravated by, service-connected disease or injury," also called "secondary" service connection).

75. 38 U.S.C. §§ 1110, 1131 (emphasis added).

76. *Id.* § 1110 (for veterans with wartime service); *id.* § 1131 (same, for veterans with peacetime service only).

77. *See id.* § 101(21)–(24).

78. *See, e.g.*, 10 U.S.C. §§ 933–934.

79. 38 C.F.R. § 3.303(a).

connection is *not* determined by whether a condition's precipitating factor(s) are related to quintessentially military activity. A knee injury can be service-connected regardless of whether it is related to a bullet wound to the kneecap, a Humvee rollover in a training exercise, or a game of pickup basketball with friends or the kids on the weekend. For the active duty servicemember, the medically unexplained onset of chronic migraine disorder while living in the barracks results in a service connection determination, just as do persistent headaches after a bout of malaria contracted on vacation or after an IED attack in Afghanistan. VA's acceptance of such simple temporal incurrence as sufficient for service connection is occasionally referred to as a "presumption of service connection for injuries or diseases that occur while a veteran is on active duty."[80]

In passing the Veterans Judicial Review Act of 1988, which established the modern VA benefits appellate structure, Congress explained that the VA benefits system's "non-adversarial" nature is defined in part by the fact that "the element of cause and effect has been totally by-passed in favor of a simple temporal relationship between the incurrence of the disability and the period of active duty."[81] Simple temporal incurrence is supported not only by Congress's special solicitude for veterans, but by the efficiency advantage of such adjudications in a mass administrative claims system, and the fact that active duty servicemembers are subject to command authority twenty-four hours a day, 365 days per year, and so are never truly on their own time.[82] Unless VA finds "clear and unmistakable evidence" that the disability pre-existed service (such as if caused by a congenital condition), the veteran claimant enjoys a presumption that they entered service in sound medical condition and that anything incurred in service is "connected" to it.[83] As such, an in-service diagnosis,[84] or symptoms recorded in service that a competent medical

80. Forshey v. Principi, 284 F.3d 1335, 1339 (Fed. Cir. 2002) (citing 38 U.S.C. § 105(a)), *superseded in non-relevant part by statute*, Veterans Benefits Act of 2002, Pub. L. No. 107-330, 116 Stat. 2820.

81. H.R. REP. NO. 100–963, at 13 (1988). This debate attaches to the Veterans' Judicial Review Act and Veterans' Benefits Improvement Act of 1988, which established the modern VA benefits system and made VA benefits decisions subject to judicial review. *See* Veterans' Judicial Review Act, Pub. L. No. 100-687, 102 Stat. 4105 (1988); Veterans' Benefits Improvement Act of 1988, Pub. L. No. 100-687, 102 Stat. 4122.

82. Holton v. Shinseki, 557 F.3d 1362, 1366 (Fed. Cir. 2009) ("[A] veteran need not show that his injury occurred while he was performing service-related duties or acting within the course and scope of his employment in order to receive disability benefits; for purposes of disability compensation, a service member's workday never ends."). This is also the case for personal jurisdiction under the Uniform Code of Military Justice. *See* Solorio v. United States, 483 U.S. 435, 436, 450–51 (1987) (holding that military has jurisdiction over individuals who are members of the U.S. Armed Forces at the time they are charged with military justice offenses, even if the offense otherwise has no direct connection to the member's service in the military).

83. 38 U.S.C. § 1111; *see* 38 C.F.R. § 3.303(c); *see also* Winn v. Brown, 8 Vet. App. 510, 516 (1996) ("[T]he statutory language . . . states in effect that there need be clear and unmistakable evidence of disease or injury where the 'defect' was not noted upon enlistment."). Even where a disability pre-existed service, service connection may lie.

84. *See* 38 C.F.R. § 3.303(a).

professional explains were symptoms of a now-diagnosed medical condition are sufficient for direct service connection.[85]

Although the VA benefits system intends to grant service connection for any condition incurred in service, the evidentiary realities are such that conditions with longer latency periods—like many toxicogenic or radiogenic conditions, which emerge only years or decades after exposure—are significantly more difficult to service connect.[86] This remains true absent presumptions, even though unlike a knee injury incurred while goofing off on down time, military toxic exposure injuries would not have occurred but for military service. Unfortunately, for toxicogenic and radiogenic conditions with latency periods, the simple temporal incurrence around which WWI-era policymakers originally designed service connection is simply not available.

4. The Disadvantages of the "Non-Adversarial" System for Toxic-Exposed Veterans

Congress's "special solicitude" for veterans is real, especially after the 1988 passage of the Veterans Judicial Review Act ("VJRA") pried final resolution of veterans' entitlement to benefits out of the VA Secretary's hands. The VJRA, *Feres* doctrine, and government contractor immunity may keep what would otherwise be toxic tort claims out of district court, but the benefit of the doubt, duty to assist, relaxed evidentiary standards, multiple opportunities for appeal on the existing record or with "new and relevant evidence," and short-of-causation service connection requirements result in countless benefits grants where a veteran would not recover for the same injury under tort law. The VA benefits rating schedule, whose sliding scale pays out monthly compensation at levels of severity well before claimants are unable to work, provides veterans and their families with income support inaccessible through Social Security.[87] However, as commentators have long argued, the "splendid isolation" of veterans law and veterans benefits adjudications in the agency and now Veterans Court has its drawbacks, too.[88]

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85. *Id.* § 3.303(d).

86. Conditions not diagnosed in service or whose symptoms emerge intermittently or only after service can still receive direct service connection where, after considering all the evidence of record, it is at least as likely as not that the condition was incurred coincident with service. *Id.* § 3.303(d). "All evidence" has been interpreted to mean that all evidence must be considered under the statutory benefit of the doubt standard, not that there must be no negative evidence in the record. *See* Cosman v. Principi, 3 Vet. App. 503, 506 (1992).

87. Social Security Disability benefits are paid out only to people who previously worked, but no longer can do any substantial gainful activity in the national economy for at least a year due to one or more qualifying disabilities defined under 20 C.F.R. § 404.1505(a), with the benefit amount calculated according to the beneficiary's work earning history. 20 C.F.R. § 404.317 (2024).

88. *See* Wishnie, *supra* note 27, at 1730–41 (arguing for district court review of veterans' claims, and providing a survey of other commentators' proposals to mitigate veterans law's "splendid isolation"). *See generally* James T. O'Reilly, *Burying Caesar: Replacement of the Veterans Appeals Process Is Needed to Provide Fairness to Claimants*, 53 ADMIN. L. REV. 223 (2001) (arguing that veterans benefits claims should just be heard under the Administrative Procedure Act, and in fact that

Chief among the challenges facing toxic-exposed veterans is the unavailability of the factfinding tools available to toxic tort litigants in district court, including expert discovery and easy access to magistrate judges dedicated to understanding and weighing competing and complex scientific and medical facts. The basic veterans benefits system, which is built for efficient mass adjudication of claims, does not provide the tools for veterans to build affirmative cases for service connection or for VA to fairly assess the causal connection between the veteran's exposure and current medical condition even at the "near-equipoise" standard of proof. Liberalized evidentiary presumptions specific to toxic-exposed veterans are therefore necessary.

II. PRESUMPTIONS RESPOND TO THE DISADVANTAGES TOXIC-EXPOSED VETERANS FACE IN INDIVIDUALIZED DIRECT SERVICE CONNECTION ADJUDICATIONS

Individualized direct service connection adjudications disadvantage veterans with toxicogenic and radiogenic conditions, which often do not emerge until years after exposure. The forms of evidence elicited through discovery in mass toxic tort litigation to bridge temporal gaps in causation—the exchange of long-ranging environmental data and classwide biological and medical data over time and competing experts opining as to causation under cross-examination—are unavailable to VA claimants. As described above, VA claimants have no discovery rights and are not permitted to cross-examine VA's medical experts in "non-adversarial" hearings. Indeed, with rare exceptions,[89] Congress and the courts have expressly funneled claims for injury in military service through the Department of Defense ("DoD") medical retirement and VA adjudication systems rather than through the district courts, which have developed procedures and evidentiary standards to adjudicate toxic torts. Presumptions of service connection are the policy response to claimants disadvantaged by Congress and the courts' exclusive funneling of claims through the VA disability compensation system.

Congress and VA have created toxic exposure presumptions in large part to respond to individual veterans' difficulties in proving a medical nexus between their exposure and current disabling conditions, though the system efficiencies created by reducing the number of findings of fact necessary to a service connection adjudication are attractive cost-saving measures as well.

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veterans benefits and Social Security claims should feed into the same highest administrative appeal authority, and then into district court); Yelena Duterte, *Duty to Impair: Failure to Adopt the Federal Rules of Evidence Allows the VA to Rely on Incompetent Examiners and Inadequate Medical Examinations*, 90 UMKC L. REV. 511 (2022) (arguing that rewriting VA-specific rules to align the Federal Rules of Evidence would improve claims processes).

89. State "defective design" product liability claims have been allowed to move forward against the government contractor 3M in the multidistrict defective earplug litigation. *In re* 3M Combat Arms Earplug Prods. Liab. Litig., 474 F. Supp. 3d 1231, 1248 (N.D. Fla. 2020). And the 2020 National Defense Authorization Act created a new DoD path for resolution of in-service medical malpractice claims. National Defense Authorization Act for Fiscal Year 2020, Pub. L. No. 116-92, 133 Stat. 1198, 1457 (2019) (codified as amended at 10 U.S.C. § 2733a).

In short, proving causation in toxic exposure cases requires group data. Epidemiological studies comparing the health outcomes of members of an exposed population with the health outcomes of otherwise similarly situated, non-exposed individuals are typically necessary to establish associations between a medical condition and a given toxic exposure. In all such studies, a sufficiently large "n" is needed to isolate the effects of the exposure from other potential causes of a given medical condition.[90] Group data is necessary to a certain extent to establish etiology for all medical conditions not caused by mechanical trauma or other physical injuries or processes whose effects are readily observable (gunshot wounds, broken limbs, burns, muscle strains, osteoarthritis, etc.). But the complex biological systems damage inflicted by toxicant and radiation exposures make causation especially difficult to determine at the individual level. Both ionizing radiation and dioxins, for example, break down cell walls and damage DNA, causing not only acute symptoms but also ongoing replication errors with latent health effects throughout the body.[91]

Medical claims related to toxic exposures create unique evidentiary problems both within and without the veterans benefits system precisely because they typically rely on toxicological and epidemiological group data that is statistical in nature.[92] In the district courts, causation in toxic torts is adjudicated in two stages—group or "general" causation first, and individual or "specific" causation second.[93] Toxic exposure claims raise what some have termed the "G2i" issue, or "the challenge of reasoning from group data in science to what is typically most relevant in courts: whether an individual case is an instance of some general phenomenon."[94] The general causation stage deals with the group data. It asks whether it is possible for X exposure to cause Y harm in any person, and if so, what the rate of harm Y after exposure X is likely to be in the exposed population. The specific causation stage then asks whether X exposure is more likely to have been a "substantial factor" in causing Y harm to the affected individual than alternative causes.[95]

VA toxic exposure presumptions grant service connection at the general causation stage on a class basis; specific causation is only considered where

90. *See* Joseph Sanders, David L. Faigman, Peter B. Imrey & Philip Dawid, *Differential Etiology: Inferring Specific Causation in the Law from Group Data in Science*, 63 ARIZ. L. REV. 851, 874–84 (2021) (describing that other forms of group data typically necessary to medical causation factfinding include toxicological studies, epidemiological studies that look for the rate of exposure to "X" among an "N" of individuals with "Y" medical condition, clinical trials, and certain genetic and other susceptibility studies).

91. *See Ionizing Radiation: Health Effects*, OCCUPATIONAL SAFETY & HEALTH ADMIN., https://www.osha.gov/ionizing-radiation/health-effects [https://perma.cc/4RAZ-XWSY].

92. Sanders et al., *supra* note 90, at 874–81.

93. David E. Bernstein, *Getting to Causation in Toxic Tort Cases*, 74 BROOK. L. REV. 51, 52–53 (2008).

94. Sanders et al., *supra* note 90, at 853 n.2 (citing David L. Faigman, John Monahan & Christopher Slobogin, *Group to Individual (G2i) Inference in Scientific Expert Testimony*, 81 U. CHI. L. REV. 417 (2014)).

95. *See* Bernstein, *supra* note 93, at 55–60 (collecting cases showing implementation of the "substantial factor" test at the specific causation stage). *See generally* CLIFFORD S. FISHMAN & ANNE TOOMEY MCKENNA, 6 JONES ON EVIDENCE § 52:19, Westlaw (database updated Nov. 2023).

VA seeks to rebut the presumption. Most typically, to win presumptive service connection, a veteran need only show their presence at a particular exposure site within the relevant time period and that they have one or more enumerated medical conditions. VA then presumes both individual exposure *and* the nexus between that exposure and the current medical condition.[96] VA can rebut the presumption only if the evidence of record shows that it is probable (more likely than not) that the individual veteran's condition has some alternative cause.[97] In this way, the presumptive service connection mechanism privileges efficient adjudication and access to benefits for groups of toxic-exposed veterans over excluding "undeserving" individuals whose medical conditions were caused by something other than toxic exposure in service. This is precisely the objection opponents have to presumptions: although presumptions exclude fewer "deserving" veterans, they include more "undeserving" ones.

This Part first illustrates why non-presumptive benefits adjudications disproportionately disadvantage veterans with toxic exposure injuries and then describes how presumptions of service connection create equitable opportunities for benefits access for veterans with toxicogenic and radiogenic conditions.[98]

A. Adjudication Challenges for Veterans Whose Toxic Exposure-Related Conditions Emerge After Service

Absent the efficiency of simple temporal incurrence and presumptions, veterans whose conditions only emerge after service—including veterans with toxic exposure—rely on the three "*Caluza* elements" for service connection: (1) a current medical condition; (2) an injury, disease, or other event or experience during service; and (3) a medical nexus, or link, between the current medical condition and the in-service event.[99] It is the third factor, the "medical nexus," that requires proof of causation.[100] Direct service connection—showing a condition is at least as likely as not related to service by meeting the

96. Unlike in toxic tort cases, veterans need not show that they were subjected to specific *levels* of the toxic material, either. Veterans exposed to the substance are presumed to have experienced the same level of exposure for the purpose of presumptive service connection. However, veterans with non-presumptive conditions or exposures are subject either to the PACT Act's "synergistic" review for most exposures, see *infra* note 127, or to a dose estimate reconstruction for veterans with individual radiation dose measurements available. *See* 38 C.F.R. § 3.311 (2023).

97. Taylor v. McDonald, 27 Vet. App. 158, 166 (2014) (interpreting 38 C.F.R. § 3.307(d)'s provision that presumptions of service connection are rebutted by "affirmative evidence to the contrary").

98. Presumptions are, of course, not the only possible solution to toxic-exposed veterans' evidentiary disadvantages. Otherwise lowering the standard of proof is another. Judge Pauline Newman proposed in a dissent, for example, that veterans with rare diseases like those caused by radiation exposure should only be required to show that their in-service exposure "possibly" could have caused the veteran's condition. Bastien v. Shinseki, 599 F.3d 1301, 1308 (Fed. Cir. 2010) (Newman, J., dissenting).

99. *See* Caluza v. Brown, 7 Vet. App. 498, 506 (1995). The Federal Circuit has broadened the *Caluza* standard in *Jandreau v. Nicholson*, 492 F.3d 1372, 1376–77 (Fed. Cir. 2007), and in *Davidson v. Shinseki*, 581 F.3d 1313, 1315–16 (Fed. Cir. 2009), as discussed below. *See infra* note 123 and accompanying text.

100. Combee v. Brown, 34 F.3d 1039, 1040 (Fed. Cir. 1994) (referring to the requirement as one of "actual direct causation").

Caluza factors—is always available to veterans claiming service-connected disability compensation for conditions caused by toxic exposure, even in the absence of a presumption.[101]

VA adjudicators at all levels of the agency often struggle to fit medical evidence related to scientific and medical causation into the VA benefits systems' "'unique' standard of proof,"[102] which gives the win to the veteran where competing evidence is "nearly equal," or in "approximate balance."[103] The mismatch between legal and medical standards of proof is certainly not unique to the VA benefits system, as decades of torts scholarship has examined. VA recognizes as much and has developed its standard in response.

"[T]he legal standard of evidentiary preponderance is not to be confused with the clinical standard of medical certainty," the Veterans Court has explained in dicta.[104] The Veterans Court has clarified that "Congress has not mandated that a medical principle have reached the level of scientific consensus to support a claim for VA benefits."[105] Although "the extent to which a theory is accepted in the scientific community is a factor the Board may use in evaluating scientific evidence,"[106] a theory's non-acceptance does not relieve the VA of its obligation to consider such evidence against the benefit of the doubt standard.[107] Rather,

> when [VA adjudicators] must decide a scientific question on an issue that has not yet obtained scientific consensus, "the correct legal response is to recognize the uncertain state of present diagnostic knowledge, to take cognizance of the range of epidemiologic results that have been reported, and to decide each case on its specific facts, in accordance with the burden of proof set in the statute."[108]

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101. The Federal Circuit held in *Combee v. Brown* that Congress or VA's designation of certain medical conditions as presumptively caused by toxic exposures does not permit the inference that conditions not so designated cannot be caused by toxic exposures. *Id.* at 1044.

102. Wise v. Shinseki, 26 Vet. App. 517, 531 (2014); HEALTH & MED. DIV., NAT'L ACADS. OF SCIS. ENG'G & MED., REVIEW OF THE DEPARTMENT OF VETERANS AFFAIRS PRESUMPTION DECISION PROCESS 10 (Anne N. Styka & Bruce N. Calonge eds., 2023) [hereinafter NASEM REPORT 2023] ("The committee concludes that the term 'equipoise' denotes a lack of consensus across the medical community and that the term as required by law to be used in the presumption decision process is inconsistent with the current scientific use of it.").

103. Lynch v. McDonough, 21 F.4th 776, 779–81 (Fed. Cir. 2021) (clarifying that the benefit of the doubt is best described as an "approximate balance" rather than near-equipoise).

104. Jones v. Shinseki, 23 Vet. App. 382, 388 n.1 (2010). Specifically, the Veterans Court approvingly cited a Federal Circuit dissent in a non-VA case that explained that while medical nexus analysis based in statistics, which is the case with toxic exposure analysis, "although the data may not establish a causal relationship to a medical certainty [which means ninety-five percent confidence level, or general acceptance by the medical community], they may nonetheless meet the . . . standard of the law." *Id.*

105. *Wise*, 26 Vet. App. at 531.

106. *Id.* (explaining Rucker v. Brown, 10 Vet. App. 67, 73 (1997)).

107. *Id.* at 531–32.

108. *Id.* at 532 (citing Hodges v. Sec'y of Dep't of Health & Hum. Servs., 9 F.3d 958, 971 (Fed. Cir. 1993) (Newman, J., dissenting)).

The Veterans Court has held, "when evaluating that evidence, [VA] cannot demand a level of acceptance in the scientific community greater than the level of proof required by the benefit of the doubt rule."[109]

Nonetheless, veterans with in-service toxic exposures struggle to make a sufficient showing even at the "near-equipoise" level for each of the three *Caluza* elements due to the very nature of toxic exposures and toxicogenic conditions. First, although the "current medical condition" element is typically the easiest showing, veterans with exposures to radiation and toxic materials can experience odd clusters of chronic symptoms that defy easy diagnosis.[110] Second, the government often refuses to recognize military toxic exposures, either entirely or at the level of severity victims believe is appropriate, often because exposures are top-secret or minimized for public relations or diplomatic reasons.[111] The government also sometimes fails to keep records sufficient to show individual veterans' exposure even where the exposure event itself is recognized.[112] Third, even where both a current condition is diagnosed and the government has recognized a veteran's exposure, because toxicogenic and radiogenic conditions can take years to emerge and often have poorly understood etiologies or multiple potentially contributory factors, individual veterans often struggle to show a medical nexus between their conditions and their particular exposure. Underlying all of this is the fact that causation in nearly all toxic exposure cases is determined probabilistically and on a group basis.[113]

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109. *Id.* In this way, the VA approach to analysis of medical evidence rejects the older *Frye* standard in favor of something closer to the *Daubert*, in which a theory's general acceptance in the scientific community is but one factor of many that speak to its probativeness. *See* Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 597 (1993).

110. In fact, lack of diagnosis became one of two pathways to presumptive service connection for Gulf War Illness. *See* 38 C.F.R. § 3.317(a)(2)(i)(A) (2023).

111. *See, e.g.*, Taylor v. Wilkie, 31 Vet. App. 147, 155–62 (2019) (Greenberg, J., dissenting) (describing how a veteran's secrecy oath preventing him from disclosing his exposure to toxic gas testing at Edgewood Arsenal stymied his efforts to secure disability compensation for service-connected conditions), *rev'd and remanded sub nom.* Taylor v. McDonough, 71 F.4th 909 (Fed. Cir. 2013).

112. *See, e.g.*, Combee v. Brown, 34 F.3d 1039, 1042 (Fed. Cir. 1994) (quoting H.R. REP. NO. 98-592, at 7 (1984), *as reprinted in* 1984 U.S.C.C.A.N. 4449, 4453). The congressional record underlying the Radiation Compensation Act of 1984 shows that presumptions passed in part because "[m]any of these troops [atomic veterans] were exposed to low-level ionizing radiation which may or may not have been accurately documented with proper exposure devices or methodologies." *Id.* (alteration in original). Military failures to record toxic exposures are so common that the PACT was drafted to specifically provide that "if no record of the veteran in an exposure tracking record system indicates that the veteran was subject to a toxic exposure . . . the totality of the circumstances of the service of the veteran" will be considered in determining whether exposure is at least as likely as not. 38 U.S.C. § 1119(a)(2).

113. Alexandra Lahav compellingly describes such causation as "chancy." She opens her essay on the topic with an example of an herbicide-exposed cancer patient. Alexandra D. Lahav, *Chancy Causation in Tort Law*, 15 J. TORT L. 109, 109–10 (2022). "Did the herbicide cause his cancer?" she asks, "It is impossible to say definitively." *Id.* at 109. She explains that a scientist would tell the man: "[A]n increased incidence of your type of cancer has been associated with high exposure to that herbicide." *Id.* at 109–10. She continues to explain: "[S]ince people who were not exposed

Presumptive service connection recognizes and responds to these challenges by removing individual veterans' evidentiary burden as to the third *Caluza* element especially, and sometimes also as to the first and second. Instead of requiring each individual claimant show that each *Caluza* element is "as likely as not" met, presumptive service connection requires only that they show they are a member of the class of veterans covered by the presumption. It is worth diving deeper into three recurrent issues pertaining to the *Caluza* elements that more concretely illustrate the necessity of toxic exposure presumptions.

1. Toxic-Exposed Veterans Are Unable to Access Records Necessary to Prove Nexus, and Often Even Exposure

The "non-adversarial" VA benefits system offers toxic-exposed veterans insufficient opportunity to challenge adverse evidence that VA develops pursuant to its "duty to assist," and to identify and access records held by the government that may be relevant to their claims. And yet, VA claims development and exposure verification is dependent in large part on DoD (and other governmental, and sometimes civilian) recordkeeping and cooperation in providing records to VA. In addition to the standard challenges of lost and degraded personnel and medical records—including in the 1973 National Personnel Records Center fire in St. Louis[114]—some toxic exposures were never formally recorded or were refused recognition by the DoD. Others were recognized at the time of exposure but were top-secret, forcing veterans to wait decades for declassification. These top-secret classifications have extended even to veterans' own bioassay data measuring individual exposure burden.[115] Even when a particular exposure is declassified or otherwise publicly recognized for what it was, veterans are often at the mercy of official unit histories and

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to the herbicide also developed this cancer, the likelihood that his cancer was caused by exposure to the herbicide is probabilistic." *Id.* at 110.

Lahav explains that ordinary tort litigation follows the "but-for" or counterfactual causation standard, which asks whether "but for the defendant's conduct, the plaintiff would not have suffered the injury." *Id.* This is not possible for the herbicide-exposed patient. The man can "show that the herbicide had a tendency to cause a kind of cancer and that he developed that kind of cancer after being exposed to a significant dose," and even that he was not exposed to other substances with a tendency to cause the cancer, "[b]ut he can never prove that he would not have developed cancer if he had not been exposed to that herbicide," and so "cannot prove but-for causation." *Id.* She concludes that in such cases where actual causation is probabilistic, or "chancy," where the standard for proximate causation is set is a "normative decision." *Id.*

This phenomenon is not limited to toxic exposure. In the mental health context, Heathcote Wales explains that the question of whether a veteran would have developed a mental health condition had they never served remains fraught, as biological, environmental, and experiential variables all may contribute to symptoms' emergence. Heathcote W. Wales, *Causation in Medicine and Law: The Plight of the Iraq Veterans*, 35 NEW ENG. J. ON CRIM. & CIV. CONFINEMENT 373, 377–87 (2009).

114. *The 1973 Fire, National Personnel Records Center*, NAT'L ARCHIVES (Mar. 15, 2023), https://www.archives.gov/personnel-records-center/fire-1973 [https://perma.cc/SN53-ZR2N].

115. *See* Brent Ashcroft, *ATOMIC VETERANS: Still Haunted and Awaiting Honor After 50 Years of Forced Silence*, WZZM13 (Nov. 12, 2019, 9:36 AM), https://www.wzzm13.com/article/news/local/michigan-life/atomic-veterans/69-8513c88e-6b60-48e3-a9be-c569b4b1efb1 [https://perma.cc/6DZQ-FF47].

ships' logbooks to prove they were exposed, as their individual movements and temporary duty assignments may not be recorded in their personnel files.

It is true that VA allows veterans to submit any evidence in their possession potentially relevant to the service connection adjudication. And pursuant to its duty to assist, VA will retrieve the veteran's official military personnel file ("OMPF") and any medical records held by federal facilities and will make efforts to request medical and employment records from non-government sources adequately identified by the veteran if relevant to the claim.[116] Where a veteran's testimony is not enough, VA will also conduct government records research to attempt to corroborate an in-service event underlying a claim for benefits, such as a sexual assault or presence in country where Agent Orange was sprayed. For certain toxic exposure claims, VA will request individualized dose estimates for the claimant or independent medical opinions opining as to the connection between the exposure and a given medical condition.[117] Veterans can eventually see the evidence VA collects on their behalf by requesting a copy of their claims file, or "c-file" (though if unrepresented, veterans may not see the records until several months or even up to a year after the requests), and can challenge the credibility or applicability of evidence collected on appeal. Thanks to the PACT Act, veterans can increasingly expect to find an Individual Longitudinal Exposure Record ("ILER") purporting to detail potential in-service exposures in their records as well.[118]

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116. 38 C.F.R. § 21.1032(a)–(c) (2023). Where VA cannot identify records, the "presumption of regularity" provides that if records are missing, VA can nonetheless assume that all government processes and procedures were followed. *See* Ashley v. Derwinski, 2 Vet. App. 307, 308–09 (1992) (quoting United States v. Chem. Found., Inc., 272 U.S. 1, 14–15 (1926)); Woods v. Gober, 14 Vet. App. 214, 220 (2000).

117. 38 C.F.R. § 3.311(a).

118. Honoring our PACT Act of 2022, Pub. L. No. 117-168, § 802, 136 Stat. 1759, 1801 (describing congressional monitoring of ILER implementation); *see also The Individual Longitudinal Exposure Record*, U.S. DEP'T VETERANS AFFS. (Sept. 27, 2019), https://www.publichealth.va.gov/exposures/publications/military-exposures/meyh-1/ILER.asp [https://perma.cc/K4MS-GUYJ] (describing a typical ILER's contents).

ILER is a joint DoD and VA database that pulls in health and exposure data from various DoD sources to associate deployment history, military occupational specialty, occupational and environmental hazard data, and exposure dose measurement, diagnostic, treatment, and laboratory data for individual veterans where available. VA Adjudication Regulations for Disability or Death Benefit Claims Based on Toxic Exposure, 89 Fed. Reg. 79815, 79817 (proposed Oct. 1, 2024) (to be codified at 38 C.F.R. pt. 3). VA and DoD are still working to add data, including historic data, for individual veterans. *Id.*

Yet, troublingly, VA has proposed that if ILER does not contain entries corroborating toxic exposure for a given veteran and the record does not otherwise contain corroborating evidence, VA will not further develop that veteran's claim for service connection by ordering a medical examination and opinion as to the association between the veteran's condition and their self-reported toxic exposure. *Id.* at 79820–21 (stating that VA will apply PACT's exception to the requirement that it offer medical nexus examinations for toxic exposure risk activities ("TERA") at PACT Act §303). This is despite that certain rare conditions may themselves be evidence of toxic exposure; eighty percent of mesothelioma cases, for example, are caused by asbestos exposure. *Mesothelioma Causes, Risks, and Prevention*, U. PA., PENN MED., https://www.pennmedicine.org/cancer/types-of-cancer/mesothelioma/causes-risks-prevention [https://perma.cc/9YB7-GN28]. Although ILER is a major advancement in tracking veterans' toxic exposure, ILER will only ever

However, in practice, the VA benefits system does not offer a mechanism by which veterans can force VA to identify and turn over government records that VA does not include in the "c-file." There is, in other words, no affirmative discovery or discovery-like process available to veteran claimants. In the toxic exposure context, this means that veterans cannot access the kinds of data and records used in toxic tort litigation to prove that a given exposure is *capable* of causing health effects. For example, the c-file will not contain DoD measurements of environmental contamination levels at an exposure site or the results of contemporaneous bioassay samples measuring the level of radiation in exposed veterans' bodies. It will not contain reports of National Academies studies as to whether a positive association exists between the exposure and a given medical condition or the raw data that underlies it. It will not contain military records of what units were present at a given exposure site at what time. Indeed, the c-file is likely to contain only *references* to these records in research or expert reports prepared at the VA adjudicator's request, if anything. Veterans' ability to challenge these reports' conclusions is hampered by their inability to access the underlying evidence in the course of VA adjudications.[119]

There are two potential routes by which veterans can attempt to access records relevant to their toxic exposure claims. First, veterans can file Freedom of Information Act ("FOIA") requests for general toxic exposure records or Privacy Act requests for records specific to them. However, search and production fees, disclosure exemptions for records related to national security and others' health, and delayed response despite statutory deadlines make these tools impractical or even ineffective for the average pro se claimant. Even with lawyers willing to sue to enforce FOIA requests, records delivery is not guaranteed.[120]

Second, the Board of Veterans' Appeals—the highest level of appeal within the agency, at which claimants are entitled to a hearing upon request—does in fact have the power to grant an appellant a subpoena to compel production of records or the testimony of experts.[121] The subpoena power lays entirely within the Board's discretion, however, and by all accounts, it has almost never exercised it.[122] There is no comparable power at lower levels of agency

contain the data that DoD and VA actually have and are willing to enter into the database, and it appears that veterans whose exposure risk is omitted from ILER will face heightened barriers to service connection.

119. *See generally* James D. Ridgway, *Lessons the Veterans Benefits System Must Learn on Gathering Expert Witness Evidence*, 18 FED. CIR. BAR J. 405 (2009) (making the same point as to veterans' inability to cross-examine C&P examiners).

120. *See* Viet. Veterans of Am. v. Dep't of Def., 453 F. Supp. 3d 508, 512 (D. Conn. 2020) (denying FOIA request for release of radiation exposure bioassay data). The Author represented VVA as a clinical student in the early stages of this case, which sought to identify those exposed to ionizing radiation at Palomares, Spain in 1966.

121. 38 C.F.R. § 20.709.

122. A search of the Board's reading room results in only 1,499 hits across all decisions available online since 1992 for the statutory provision allowing it to request independent medical opinions and only 879 results for the accompanying regulation. A search reveals only 281 results for the term "subpoena," none of which appear to have been granted.

adjudication, where the majority of claim decisions are made, though lower-level adjudicators have the ability to *request* records as part of their "duty to assist."

Toxic-exposed veterans' inadequate access to records and expert testimony necessary to make an affirmative showing of service connection and rebut VA or DoD expert opinions developed by VA that cut against service connection undermine their access to benefits absent presumptions.

2. Reliance on Medical Nexus Opinions Disadvantages Toxic-Exposed Veterans from the Beginning of the Claims Process

Regardless of whether the applicable causation standard is "but-for" or a looser "causal connection," the primary difficulties for toxic exposures as to the third *Caluza* element (medical nexus) are evidentiary, too.

With the exception of obvious conditions like a broken leg or varicose veins that a layperson is deemed competent to recognize,[123] causation under *Caluza* is shown by "competent medical evidence," defined as medical treatise evidence or scholarship, or "evidence provided by a person who is qualified through education, training, or experience to offer medical diagnoses, statements, or opinions."[124] Because VA adjudicators are prohibited from offering medical opinions themselves, they must rely on the opinions of medical experts.[125] As part of its routine development of disability compensation claims as per its duty to assist, VA medical professionals or contractors perform what it calls compensation and pension examinations ("C&P exams"). A well-developed disability compensation claim for a toxic exposure-related condition will often, therefore, be a "battle of the experts" between a VA-ordered medical opinion and a medical opinion the veteran submits—a battle of the experts on paper, that is, as again, it appears that a veteran has never succeeded in subpoenaing and cross-examining VA medical evidence even at the Board of Veterans Appeals.[126]

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123. 38 C.F.R. § 3.159(a)(2) (defining "[c]ompetent lay evidence"); *see also* Jandreau v. Nicholson, 492 F.3d 1372, 1377 (Fed. Cir. 2007) (setting out the conditions under which lay evidence is competent); Davidson v. Shinseki, 581 F.3d 1313, 1316 (Fed. Cir. 2009) (reiterating that medical opinion evidence is not always necessary to establish nexus in such cases).

124. 38 C.F.R. § 3.159(a)(1).

125. *See* Colvin v. Derwinski, 1 Vet. App. 171, 172 (1991) (holding that a Board's medical findings must be supported by "independent medical evidence"), *overruled on other grounds by* Hodge v. West, 155 F.3d 1356 (Fed. Cir. 1998) ("[W]e hereby overrule the Colvin [materiality] test for purposes of reopening claims for the award of veterans' benefits.").

126. In at least one case, the Federal Circuit rejected a veteran's argument that due process required he be allowed to issue interrogatories, at least, to VA's medical expert in Board proceedings. Gambill v. Shinseki, 576 F.3d 1307, 1313 (Fed. Cir. 2009). Writing in concurrence, Judge Bryson would have balanced the risk of unreliable outcomes with the burden of permitting cross-examination on the agency to hold that cross-examination of agency medical experts was *never* constitutionally required. *Id.* at 1319 (Bryson, J., concurring).

Note that veterans who can provide credible expert medical opinions, especially credible opinions *rebutting* the VA-provided opinion, in fact, benefit from the lack of VA expert presence at Board hearings. Claimants can put their own experts on the witness stand for direct examination to provide an affirmative case for the medical nexus and attack contrary evidence. Although VLJs can ask the expert questions, they are not permitted to cross-examine the expert. 38 C.F.R. § 20.700(c).

However, in the overwhelmingly pro se veterans benefits system, few veterans have the know-how or resources to secure effective expert nexus opinions and so must hope for favorable C&P examinations.[127] Veterans must typically pay out of pocket for the kind of comprehensive assessment sufficient to rival VA C&P exams' depth of information; for-profit nexus letter companies charge hundreds to thousands of dollars to provide nexus letters based on records reviews and examinations.[128] While some veterans' personal doctors are willing to write nexus letters at low or no cost, doctors are not always able to devote significant time to laying out a thorough rationale for their opinion. Low-income VA benefits claimants are likely to rely on the VA healthcare system for their medical needs, and VA medical providers frequently refuse to provide nexus opinions for their patients, citing a conflict of interest.[129]

If securing expert medical opinions is difficult for veteran claimants for conditions with relatively simple etiologies like back injuries or PTSD, that difficulty increases multiple times over in securing an expert qualified to opine as to medical nexus for toxic exposures on both the general and specific causation levels. With no damages available as in the district courts and attorneys' fees limited by the Equal Access to Justice Act's cap,[130] financing to pay a qualified expert to create highly complex analysis to win a single veteran's claim is likely limited.

Where veterans do succeed in securing their own medical nexus opinions, adjudicators are required to assess the probativeness of VA and third-party medical opinions the same way, considering whether the medical professional is sufficiently informed of the relevant facts and "has applied valid medical

127. *See* Ridgway, *supra* note 119, at 415–17 (describing how claim applications and notices fail to communicate to claimants that submitting medical nexus evidence would likely benefit them).

The PACT Act requires VA to provide C&P examinations and medical opinions for veterans with non-presumptive conditions or exposures who bring toxic exposure claims under a direct service connection theory. Honoring our PACT Act of 2022, Pub. L. No. 117-168, § 303, 136 Stat. 1759, 1779. These TERA exams, as they are called, require the examiner to consider "the total potential exposure through all applicable military deployments of the veteran" and "the synergistic, combined effect of all toxic exposure risk activities of the veteran" in making nexus determinations. *Id.* It is yet unclear what percentage of TERA medical opinions are favorable.

At the same time, VA has proposed denying TERA examinations to veterans claiming any of nine categories of conditions where the only exposure noted in the ILER is Agent Orange. VA Adjudication Regulations for Disability or Death Benefit Claims Based on Toxic Exposure, 89 Fed. Reg. 79815, 79819 (proposed on Oct. 1, 2024). The Secretary has predicated this proposal on his past determination, based on NASEM studies, that there is no positive association between these categories of conditions and herbicide exposure. *Id.* Denial of a TERA exam will likely be fatal to these veterans' claims.

128. *See Top 5 Doctors Who Write VA Nexus Letters (the Definitive Guide)*, VA CLAIMS INSIDER (May 3, 2024), https://vaclaimsinsider.com/top-5-doctors-who-write-va-nexus-letters [https://perma.cc/SF25-LL23] (describing various companies' fees).

129. VA does in fact permit its providers to write medical opinions for benefits claim purposes. *See* VETERANS HEALTH ADMIN., DEP'T OF VETERANS AFFS., PROVISION OF MEDICAL STATEMENTS AND COMPLETION OF FORMS BY VA HEALTH CARE PROVIDERS 4 (2020). VA doctors will still sometimes refuse to provide nexus letters because a "no nexus" opinion could damage the doctor–patient relationship, however.

130. Most private veterans benefits attorneys use contingency agreements, where their fees are paid out as a percentage of a backpay recovery.

analysis to the significant facts of the particular case in order to reach the conclusion submitted in the medical opinion."[131] However, the opinions resulting from C&P exams typically play the deciding role in VA adjudications, particularly at the regional office level before the veteran appeals.[132] Indeed, high-level VA policymakers have shown themselves to be skeptical of and even hostile to third-party medical opinion evidence, even recently rescinding veterans' access to VA Disability Benefits Questionnaires ("DBQs") to prevent non-VA doctors from providing comprehensive examinations sufficient to substitute for VA-ordered C&P exams.[133]

At the lowest level of agency adjudication (the regional office level), C&P examiners' medical opinions typically play a deciding role, even where the veteran provides their own third-party medical opinion. This is because the VA "raters"—non-lawyer agency employees who adjudicate the vast majority of claims in the system before claimants are able to reach higher levels of appeal—follow an adjudications manual and procedures that assume that the nexus evidence will be in C&P exam reports and the DBQs that result.[134] Apart from making credibility determinations, these front-line adjudicators have limited autonomy in their decision-making. The template narrative decision letters regional office adjudicators produce typically quote directly from the C&P exams and provide the bulk of decisional rationale. This is despite that C&P exams are not necessarily thorough or accurate; on a given day, a C&P examiner will perform exams on as many as seven to eight veterans, each of whom may have multiple medical conditions at issue.[135] Unfortunately, for veterans who provide their own medical nexus opinions, a decision that favors the C&P examiner's opinion over the veteran expert's is not necessarily

131. Nieves-Rodriguez v. Peake, 22 Vet. App. 295, 301, 304 (2008) ("[A] medical examination report must contain not only clear conclusions with supporting data, but also a reasoned medical explanation connecting the two.").

132. *See generally* Blair E. Thompson, *The Doctor Will Judge You Now*, 89 U. CIN. L. REV. 963 (2021) (critiquing the VA benefits system's over-reliance on C&P exams to dictate service connection adjudications, particularly at the regional office level); Nicole J. Soria, Note, *Challenging the Presumption of Competency of Veterans Affairs Compensation and Pension Examiners: Shifting the Burden of Proof from the Veteran Back to the VA*, 42 T. JEFFERSON L. REV. 89 (2019) (arguing that the VA C&P examiners' presumption of competency should be revoked).

133. *See* Jim Absher, *VA Removes Disability Benefits Questionnaires from Public View*, MILITARY.COM (Apr. 3, 2020), https://www.military.com/daily-news/2020/04/03/va-removes-disability-benefits-questionnaires-public-view.html [https://perma.cc/74Q6-BG42]; *see also* 1 VETERANS BENEFITS MANUAL 3.4.5.2 (Barton F. Stichman et al. eds., 2024). After outcry, public DBQ access was restored. *Compensation: Public Disability Benefits Questionnaires (DBQs)*, U.S. DEP'T VETERANS AFFS. (Aug. 5, 2024), https://www.benefits.va.gov/compensation/dbq_publicdbqs.asp [https://perma.cc/2ZZU-WD3Q].

134. See generally DEP'T OF VETERANS AFFS., M21-1 ADJUDICATION PROCEDURES MANUAL (2024), Part IV ("Examinations"), and references to the C&P exams and DBQs throughout.

135. Hugh B. McClean, *Delay, Deny, Wait till They Die: Balancing Veterans' Rights and Non-Adversarial Procedures in the VA Disability Benefits System*, 72 SMU L. REV. 277, 291–93 (2019).

objectionable, as "[i]t is not error for the [VA] to favor the opinion of one competent medical expert over that of another."[136]

As a result, although a win based on an independent medical opinion is certainly possible at the regional office, veterans with non-presumptive toxic exposure claims should expect to have to appeal up to the Board, at least to have their independent expert's medical opinion adequately weighed and considered. And even at the Board, although a veteran can request a C&P examiner's credentials and attack the credibility or conclusions of the opinion on its face,[137] the veteran will be unable to cross-examine the medical professional on whose opinion the regional office's decision was likely based.

3. VA Struggles to Assess Complex Scientific Evidence in Individual Adjudications

Even where veterans present robust medical nexus evidence, however, VA adjudicators at even the highest levels of agency review struggle to assess it.[138] By way of example, VA adjudicators' reticence to dive into complex scientific factfinding was recently on display in *Skaar v. Wilkie*, in which a veteran exposed to ionizing radiation at Palomares, Spain in 1966 challenged VA's unquestioning reliance on an Air Force dose estimate methodology on behalf of a certified class with expert evidence that the methodology is not based in "'sound scientific evidence' as required by law."[139] Retired Master Sergeant Victor Skaar had presented robust expert evidence from a MacArthur Genius grant-winning nuclear physicist attacking the methodology used to deny both his own claim and other Palomares veterans' claims.

The Veterans Court had ordered a limited remand to the Board to address challenges to the methodology directly, as it had failed to do so before he appealed his denial to the court. Rather than assess the methodology and the expert testimonial evidence challenging it, however, the Board simply found that it was based in sound science because the Air Force had stated that it was.[140] The Board refused to engage with the substance of Mr. Skaar's challenge or the expert reports detailing the flaws in the Air Force methodology, and instead

136. Owens v. Brown, 7 Vet. App. 429, 433 (1995). Yet VA may not *ignore* the veteran's expert's opinion. *See, e.g.*, Brigandi v. Wilkie, No. 18-2669, 2019 WL 4050990, at *10 (Vet. App. Aug. 28, 2019) (vacating and remanding a Board decision as error because it ignored the veteran's lay statements and VA "[medical] examiner's opinion that [the veteran] presented with psychiatric symptoms during service that have continued since service").

137. *See* 1 VETERANS BENEFITS MANUAL, *supra* note 133, at 12.7 (describing multiple common methods of attack on C&P examinations).

138. *See* James D. Ridgway, *The Veterans' Judicial Review Act Twenty Years Later: Confronting the New Complexities of the Veterans Benefits System*, 66 N.Y.U. ANN. SURV. AM. L. 251, 252, 270–73 (2010) (describing the VJRA's failures to accommodate complex cases, and especially complex medical factfinding).

139. Skaar v. Wilkie, 32 Vet. App. 156, 169 (2019), *vacated and remanded sub nom.* Skaar v. McDonough, 48 F.4th 1323 (Fed. Cir. 2022). The Author was co-counsel for Mr. Skaar and the class at the Veterans Court and Federal Circuit.

140. Skaar v. Wilkie, 33 Vet. App. 127, 141 (2020) (en banc) ("[T]he Board's finding that the dose estimate is sound evidence 'on its face' without more detail essentially amounts to the Board saying the dose estimate is sound 'because I say so.'"), *vacated in part sub nom. Skaar*, 48 F.4th at 1323.

concluded that "just as it is prohibited from exercising its own independent judgment to resolve medical questions, the Board is not in a position to exercise such independent judgment on matters involving scientific expertise."[141] The Veterans Court held that the Board does indeed have an independent obligation to assess whether the challenged methodology constitutes sound scientific evidence, and remanded the merits of Mr. Skaar's challenge to the dose estimate methodology back to the Board for readjudication.[142]

In finding that the Board can and must assess complex scientific questions, the court pointed to VA adjudicators' power to request independent advisory medical opinions to help it understand claims with medical complexity or controversy.[143] The Board similarly has the power to grant an appellant a subpoena to compel the testimony of experts necessary to assess a claim. The Board may also use its subpoena power to identify relevant documents and compel the testimony of Air Force experts necessary to assess the merits question in Mr. Skaar's claim on a class basis.[144] Unfortunately, like most claimants, Mr. Skaar has no way to force these factfinding tools' deployment to improve the Board's adjudication of his non-presumptive toxic exposure claims; these tools for claim development remain within VA's discretion to use or ignore as it sees fit. While the PACT Act newly provides presumptive service connection for Palomares veterans with one of a number of enumerated medical conditions, Mr. Skaar does not have an enumerated condition and so must rely on VA's capacity to actually assess "the synergistic, combined effect of all toxic exposure risk activities of the veteran" as is now required by the PACT Act,[145] and the Board's willingness to squarely address his challenge.

B. THE FUNCTION OF VA TOXIC EXPOSURE PRESUMPTIONS

The data show that presumptions are necessary for toxic-exposed veterans' benefits access. For example, 2019 VA data showed that out of 10,588 claims for disabilities related to post-9/11 burn pit exposure since June 2007, 8,228—or seventy-eight percent—had been denied.[146] Prior to the Gulf War Illness ("GWI") presumptions, "VA had denied almost [ninety-five percent] of the

141. *Id.* at 134.

142. *Id.* at 143.

143. *Id.* at 142; *see* 38 U.S.C. § 5109; 38 C.F.R. §§ 3.311(a)(3), 3.328 (2023).

144. 38 C.F.R. § 20.709(a) ("An appellant, or his or her representative, may arrange for the production of any tangible evidence or the voluntary appearance of any witnesses desired. When necessary evidence cannot be obtained in any other reasonable way, the appellant, or his or her representative, may move that a subpoena be issued to compel the attendance of witnesses residing within [one hundred] miles of the place where a hearing on appeal is to be held and/or to compel the production of tangible evidence. A subpoena will not be issued to compel the attendance of Department of Veterans Affairs adjudicatory personnel.").

145. Honoring our PACT Act of 2022, Pub. L. No. 117-168, § 1168(a)(2)(B), 136 Stat. 1759, 1779. Despite this heightened requirement of C&P examiners, I have yet to see significantly more complex analyses in C&P examiners' toxic exposure opinions in my own practice.

146. *Toxic Exposure: Examining the VA's Presumptive Disability Decision-Making Process Before the S. Comm. on Veterans' Affs.*, 116th Cong. 5 (2019) (statement of Burn Pits 360), https://www.veterans.senate.gov/services/files/43DB186E-82F9-4EB8-A2CF-DA6A4CAEDEAC [https://perma.cc/ZSD7-MYST].

4,144 [Persian Gulf veteran] claims it had processed."[147] A study of claims of non-presumptive bladder cancer linked to Agent Orange exposure before the Board of Veterans Appeals between 2008 and 2016 found that fewer than eight percent succeeded.[148]

Whether a presumption is established and at what level of scientific certainty is fundamentally a policy decision, as reflected in decades of congressional and VA debate. Critically, establishing a presumption is not a radical policy decision or a mechanism unique to the "uniquely pro-claimant" VA benefits system.[149] VA toxic exposure presumptions rather respond to problems inherent to toxic exposure claims with basic evidentiary solutions. As VA regulation puts it, "[t]he presumptive provisions of the statute and Department of Veterans Affairs regulations implementing them are intended as liberalizations applicable when the evidence would not warrant service connection without their aid."[150]

"[T]he *ordinary default rule* [in litigation is] that plaintiffs bear the risk of failing to prove their claims."[151] By default, the plaintiff carries both the burden of production and the burden of persuasion. The plaintiff must provide enough evidence to convince the trier of law that a reasonable mind could find that a given fact exists and must then persuade the trier of fact that it exists at the standard of proof applicable in a given case.[152]

Congress did not invent the presumptive mechanism for VA—far from it. Presumptions have persisted as a legal tool in Roman law, at medieval English common law, in code-based legal systems like France's, and in American law up through the present.[153] They vary from the presumption of innocence in criminal law ("innocent until proven guilty") to the presumption that a person missing seven years is dead, the "presumption of regularity" in the conduct of government affairs, and the presumption that an issued patent is valid. A "[l]egal presumption," writes epistemologist Nicholas Rescher, "specifies an inference that is to be drawn from certain facts in the absence of better information; it indicates a conclusion that, by legal prescription, is to stand until duly set aside."[154] Presumptions reflect judgments about "the inherent (un)likelihood of the alleged fact, the apparent cost of an error relating to that fact and the

147. U.S. GEN. ACCT. OFF., GAO/HEHS-96-112, VETERANS' COMPENSATION: EVIDENCE CONSIDERED IN PERSIAN GULF WAR UNDIAGNOSED ILLNESS CLAIMS 1 (1996), https://www.gao.gov/assets/hehs-96-112.pdf [https://perma.cc/L62C-UNEA].

148. *See* Charles Ornstein & Terry Parris, Jr., *The Exceptions: A Rare Few Score Agent Orange Benefits for Bladder Cancer*, PROPUBLICA (Apr. 27, 2016, 5:59 AM), https://www.propublica.org/article/the-exceptions-a-rare-few-score-agent-orange-benefits-for-bladder-cancer [https://perma.cc/398Z-TFF7].

149. Hodge v. West, 155 F.3d 1356, 1362 (Fed. Cir. 1998).

150. 38 C.F.R. § 3.303(d) (2023).

151. Schaffer *ex rel.* Schaffer v. Weast, 546 U.S. 49, 56 (2005) (emphasis added).

152. PAUL C. GIANNELLI, UNDERSTANDING EVIDENCE § 5.02, at 56–57 (4th ed. 2017).

153. NICHOLAS RESCHER, PRESUMPTION AND THE PRACTICES OF TENTATIVE COGNITION, at xi, 1, 6, 13 (2006).

154. *Id.* at 2.

relative ease or difficulty that the parties would encounter with regards to the proof of the fact."[155]

Importantly, a presumption is distinct from a "reasonable assumption," also called a "permissive inference," or simply an "inference," in which a person can logically fill in missing information about an individual occurrence using the evidence before them. Rescher gives the classic example that a creature that looks, quacks, and waddles like a duck may be reasonably assumed to be one.[156] Valid application of a presumption does not rely on reasoning from the evidence available in a given instance. Rather, "[a] presumption . . . is rendered reasonable by conforming to a well-established practice (or general rule) of taking something to be so. It is not a matter of evidence or substantiation but of authorization through an established probative practice."[157]

Stated differently, legal "[p]resumptions are validated by their *functional efficacy* within their operative context and not by their statistical accuracy."[158] A legal presumption improves a legal system by increasing efficiency in accurate factfinding, fairness to the evidentiarily disadvantaged party, or both.[159] What sets the balance between evidentiary fairness and accuracy in determining whether to establish presumptions? Policy considerations. The presumptions that systems of adjudication choose to create reflect their values.[160]

Taking fairness, accuracy (or probability, as Edward Cleary called it), and policy considerations in order: First, as to fairness, it is substantively fair to establish rebuttable presumptions of service connection for toxic-exposed veterans because the records necessary to establish service connection for toxic exposures—including the resources to conduct studies necessary to establish general causation for a given exposure and condition—are within the government's and not the veteran claimant's control. Presumptions are judged to be substantively fair where they adhere to the jurisprudential rule that the burden of production "should be placed, if possible, on the party with better access to the evidence."[161] This is because if placed on "the party without access to evidence, and if there are no robust discovery provisions in place"—as in the veterans benefits system, where discovery-like mechanisms are in practice limited to the VA records collection and C&P exams that

155. David Hamer, *Presumptions, Standards and Burdens: Managing the Cost of Error*, 13 L. PROBABILITY & RISK 221, 221 (2014) (describing presumptions as "devices for managing the expected cost of error").

156. RESCHER, *supra* note 153, at 21.

157. *Id.* (emphasis omitted).

158. *Id.* at 9 (emphasis added).

159. *See* Bruce J. Winick, *Presumptions and Burdens of Proof in Determining Competency to Stand Trial: An Analysis of* Medina v. California *and the Supreme Court's New Due Process Methodology in Criminal Cases*, 47 U. MIA. L. REV. 817, 846 (1993) (crediting Edward W. Cleary, *Presuming and Pleading: An Essay on Juristic Immaturity*, 12 STAN. L. REV. 5 (1959)).

160. *See* GIANELLI, *supra* note 152, at 57–58.

161. Ronald J. Allen, *Burdens of Proof*, 13 L. PROBABILITY & RISK 195, 203 (2014). Allen recognizes slippage between the terms "burdens of proof" and "presumption" that may be apparent here. He concludes, "the word 'presumption' is simply a label applied to a range of evidentiary decisions that are made for the various reasons that inform the structuring of litigation." *Id.* at 208.

comprise the duty to assist—"then the party will be unable to meet his burden of production and will lose the case."[162]

Second, as to whether presumptions of service connection for toxic-exposed veterans increase efficiency in accurate factfinding, the response is dependent not only on the *n* (or framing) but on how strong the association is between the exposure and a given medical condition at the level of general causation. Admittedly, any presumption in claimants' favor will increase the likelihood of erroneous grants, perhaps significantly, as Senator Rand Paul fears will happen with the PACT Act's presumptions. However, taking seriously the fact that veterans whose conditions were *actually* caused by toxic exposures rarely win service connection for toxic exposure injuries without presumptions or other evidentiary assists,[163] especially pro se, then establishing presumptions of service connection where there is any non-negative association between an exposure and a given condition is likely to significantly reduce erroneous denials as well. Of course, the likelihood that accuracy is improved by presumptions increases the better the information on which the presumption is established is.[164] While this may counsel delaying presumptions in favor of additional study, VA has an important protective tool against erroneous grants: VA can rebut presumptions. The party whom the presumption disfavors' ability to *rebut* the presumption—the key characteristic of a true presumption as opposed to a substantive rule of law[165]—counterbalances presumptions' inattention to accuracy at the individual level. If VA can show "affirmative evidence" that a veteran's medical condition has an "intercurrent cause," VA can block an erroneous grant.[166]

Third, this Article has argued that a number of policy considerations counsel speedy adoption of generous presumptions of service connection for toxic-exposed veterans, even where the association or evidence of causation

162. *Id.* at 203; *see also* Cleary, *supra* note 159, at 12 (describing fairness as concerned with the party with superior access to the evidence).

163. For an example of an alternative evidentiary assist, note that veterans exposed to ionizing radiation for whom VA has individual dose measurements on file may succeed in service connection claims using the dose estimate process outlined at 38 C.F.R. § 3.311.

164. Commentators have characterized the tradeoff between accuracy and efficiency as a gamble at the individual adjudication level that becomes more rational the more information is available. Andrew Gavil and Steven Salop have, for example, applied decision theory to legal presumptions, explaining "[d]ecision theory recognizes that some erroneous decisions are inevitable because it is not economical, or even possible, to achieve perfect information," and that presumptions based on prior knowledge become more appealing the costlier information is to obtain. Andrew I. Gavil & Steven C. Salop, *Probability, Presumptions and Evidentiary Burdens in Antitrust Analysis: Revitalizing the Rule of Reason for Exclusionary Conduct*, 168 U. PA. L. REV. 2107, 2119 (2020).

165. *See* RESCHER, *supra* note 153, at 5.

166. 38 U.S.C. § 1113(a); 38 C.F.R. § 3.307(b)–(d) (2023). The case law is surprisingly underdeveloped as to what constitutes "affirmative evidence" or an "intercurrent cause" sufficient to rebut a presumption of service connection, but VA guidance provides that the "intercurrent cause" must be the "*sole* cause of the disease" or "makes the presumptive cause of the disability medically unlikely." DEP'T OF VETERANS AFFS., *supra* note 134, at V.ii.2.B.1.d. VA guidance further suggests that "affirmative evidence" is a higher standard than the preponderance of the evidence. *Id.*

between an exposure and a given condition is relatively weak.[167] The primary policy considerations against presumptions are that disability compensation is costly, and presumptions are substantively unfair to veterans left to pursue direct service connection claims for conditions that emerge post-service through ordinary channels, especially where presumptions result in benefits grants where there is, in fact, no service connection.

To sum up, the primary considerations in favor are, first, that absent presumptions, sick veterans and their families will not be able to access critical VA benefits. And second, the veterans benefits system intends that all veterans disabled by conditions incurred in service receive compensation, but its architecture puts toxic-exposed veterans at a unique disadvantage in individual adjudications due to the types of evidence typically necessary to prove their claims. The policy question boils down to whether veterans benefits should be over- or underinclusive where there is legitimate uncertainty as to whether a toxic exposure can cause a given medical condition. This Article's answer is that Congress's "special solicitude" for veterans—and for veterans with disabilities in particular, as evidenced by the benefits system's focus on service-connected disability compensation and provision of non-service-connected pension—should counsel speedy and generous establishment of new service connection presumptions for toxic-exposed veterans.[168]

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167. Even a relatively weak positive association can still be sufficient evidence for a claimant to meet the nexus requirement of the VA benefits system's near-equipoise standard. As one commentator explains:

> Contrary to the statements of courts and commentators, failure to produce evidence of a relative risk of greater than two does not entail that is it more likely than not that the factor in question was not a cause in the particular case. As epidemiologists have noted, causal strength comes in degrees and is not an "all or nothing" affair. There are weak causal relations, but they are no less causal. And there is no non-arbitrary point (above 0) at which a threshold of association could be drawn for causation. A *cause* need only raise the chance of its effect, not double it; there is nothing in the concept of causation to justify maintaining the [rule common to toxic tort law that "[i]n proving causation the plaintiff must provide evidence that establishes a probability of greater than [fifty percent] that the defendant was a cause of the injury"].

Mark Parascandola, *Evidence and Association: Epistemic Confusion in Toxic Tort Law*, PHIL. SCI., Sept. 1996, at S168, S169, S173–74 (1996) (emphasis added). In other words, "[a] strong association is not a necessary condition for inference to a general causal relation, but stronger associations do tend to give investigators more confidence in their conclusions." *Id.* at S170.

168. Although there are legitimate claimant equity and system efficiency reasons to establish new presumptions of service connection speedily and generously, any decision to do so will also be political. Kathryn A. Watts, among others, has argued that "arbitrary and capricious" review of agency action should recognize that political considerations as appropriate factors in agency decision-making, in part to encourage frank agency acknowledgement of what is supported by political will versus "neutral" science, to the extent such a thing exists. Kathryn A. Watts, *Proposing a Place for Politics in Arbitrary and Capricious Review*, 119 YALE L.J. 2, 40 (2009).

Watts writes: "[C]ourts ought to be much more likely to accept political influences as congressionally authorized considerations where the political factors seek to implement policy considerations or value judgments tied in some sense to the statutory scheme being implemented." *Id.* at 56. Here, where no private party is adversely affected for political gain or otherwise (taxpayer

The next Part describes the places in the PACT Act's new presumption creation process where the Secretary can exercise this generosity and proposes a mechanism for veterans to force consideration of potential new presumptions where the PACT Act currently offers none.

III. BREAKING OUT OF THE TOXIC EXPOSURE TEMPLATE

As necessary as presumptions of service connection are for toxic exposures, those in effect have been hard-won. The government response to toxic exposure has followed a rough template since veteran organizing forced initial recognition of the harms of Agent Orange exposure in the late 1970s. Under this template, veteran gains were won via the media and political pressure brought by veteran organizing. By forcing veterans to push from all sides for incremental gains, this template displaced the costs of uncertainty onto veterans, delaying compensation and healthcare benefits for decades after potentially toxicogenic and radiogenic conditions emerged.

After briefly describing the pre-PACT Act toxic exposure template, this Part lays out how Title II of the PACT Act, known as the TEAM Act (or "TEAM"),[169] aligns and breaks with the template. Most basically, although the TEAM Act standardizes the process for VA's study and consideration of new presumptions, it ultimately leaves the Secretary with the discretion to determine when evidence of an association between an exposure and condition is sufficient to justify a new presumption.

This Article has provided a principled basis for the Secretary to use this discretion *generously*, to bring toxic-exposed veterans whose conditions emerge only after service into parity with those whose conditions emerge on active duty, and into parity with veterans with the kind of post-service conditions for which evidence of an in-service causal relationship is readily available. However, toxic-exposed veterans should not have to rely on VA's generosity alone; reliance on political pressure to sway secretarial discretion risks replicating the pre-PACT Act toxic exposure template. Instead, the Secretary should use his rulemaking power to afford smaller groups of toxic-exposed veterans the ability to trigger population-level research of their conditions and force full consideration of new presumptions.

A. THE TROUBLE WITH THE TOXIC EXPOSURE TEMPLATE

Policymakers' pre-PACT Act toxic exposure template went something like this.[170] First, DoD denies the health hazards of the exposure, if it acknowledges

injury considerations aside) and generous presumptions should align with veterans benefits' overall statutory scheme, there is little reason why an executive's policy goals as to veteran care should not be reflected in rulemakings.

169. Honoring our PACT Act of 2022, Pub. L. No. 117-168, § 201, 136 Stat. 1759, 1766 ("This title may be cited as the 'Toxic Exposure in the American Military Act of 2022' or the 'TEAM Act of 2022.'").

170. I draw primarily from the Congressional Research Services' and the National Academies' useful chronologies of major toxic exposure legislation to outline the toxic exposure template. These

the fact of exposure publicly at all, and VA follows its lead. Second, veteran advocate pressure and accompanying media attention moves Congress to investigate exposed veterans' claims of illness. Members of Congress send letters of inquiry to DoD and VA, and committees may hold hearings. Hearing no response sufficient to placate veterans' advocates, Congress slips an order that VA or DoD contract for a study of the issue into a larger bill, often the annual National Defense Authorization Act.[171] Studies can take years, and there may be several such study orders. As veteran suffering and frustration build with delay, Congress or VA begin to offer benefits access short of compensation, perhaps rolling them out from least to most costly.

Such measures include VA "registries" to help survey the scope of the issue and free health monitoring exams or testing for affected veterans,[172] VA treatment for toxic exposure-linked conditions, and full VA healthcare access.[173] Policymakers may then provide some eased path to service connection short of a presumption.[174] Presumptions of service connection are created when pressures are strong enough that policymakers deem the science adequate, and

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are PANANGALA ET AL., *supra* note 34, at 7–22 and NASEM REPORT 2008, *supra* note 39, at 36–49, 70–81. Carlissa R. Carlson recently described the state of the systemized presumption creation process just prior to the PACT Act's passage with reference to these and other sources, as well. Carlissa R. Carlson, *Welcome to the Burn Pit: Where the Black Goo Oozes and the Green Ponds Glow*, 82 LA. L. REV. 677, 695–701 (2022). I detail one example of the template in action in a piece on toxic exposure at Camp Lejeune. *See* Brooks, *supra* note 5, at 158–69.

In a recent report that also tracks the toxic exposure template, Disabled American Veterans ("DAV") and the Military Officers Association of America ("MOAA") found that "[o]n average, it takes the VA 31.4 years from the first incidence of exposure to formally acknowledge that exposure," and that it then "takes 2.4 years, on average, from acknowledgement to establishment of a concession of exposure and presumption of service connection," resulting in an average wait of 34.1 years for presumptive service connection to be established. DISABLED AM. VETERANS & MIL. OFFICERS ASS'N OF AM., ENDING THE WAIT FOR TOXIC-EXPOSED VETERANS: A POST-PACT ACT BLUEPRINT FOR REFORMING THE VA PRESUMPTIVE PROCESS 2 (2024) [hereinafter ENDING THE WAIT FOR TOXIC-EXPOSED VETERANS], https://www.dav.org/wp-content/uploads/EndingTheWait_Full-Report.pdf [https://perma.cc/QL6F-4XX7].

171. *See, e.g.*, Veterans Health Programs Extension and Improvement Act of 1979, Pub. L. No. 96-151, 93 Stat. 1092 (containing the first Agent Orange legislation, this bill mandated that VA conduct an epidemiological study of possible health effects of Agent Orange).

172. *See Environmental Health Registry Evaluation for Veterans*, U.S. DEP'T VETERANS AFFS., https://www.publichealth.va.gov/exposures/benefits/registry-evaluation.asp [https://perma.cc/Q52C-3GVT] (listing registries).

173. *See* Veterans' Health Care, Training, and Small Business Loan Act of 1981, Pub. L. No. 97-72, § 102(a)(2)(ii), 95 Stat. 1047, 1047–48 (authorizing inclusion of evaluation of non-Agent Orange chemicals on Vietnam veterans in study order and of more immediate impact, allowed veterans to receive health care even if there was "insufficient medical evidence to conclude that [their medical condition was] associated with such exposure" to Agent Orange); PANANGALA ET AL., *supra* note 34, at 7 ("P.L. 97-72 elevated Vietnam veterans' priority status for health care at VA facilities by recognizing a veteran's own report of exposure as sufficient proof to receive medical care unless there was evidence to the contrary.").

174. *See, e.g.*, 38 C.F.R. § 3.311 (2023) (establishing ionizing radiation adjudication procedures for veterans ineligible for presumptions).

even then, policymakers typically begin by recognizing a subset of potentially linked conditions for each exposure.[175]

As an example of the template in action, consider the "Atomic Veterans" used as human guinea pigs for nuclear weapons testing in the early days of the Cold War. The DoD hid the extent of the exposure from servicemembers, and servicemembers were sworn to absolute secrecy on penalty of treason for decades.[176] Congress then slow-walked establishing compensation frameworks for ionizing radiation even once it lifted secrecy requirements, citing "scientific and medical uncertainty regarding . . . long-term adverse health effects."[177] The 96th Congress ordered studies;[178] the 97th authorized priority VA healthcare access;[179] and only in 1984 did the 98th Congress create the first presumptions for Atomic Veterans.[180] But still, some radiation-exposed veterans were excluded. It took the 117th Congress's PACT Act for veterans of the smaller Palomares and Enewetak nuclear radiation exposures to have access to the same presumptions their peers were granted in 1984.[181]

Once Congress establishes one set of service-connection presumptions for toxic-exposed veterans, it has typically left creation of the rest to VA rulemaking and required consultation with government scientists. For example, the Agent Orange Act of 1991 established additional presumptive service-connected conditions for Agent Orange exposure.[182] The Agent Orange Act requires VA to contract with the Institute of Medicine ("IOM"), a component of the National Academy of Sciences, every two years for the IOM to "review

175. *See* Veterans' Dioxin and Radiation Exposure Compensation Standards Act, Pub. L. No. 98-542, 98 Stat. 2725 (1984) (establishing presumptions of service connection for certain conditions, along with other liberalizing evidentiary rules short of presumptions for other conditions); *see also infra* notes 204–05 and accompanying text (describing the process by which VA established the first burn pit presumptions).

176. *See* Press Release, President Joseph R. Biden, Jr., A Proclamation on National Atomic Veterans Day (July 15, 2022), https://www.whitehouse.gov/briefing-room/statements-releases/2022/07/15/a-proclamation-on-national-atomic-veterans-day-2022 [https://perma.cc/95HP-5U9J].

177. Veterans' Dioxin and Radiation Exposure Compensation Standards Act § 2(2).

178. Veterans Health Programs Extension and Improvement Act of 1979, Pub. L. No. 96-151, § 307, 93 Stat. 1092, 1097; Veterans' Health Care Amendments of 1983, Pub. L. No. 98-160, § 601, 97 Stat. 993, 1006; *see also* Orphan Drug Act, Pub. L. No. 97-414, § 10, 96 Stat. 2049, 2065 (1983); Veterans' Dioxin and Radiation Exposure Compensation Standards Act § 2(6) ("[A]s of 1981, federally sponsored research projects relat[ed] to ionizing radiation were costing the [f]ederal [g]overnment more than $115,000,000.").

179. Veterans' Health Care, Training, and Small Business Loan Act of 1981, Pub. L. No. 97-72, § 102, 95 Stat. 1047, 1047–48.

180. Veterans' Dioxin and Radiation Exposure Compensation Standards Act § 5. This was then followed by the Radiation-Exposed Veterans Compensation Act of 1988, Pub. L. No. 100-321, 102 Stat. 485 (establishing presumptions for thirteen specified types of cancer through legislation and regulation) and the Veterans' Radiation Exposure Amendments of 1992, Pub. L. No. 102-578, 106 Stat. 4774 (adding two more cancers to radiation list).

181. *See* Honoring our PACT Act of 2022, Pub. L. No. 117-168, §§ 401–402, 136 Stat. 1759, 1780.

182. Agent Orange Act of 1991, Pub. L. No. 102-4, 105 Stat. 11. For a full description of VA's toxic exposure template at work for Agent Orange, see PANANGALA ET AL., *supra* note 34, at 2, 9–16. The NASEM explains that the Agent Orange Act became the template for VA presumption-making by regulation for other exposures, too. NASEM REPORT 2008, *supra* note 39, at 2, 12.

and summarize the scientific evidence, and assess the strength thereof, concerning the association between exposure [to herbicides used during the Vietnam era] and each disease suspected to be associated with such exposure."[183] These studies usually take the form of literature reviews.[184] Under the Agent Orange Act, VA is required to use IOM's findings and other evidence to issue regulations for new presumptions of service connection where there is a "positive association" between the exposure and the incurrence of a disease.[185] The Persian Gulf War Veterans Act of 1998 similarly requires what the Congressional Research Service has described as "regular and thorough reviews of the scientific and medical literature relevant to the health of Gulf War veterans by the IOM,"[186] and the Veterans Benefits Act of 2003[187] established an expert Veterans' Advisory Board on Dose Reconstruction ("VBDR") to analyze and improve the VA's process for disability benefits claims related to service-connected radiation exposure. Despite this legislation's requirement of regular scientific review of evidence associated with various conditions, establishing service connection presumptions by rulemaking has been delayed[188] and, at times, inexplicably stalled altogether.[189]

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183. Agent Orange Act of 1991 § 3. The Agent Orange Act passed at roughly the same time as the consent decree was approved in *Nehmer v. United States Veterans Administration*, a class action certified in the Northern District of California for veterans denied service connection under a VA regulation that proclaimed that chloracne was the only disease for which sound scientific evidence showed a relationship with Agent Orange exposure. The consent decree provided, among other relief, that VA would create a presumption of service connection for Agent Orange-exposed veterans whenever it recognized that emerging scientific evidence showed a positive association with a new disease. *See generally* Nehmer v. U.S. Veterans Admin., No. cv-86-6160, 1991 U.S. Dist. LEXIS 22110 (N.D. Cal. May 17, 1991).

184. *See* Brown, *supra* note 5, at 600–01 (describing the contract and study process).

185. Agent Orange Act of 1991 § 316.

186. PANANGALA ET AL., *supra* note 34, at 8 (referring to Act of Oct. 21, 1998, Pub. L. No. 105-277, 112 Stat. 2681). For a succinct (but vague) description of VA's pre-PACT Act presumption investigation process for Gulf War-related illnesses, see U.S. GOV'T ACCOUNTABILITY OFF., GAO-21-253T, VA DISABILITY BENEFITS: PROCESS FOR IDENTIFYING CONDITIONS PRESUMED TO BE SERVICE CONNECTED AND CHALLENGES IN PROCESSING COMPLEX GULF WAR ILLNESS CLAIMS 6–9 (2020), https://www.gao.gov/assets/720/711410.pdf [https://perma.cc/RT9B-8NBZ].

187. Veterans Benefits Act of 2003, Pub. L. No. 108-183, 117 Stat. 2651.

188. For example, as of 2005, the National Academies had not completed "even an initial review" of all the environmental hazards described in the 1998 Gulf War Act. Brown, *supra* note 5, at 607. See also the approximately five-year year delay between National Academies' recognition of some association between hypertension, bladder cancer, hypothyroidism, and Parkinsonism and Agent Orange and the creation of new presumptions. *Compare* NAT'L ACADS. OF SCIS. ENG'G & MED., VETERANS AND AGENT ORANGE: UPDATE 2014, at 8–15 (2016), *with* Amanda Dolasinski, *MOAA, Other Groups Ask VA to Expand List of Diseases Linked to Agent Orange Exposure*, MOAA (Nov. 15, 2019), https://www.moaa.org/content/publications-and-media/news-articles/2019-news-articles/moaa,-other-groups-ask-va-to-expand-list-of-diseases-linked-to-agent-orange-exposure [https://perma.cc/E4BZ-7CA8].

189. For example, the VBDR recommended after close review that the VA add skin cancer to the list of presumptive conditions in 38 C.F.R. § 3.309(d)(2). VETERAN ADVISORY BD. ON DOSE RECONSTRUCTION, RECOMMENDATIONS 3 (2006), http://vbdr.org/recommendations/vbdr-recommendations-june06.pdf [https://perma.cc/3X2B-5NQD]. The Secretary rejected this recommendation without meaningful explanation. Letter from Daniel L. Cooper, Under Sec'y of Veterans Affs. for

Statutory scientific study requirements provide at least some leverage for veterans to challenge the government's failure to investigate the relationship between toxic exposure and their medical conditions. Veterans can sue the VA Secretary in the Federal Circuit for rulemaking violations under a scope of judicial review similar to the Administrative Procedure Act's ("APA"), including failure to act.[190] A statutory deadline is a strong basis for specific injunctive relief, but administrative law provides weak recourse for plaintiffs accusing agencies of unreasonable delay, or for failing to engage in rulemaking absent some heightened statutory requirement. As for delay—including delay on petitions for rulemaking—there is no set threshold when agency inaction becomes unreasonable, and limited agency resources and competing priorities often outweigh even issues related to human health.[191] And judicial power over agencies is close to its weakest where agency failure to engage in rulemaking is at issue.[192] As a result, although filing suit can be one means to exert political pressure on agencies for failing to act regardless of the suit's outcome, veterans have struggled to force VA to engage in rulemaking through the courts.[193]

Benefits, U.S. Dep't of Veterans Affs., to James A. Zimble, Chairman, Veterans' Advisory Bd. (Oct. 5, 2006), http://vbdr.org/recommendations/VA-Response-Austin.pdf [https://perma.cc/4UMN-HGX5].

190. Preminger v. Sec'y of Veterans Affs., 632 F.3d 1345, 1350–52 (Fed. Cir. 2011) (noting that per 38 U.S.C. § 502, VA rulemaking violations are directly reviewable in the Federal Circuit).

191. The Federal Circuit uses the D.C. Circuit's so-called "TRAC" factors to assess whether VA delay is unlawfully unreasonable. *See* Martin v. O'Rourke, 891 F.3d 1338, 1349 (Fed. Cir. 2018) (adopting and describing factors set out in Telecomms. Rsch. & Action Ctr. v. FCC, 750 F.2d 70, 79–80 (D.C. Cir. 1984)); *see also* Michael D. Sant'Ambrogio, *Agency Delays: How a Principal-Agent Approach Can Inform Judicial and Executive Branch Review of Agency Foot-Dragging*, 79 GEO. WASH. L. REV. 1381, 1390 (2011) ("[T]he doctrine [of unlawful agency delay] in the courts has been ad hoc and too weak to ensure the efficient operation and accountability of the administrative state."); *id.* at 1403–14 (outlining the caselaw, including *TRAC*).

192. *See* Ark. Power & Light Co. v. Interstate Com. Comm'n, 725 F.2d 716, 723 (D.C. Cir. 1984) ("[T]his court will compel an agency to institute rulemaking proceedings only in extremely rare instances. . . . [R]eview is limited to ensuring that the agency has adequately explained the facts and policy concerns it relied on, and that the facts have some basis in the record."). *But see* Massachusetts v. EPA, 549 U.S. 497, 527 (2007) (explaining why agency failure to engage in rulemaking is more reviewable than agency decisions as to whether to bring an enforcement action, where judicial power over agencies is at its very weakest).

193. *See* Mil.-Veterans Advoc. Inc. v. Sec'y of Veterans Affs., 38 F.4th 154, 155, 164 (Fed. Cir. 2022) (upholding VA's denial of a veteran group's petition for rulemaking to extend Agent Orange presumptions to veterans allegedly exposed on Guam and Johnston Island under its "narrow, highly deferential standard of review"). It is similarly difficult to get a court to hold that VA's decision not to create a rule is arbitrary and capricious absent a petition for rulemaking. *See* LeFevre v. Sec'y, Dep't of Veterans Affs., 66 F.3d 1191, 1201–04 (Fed. Cir. 1995) (upholding VA's decision not to create presumptions of service connection under the Agent Orange Act of 1991 for prostate, liver, and nose cancer for veterans exposed to Agent Orange based on VA's analysis of the scientific evidence).

The major victory in litigation over rulemaking in the toxic exposure realm is the *Nehmer* line of Agent Orange cases, which rely on the particulars of the Veterans' Dioxin and Radiation Exposure Compensation Standards Act of 1984. Nehmer v. U.S. Veterans' Admin., 712 F. Supp. 1404, 1423 (N.D. Cal. 1989) (holding that incorrect VA statutory interpretation "increased both

Additionally, veteran and scientist critics alike have accused VA's presumption determinations of being something of a "black box," eroding presumption advocates' and skeptics' trust in the process and ability to challenge it substantively.[194] In 2008, the National Academies' Committee on Evaluation of the Presumptive Disability Decision-Making Process for Veterans ("Committee") published a report consistent with its name.[195] Despite the Committee's congressional mandate, VA refused to allow it full access to its internal process or processes for establishing new presumptions of service connection, denying IOM requests for records and other information.[196] Observing that VA's explanations in rulemaking notices were thin and discrepancies in which conditions resulted in presumptions for which exposures, the Committee concluded as many have that VA's internal processes appeared haphazard[197] and politically influenced.[198]

As the body charged with providing scientific research and recommendations to VA, the Committee's core objections were evidentiary. In particular, the Committee took issue with VA's acceptance of two different scientific thresholds to justify new presumptions.[199] The report took the position that exposure-specific statutes and VA's general "near-equipoise" standard require that presumptions be created only if the scientific evidence shows that a *causal* relationship between the exposure and condition is "at least as likely as not."[200] VA had used the causation standard when assessing presumptions related to

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the *type* and the *level* of proof needed for veterans to prevail during the rulemaking proceedings," and invaliding a regulation that provided that only chloracne could be service-connected); *see also supra* note 183 and accompanying text (discussing a consent decree approved in 1991).

194. Though again, the "black box" of VA presumptive rulemaking has meant that politically organized advocate pressure can be met with success. For example, advocates successfully convinced VA to accept a petition for rulemaking to add certain places in Thailand as presumptive for veteran exposure to dioxins. Bradley Hennings, *VA Grants CCK's Rulemaking Petition for Thailand Claims*, CHISHOLM CHISHOLM & KILPATRICK LTD (July 25, 2024), https://cck-law.com/blog/va-grants-ccks-rulemaking-petition-for-thailand-claims [https://perma.cc/Z49M-BK4G].

195. *See generally* NASEM REPORT 2008, *supra* note 39 (explaining recommendations made by the IOM Committee on methods and presumptions the government uses to determine if a specific exposure causes a health condition for veterans).

The PACT Act required the National Academies to put out another report analyzing the TEAM Act's new presumption creation process within a year of enactment. Honoring our PACT Act of 2022, Pub. L. No. 117-168, § 202, 136 Stat. 1759, 1772–75 (adding a new subchapter containing § 1176 with the report requirement in subsection (g)). In its 2023 report, NASEM found the new decision process to be "reasonable and logical" but noted that the TEAM Act and subsequent VA communications offer little to no information on the criteria that will actually be used to determine which conditions to study and how to evaluate new presumptions and that the VA's description of the process lacked "internal consistency." NASEM REPORT 2023, *supra* note 102, at 1–15.

196. NASEM REPORT 2008, *supra* note 39, at 14.

197. *Id.* at 12 ("[I]t remains unclear to the Committee how VA makes particular determinations with regard to weighing strength of evidence for causation and exposure potential in making its presumptive decisions.").

198. *Id.* at 101.

199. *Id.* at 332 ("[G]iven a similar body of evidence for different diseases, the end result of the process should be similar.").

200. *Id.* at 7–9, 12.

mustard gas and lewisite, as well as the Persian Gulf War.[201] However, VA had established presumptions for certain conditions related to Agent Orange exposures where the data showed only an *association* between the exposure and causation.[202] In other words, the Committee faulted VA for creating presumptions where the data show correlation but not necessarily causation, and proposed a *higher* bar for would-be presumptions to clear.

The Committee argued that VA should create new presumptions only where some additional evidence of "but-for" causation—mechanistic evidence of a biological pathway shown through animal studies, perhaps—accompanied a finding that the population of exposed veterans suffered higher rates of the condition at issue than their unexposed peers.[203] The Committee seemed to recognize that evidence sufficient to support or disprove counterfactual causation might not yet and may never be generated,[204] and yet concluded that uniformity and "optimize[d] . . . use of scientific evidence" should be privileged over increased access to presumptive service connection.[205] The Committee put forward a set of recommendations to standardize VA presumption decision-making processes and re-center IOM scientists' expertise, with the intent that VA establish new presumptions by rulemaking only where the *causal* evidence of service connection is at the equipoise level.[206] VA rejected the IOM recommendations, an instance of its "black box" working in veterans' favor.

Some dozen years and a new set of presumptions for toxic water exposure at Camp Lejeune later,[207] VA finally announced in 2021 that it was "establishing a holistic approach to determining toxic exposure presumption going forward."[208] Secretary Denis McDonough explained, "We are moving out smartly in initiating action to consider these and other potential new presumptions, grounded in science and in keeping with my authority as Secretary of VA."[209] VA then announced presumptions of service connection for three respiratory conditions—asthma, sinusitis, and rhinitis—merely *associated* with

201. *Id.* at 16.

202. *Id.*

203. *Id.* at 160–69.

204. *See, e.g.*, *id.* at 13 (recognizing irremediable lack of dose measurement data for radiation-exposed veterans); *id.* at 270–71 (recognizing systemic failures in exposure data collection); *id.* at 298–307 (recognizing government secrecy inhibits certain exposure data collection).

205. *Id.* at 14.

206. *Id.* at 333–34.

207. Diseases Associated with Exposure to Contaminants in the Water Supply at Camp Lejeune, 82 Fed. Reg. 4173 (Jan. 13, 2017) (codified at 38 C.F.R. § 3.309(f) (2023)).

208. Press Release, U.S. Dep't of Veterans Affs., VA Plans Expansion of Benefits for Disability Claims for Conditions Related to Certain Toxic Exposures (May 27, 2021), https://news.va.gov/press-room/va-plans-expansion-of-benefits-for-disability-claims-for-conditions-related-to-certain-toxic-exposures [https://perma.cc/E42M-44NY].

209. *Id.*

burn pit exposure.[210] Here, VA justified its break with IOM recommendations for a causation requirement by staking the position that the Secretary has more discretion to create presumptions where the scientific evidence is underdeveloped.[211] This is the position this Article argues the Secretary should take under the TEAM Act—the direction that will make parity a possibility for toxic-exposed veterans.

B. THE PACT ACT'S CHALLENGES AND OPPORTUNITIES

Much of the promise of the PACT Act for veterans not included in its statutory presumptions lies in the TEAM Act, which creates a presumption proposal and review structure not unlike the committee-based structure the IOM proposed in 2008. The TEAM Act differs from the IOM proposal in three key ways, however. First and of critical importance to veterans, TEAM sets the bar for new presumption creation at association, not causation. Second, and unhelpfully for veterans, TEAM offers no formal pathway for veteran advocates to participate meaningfully in the presumption creation process, much less force consideration of new presumptions. Third, TEAM leaves within the VA Secretary's ultimate discretion whether to create a new presumption or not.

The first step in the TEAM process requires a "working group" comprised of VA employees[212] to determine what military toxic exposures and conditions merit in-depth study and consideration for new presumptions by "conducting ongoing surveillance and reviewing such exposure[s] described in scientific literature, media reports, information from veterans, and information from Congress."[213] TEAM provides that the Secretary "shall" consult the Working Group with respect to any case involving a known or suspected in-service toxic exposure,[214] but provides that "if the Working Group determines that the research may change the current understanding of the relationship between an exposure to an environmental hazard and adverse health outcomes

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210. Presumptive Service Connection for Respiratory Conditions Due to Exposure to Particulate Matter, 86 Fed. Reg. 42724, 42724 (Aug. 5, 2021) (to be codified at 38 C.F.R. pt. 3). Among evidence described in the rule explanation, VA said:

> While the 2020 [National Academies] report concluded there was inadequate or insufficient evidence of an association between airborne hazards exposures in the Southwest Asia theater and subsequent development of rhinitis, sinusitis, and asthma, the report did conclude that certain respiratory symptoms such as chronic persistent cough, shortness of breath (dyspnea), and wheeze did have limited or suggestive evidence of an association.

Id. at 42726. *But see id.* at 42727 ("[The Environmental Protection Agency] concluded that there is 'likely to be causal relationship' between both [short-term and long-term] exposure to fine particulate matter and respiratory health effects. . . . ['Likely' means] the pollutant has been shown to result in health effects in studies where results are not explained by chance, confounding, and other biases, but uncertainties remain in the evidence overall.").

211. *Id.* at 42728–29.

212. Honoring our PACT Act of 2022, Pub. L. No. 117-168, § 1172(b)(2), 136 Stat. 1759, 1768.

213. *Id.* § 1172(c)(1).

214. *Id.* § 1172(b)(3).

in humans," it "may"—not "shall"—move that issue to the next stage, "formal evaluation."[215]

As in past toxic exposure bills, TEAM provides that VA will contract with the National Academies to perform the formal evaluations recommended by the Working Group.[216] And providing an enhanced avenue for judicial review of agency inaction, TEAM provides mandatory timelines for reporting results once the formal evaluation commences: A recommendation as to whether a presumption of service connection should be established must be provided within 120 days of the formal evaluation's start. Even more significantly, the Secretary must determine whether to commence rulemaking for presumptive service connection within 160 days thereafter and publish notice accordingly.[217] (Past research timelines suggest that these deadlines are optimistic, particularly as formal evaluations under TEAM are to cover a wide range of scientific and policy factors.[218])

However, because the TEAM Act *forces* the Secretary to eventually make a "yes/no" determination on specific presumptions if the Working Group sends the issues to the National Academies for formal evaluation, it necessarily creates a final agency action with a relatively robust record ripe for judicial review.[219] Although the TEAM Act ultimately leaves the decision of whether to create a new presumption to the Secretary's discretion, as constrained by the factors and scientific principles laid out in the Act,[220] this is a categorical improvement on the reviewability of the old toxic exposure template's "black box." The more difficult access point for veteran advocates, as discussed

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215. *Id.* § 1172(d).

216. *Id.* §1176.

217. *Id.* §§ 1173(d), 1174(a).

218. Perhaps reacting to the history of delay in toxic exposure response, DAV and MOAA recently recommended that Congress enact new legislation to require that once VA has formally acknowledged the possibility that a given toxic-exposure event may affect human health, VA has only ninety days to determine whether to concede that servicemembers have in fact been exposed. If exposure is conceded, VA would then have ninety days to extend healthcare eligibility to affected veterans and to develop a plan for NASEM or VA to research health effects. The Secretary's decision as to whether to create a presumption or further refine the research plan would be due 180 days after NASEM or VA's scientific report. ENDING THE WAIT FOR TOXIC-EXPOSED VETERANS, *supra* note 170, at 15–21.

219. The Federal Circuit may only review "final" VA action. *See* 38 U.S.C. § 502; 5 U.S.C. § 704.

220. Honoring our PACT Act of 2022 § 1174. Factors to be considered are:

> (1) Scientific evidence, based on the review of available scientific literature, including human, toxicological, animal, and methodological studies, and other factors[,] (2) [c]laims data, based on the review of claim rate, grant rate, and service connection prevalence, and other factors[,] [and] (3) [o]ther factors the Secretary determines appropriate, such as (A) the level of disability and mortality caused by the health effects related to the case of toxic exposure being evaluated; (B) the quantity and quality of the information available and reviewed; (C) the feasibility of and period for generating relevant information and evidence; (D) whether such health effects are combat- or deployment-related; (E) the ubiquity or rarity of the health effects; and (F) any time frame during which a health effect must become manifest.

Id. § 1173(b)(1)–(3).

below, will be getting the VA Working Group to consider and recommend a particular exposure and condition for formal evaluation.

Additionally, the text of the TEAM Act itself offers other reasons for the Secretary to err on the side of generosity and timely creation of new presumptions beyond those laid out in this Article, too. The factors Congress has instructed the Secretary to mandate in formal evaluations include claim and grant rates and the severity of affected veterans' disabilities[221]—sick veterans' inability to access benefits should weigh strongly in favor of presumptions even where the evidence in support is relatively weak. The TEAM Act also specifically provides that the Secretary may rescind presumptions where it is later found that the evidence is not *in fact* in support (not where there is a *lack* of evidence in support).[222] Rescinded presumptions do not automatically reduce disability compensation.[223] The rescission provision should provide the Secretary cover to create presumptions based on current evidence even where there are indications that future research may call the association into question.

And indeed, the TEAM Act provides that the formal scientific evaluation preceding secretarial consideration will assess "the likelihood that a positive association exists between an illness and a toxic exposure while serving in the active military, naval, air, or space service," instead of a causal relationship.[224] There is some risk that scientific evaluators may interpret the list of evidence and factors to be considered[225] as congressional intent that something closer to causation be assessed—IOM took this position regarding the "positive association" language of the Agent Orange Act[226]—but even so, the TEAM Act does not actually require the Secretary to align his presumption creation decision with the evaluators' recommendation.[227] The Secretary's discretion—and therefore, his capacity for generosity—is legally bounded only by a Federal Circuit determination that, based on the record, his decision to engage in

221. *Id.* § 1173(b).

222. *Id.* § 1174(b).

223. *Id.* § 1174(b)(2)(C) ("[N]o veteran or survivor covered under subparagraph (A) or (B) shall have their compensation reduced solely because of the removal of an illness [from the presumptives list]."). VA can only reverse favorable findings—like service connection—where there is "clear and unmistakable" evidence ("CUE") that the finding is error. 38 C.F.R. § 3105(a) (2023); 20 C.F.R. § 20.1403 (2024). Where the evidence supporting recission of a presumption does not meet the high CUE threshold, findings of service-connection under the rescinded presumption should remain undisturbed.

224. Honoring our PACT Act of 2022 § 1173(c)(B)(i).

225. *Id.* § 1173(b).

226. NASEM REPORT 2008, *supra* note 39, at 75–79 (explaining that "[a]ny determination about the existence of 'statistical association' that takes into account 'strength' of the evidence and 'appropriateness' of the methods examines the same concerns that enter into a consideration of evidence for causation" (quoting Irva Hertz-Picciotto, *How Scientists View Causality and Assess Evidence: A Study of the Institute of Medicine's Evaluation of Health Effects in Vietnam Veterans and Agent Orange*, 13 J.L. & POL'Y 553, 556 (2005))).

227. *See* Honoring our PACT Act of 2022 § 1174(a)(1) (categorizing the presumption creation recommendation of the formal evaluation as such, and providing that the Secretary shall initiate rulemaking to create a new presumption only "if the Secretary determines, in the discretion of the Secretary, that the presumption, or modification, is warranted").

rulemaking or not was arbitrary and capricious.[228] In other words, the TEAM Act gives the VA Secretary the discretion to create new presumptions even where the science is underdeveloped, as it did for asthma, rhinitis, and sinusitis in 2021.[229]

The TEAM Act process creates multiple points for veteran advocate suit—this advantage over the old toxic exposure template should not be discounted. At the same time, however, the process offers no mechanism for veterans to push presumption creation forward from the inside. TEAM offers the following avenues for participation: (1) veterans will be able to participate in notice and comment at least annually for the conditions and events for which the Secretary intends to conduct an initial literature and data review;[230] (2) veterans will be able to attend an "open meeting" with the Secretary to voice concerns about conditions and events selected for study and the process;[231] (3) veterans will be able to comment on the Secretary's decision to create a new presumption or not through the standard notice and comment process; and (4) "not less frequently than quarterly, [the Secretary will] collaborate with, partner with, and give weight to the advice of veterans service organizations and such other stakeholders as the Secretary considers appropriate" in conjunction with the Working Group's process.[232]

Although the last provision recognizes the reality that veterans service organizations ("VSOs") like DAV and the American Legion, as well as newer toxic exposure advocacy groups like Burn Pits 360, will continue to demand and will, at times, catch the Secretary's ear on toxic exposure presumption issues, their input is no break from historical practice, nor is the availability of

228. The Federal Circuit has original jurisdiction over direct challenges to agency rulemaking, pursuant to the scope of review set out in the APA. 38 U.S.C. § 502.

229. Whether an agency decision is arbitrary and capricious is a case-by-case determination based on the rulemaking record and the Secretary's articulated rationale for establishing a particular presumption. *See* Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983). The Secretary should take courage in remembering that the Federal Circuit applies administrative law's "highly deferential" arbitrary and capricious standard of review as to substantive challenges to VA rules. Nat'l Org. of Veterans' Advocs., Inc. v. Sec'y of Veterans Affs., 927 F.3d 1263, 1267 (Fed. Cir. 2019). And the Federal Circuit has historically taken an extra-deferential stance to the Secretary's decision whether to engage in rulemaking under similar provisions of the Agent Orange Act of 1991, reasoning, "Under the unusual statutory scheme here involved, with the function of reviewing and evaluating the scientific evidence given to a non-governmental, independent scientific entity, an extremely strong showing of error would be required before we properly could reverse the Secretary's determination." LeFevre v. Sec'y, Dep't of Veterans Affs., 66 F.3d 1191, 1199 (Fed. Cir. 1995). Although *LeFevre* arises out of a different procedural context, there is reason to think that the court may be especially deferential to a substantive challenge to a rule created through TEAM, too. In addition to the complexity of the scientific review process, the TEAM Act presumption creation factors enumerated at note 220, *supra*, permit the Secretary to consider humanitarian and other factors like how sick affected veterans are in addition to the science. It is not difficult to imagine new presumptions surviving arbitrary and capricious review thanks to carefully articulated rationales heavily weighing humanitarian and other factors in the face of scientific uncertainty.

230. *See* Honoring our PACT Act of 2022 § 1172(a). As with all notice and comment, the Secretary will be required to respond to comments.

231. *Id.* § 1172(a)(3)(A).

232. *Id.* § 1172(a)(3)(B).

notice and comment rulemaking. The opportunity for annual notice and comment on exposures and conditions under consideration may be useful to advocates, but again only as a focal point for litigation.[233] The public reports of the Working Group's recommendations likely provide a focal point only for additional organizing.[234]

In the Act's first year of implementation, VA announced that it had used its discretion to initiate the presumption creation review process for three conditions potentially associated with burn pit exposure: "acute leukemias, chronic leukemias, and multiple myeloma outside of the head and neck."[235] Citing section 1172's annual reporting requirement, VA published notice of its intent "to assess the scientific literature and historical claims data" related to these conditions' association with burn pits in the Federal Register in July 2023.[236] Yet VA appears to have classified this consideration as a stage *prior* to Working Group consideration under the TEAM Act. The notice invited comment on the "importance" of this study, and further invites commenters to propose additional conditions for study. Although VA *will* conduct the literature and claims data review promised for the leukemias and multiple myeloma and consider study of the other conditions, the notice provides that "[w]hen the scientific review concludes that there is a statistically significant signal or possible association of military environment exposure and health outcomes, this *may* trigger an investigation that *may* lead to additional research."[237] The Working Group that would conduct the next phase of investigation has the discretion under section 1172 to determine which

233. That said, it is unclear how effective such litigation might be. TEAM only requires that the Secretary "consider all public comment received," as well as "publish in the Federal Register a response to the comments." *Id.* § 1172(a)(2)(B). Litigants will need to convince the Federal Circuit that it can order the Secretary to consider adding exposures and conditions to his planned evaluation plans pursuant to public comment as part of his "response."

234. *See id.* § 1172(e).

235. Press Release, U.S. Dep't of Veterans Affs., VA to Review Possible Connections Between Toxic Exposures and Acute Leukemia, Chronic Leukemia, and Multiple Myeloma (July 25, 2023), https://news.va.gov/press-room/connections-between-toxic-exposurescancer [https://perma.cc/3NLW-EDWE].

236. Notice of Plans for the Department of Veterans Affairs to Assess the Current Scientific Literature and Historical Detailed Claims Data Regarding Certain Medical Conditions Associated with Military Environmental Exposures and to Solicit Public Comment, 88 Fed. Reg. 48291, 48291 (July 26, 2023) (to be codified at 44 U.S.C. § 3501). Section 1172 in fact provides for annual notice of *formal* evaluations the Secretary plans to conduct under section 1173, yet this notice states that it is for a literature and claim data review short of the formal evaluation contemplated by statute. *Id.*

237. *Id.* (emphasis added). In this case, VA did stand up a Working Group, writing in response to comments:

> VA has considered the issues presented by commenters and decided to conduct a scientific review of multiple myeloma and chronic and acute leukemias, taking into account the latest scientific classification schemes for blood cancers and scientific evidence regarding shared etiologies. VA will follow the procedures in 38 U.S.C. [§§] 1172–1174 for initiating and conducting assessments and formal evaluations.

Response to Comments for the Department of Veterans Affairs to Assess the Scientific Literature and Claims Data Regarding Certain Medical Conditions Associated with Military Environmental Exposures, 89 Fed. Reg. 33471, 33472 (Apr. 29, 2024).

conditions or events to advance to formal scientific evaluation. Again, although a formal evaluation triggers a mandatory scientific recommendation and the Secretary's requirement to subsequently publish notice of whether rulemaking for a new presumption will begin,[238] veterans have little formal power to push the Working Group towards a recommendation for formal evaluation, just as they have little power to dictate what conditions or events the Secretary notices for Working Group consideration.[239]

Given this early PACT Act implementation landscape, the next Section offers proposals that would help ensure that veterans' demands for consideration of new presumptions are timely heard and addressed.

C. PROPOSALS TO FORCE FAIR CONSIDERATION OF NEW SERVICE CONNECTION PRESUMPTIONS

This Article has argued that the Secretary's threshold for establishing new toxic exposure presumptions should be low so that veterans sickened by a signature wound of modern war have a fair opportunity to access needed money and healthcare benefits; otherwise, difficulties in accessing necessary evidence and securing full consideration of their service connection claims in the veterans benefits adjudication system would put this population at a unique evidentiary disadvantage. Even if the threshold for establishing new presumptions is low, however, toxic-exposed veterans still need some evidence of the link between their exposure and a given condition for the Secretary to consider. This Section, therefore, proposes that the VA Secretary use his rulemaking power to provide even small groups of toxic-exposed veterans the ability to trigger research into their exposures and conditions and so force consideration of new presumptions for their conditions under the TEAM Act.[240]

There is one point in the TEAM process still particularly susceptible to the "black box" structure that characterized the old toxic exposure template: the decision as to which exposures and conditions will come before the Working Group for preliminary study. It will be beneficial if the Secretary

238. Honoring our PACT Act of 2022 § 1174.

239. For a chart illustrating the process and subcommittees that VA apparently envisions will be part of the Working Group and part of the presumption review team, see NASEM REPORT 2023, *supra* note 102, at 5 fig.S-1. The Working Group moves potential conditions for consideration through the "Environmental Exposures Sub-Council," to the "Evidence-Based Policy Council" to the "VA Executive Board" before reaching the Secretary. Then once the conditions are selected, the conditions go through a "Condition-Specific Review Panel," an "Environmental Exposures Sub-Council," and an "Evidence-Based Policy Council" before again returning to the VA Executive Board and then the Secretary. The NASEM Report complains that this chart lacks the detail to make it legible for their evaluative purposes. *Id.* at 6. The chart names no place for veteran participation.

240. I am not the first to call for enhanced stakeholder participation in the presumption creation process. RAND has recommended that VA look to the Zadroga Act's approach to compensating those exposed to toxins in the 9/11 attacks and mandate veteran and survivor representation on the VA committees working to identify conditions and events for consideration. Ramya Chari, Heather M. Salazar & Lauren Skrabala, *Lessons from 9/11 for Supporting Veterans Exposed to Military Environmental Hazards*, RAND (Apr. 23, 2024), https://www.rand.org/pubs/perspectives/PEA1363-11.html [https://perma.cc/QAY6-Q2A3] (referring to James Zadroga 9/11 Health and Compensation Act of 2010, Pub. L. No. 111-347, § 3302, 124 Stat. 3623, 3627 (2011)).

continues to publish notice of potential topics of Working Group study for public comment, but toxic-exposed veterans should have a transparent mechanism to put their exposures and conditions on that agenda. A petition mechanism similar to the Energy Employees Occupational Illness Compensation Program Act of 2000 ("EEOICPA")[241] would allow a veteran claimant acting on behalf of a small class to *force* scientific study of the association between their toxic exposures and medical conditions and related rulemaking, in ways that petitions for rulemaking under the APA cannot.[242]

The EEOICPA provides compensation to civilian Department of Energy ("DOE") employees whose cancers are "as likely as not" related to exposure to radiation on the job. Employees for whom an individual dose estimate can be constructed proceed with compensation claims on an individual basis. Former employees injured in exposures for which there is not enough information to reconstruct individual dose estimates, however, can petition for the creation of a class of similarly situated former employees in the EEOICPA's "special exposure cohort." Classes in the special exposure cohort receive the equivalent of presumptive service connection; if DOE workers with certain conditions were present at certain job sites for a prescribed period of time, they receive benefits.[243]

As under PACT, the agency retains discretion in the petition process; whether a class is added to the special exposure cohort is ultimately a decision of the Secretary of the Department of Health and Human Services (subject to congressional veto), pursuant to the recommendation of the DOE's Advisory Board on Radiation and Worker Health. Yet unlike PACT, the EEOICPA and its implementing regulations allow exposed workers to trigger scientific study and the agency's consideration of new presumptions—largely within prescribed

241. 42 U.S.C. § 7384 (implementing regulations at 42 C.F.R. §§ 83.0–19 (2023)).

242. Toxic-exposed veterans, like any other group whose interests are affected by agency regulation, can put forward petitions for rulemaking. *See supra* notes 190–93 and accompanying text. But again, judicial review of agency decisions to engage in rulemaking is "limited to ensuring that the agency has adequately explained the facts and policy concerns it relied on and to satisfy [the court] that those facts have some basis in the record." Serv. Women's Action Network v. Sec'y of Veterans Affs., 815 F.3d 1369, 1374 (Fed. Cir. 2016) (citing Preminger v. Sec'y of Veterans Affs., 632 F.3d 1345, 1352 (Fed. Cir. 2011)). *But see* Edward Ward, Note, *"Indisputable" and "Particular": Why VA's Denial of a New Evidentiary Standard for MST-Related PTSD Is Arbitrary and Capricious*, 26 FED. CIR. BAR J. 203, 214 (2016) (arguing the Federal Circuit should have ruled otherwise). As such, courts overturn agency decisions not to adopt a rule "only in the rarest and most compelling of circumstances." WWHT, Inc. v. FCC, 656 F.2d 807, 818 (D.C. Cir. 1981); *see also* Daniel E. Walters, *Capturing the Regulatory Agenda: An Empirical Study of Agency Responsiveness to Rulemaking Petitions*, 43 HARV. ENV'T L. REV. 175, 219–20 (2019) (describing an empirical study of pro-regulatory environmental rulemaking petitions finding limited effect on agency action). The baseline difficulty of forcing agency action on APA rulemaking petitions is compounded by toxic-exposed veterans' lack of access to the information necessary to challenge agency inaction on a proposed presumption as arbitrary and capricious.

243. *See NIOSH Radiation Dose Reconstruction Program: Special Exposure Cohort (SEC)*, CTRS. FOR DISEASE CONTROL & PREVENTION (June 30, 2022), https://www.cdc.gov/niosh/ocas/ocassec.html [https://perma.cc/329Y-FP8M].

time limits—and provide an opportunity for exposed workers to be heard in an informal hearing and administratively appeal denied petitions.[244]

Critically, the statutory trigger for serious agency consideration of an exposed class's inclusion in the special exposure cohort is a low bar. Workers' petitions are deemed "justified" for further evaluation if accompanied by evidence as basic as an affidavit that radiation exposure happened and was inadequately monitored.[245] The National Institute for Occupational Safety & Health ("NIOSH"), a component of the CDC, is then required to evaluate justified petitions, conducting its own fact research and scientific analysis. NIOSH makes a detailed recommendation to the Advisory Board as to whether reconstruction of individual doses is indeed infeasible and whether "there is a reasonable likelihood that such radiation dose may have endangered the health of members of the class."[246] Similar to the TEAM Act's process, the EEOICPA's Advisory Board provides public notice of and holds an informal hearing, at which exposed workers may speak, before the discretionary approval process begins. However, unlike TEAM, NIOSH provides exposed workers a "petition counselor" and ombudsman to help them develop "justified" petitions, and reports produced at each stage of the process are publicly available.[247]

An EEOICPA-like mechanism to force timely investigation of toxic exposures' health effects and consideration of new presumptions of service connection for toxic-exposed veterans would remedy the information and political power disadvantages that veterans of smaller toxic exposure events or with less common conditions face in pressuring agencies to swiftly act. The Secretary has general rulemaking power,[248] and nothing in the TEAM Act prevents him from using it to adopt this mechanism by rulemaking as a step prior to public notice of the formal evaluations the Secretary plans to conduct. Presumptions will not necessarily result from these petitions; studies that result may find a negative association between a given exposure and condition, for example. However, as long as the information underlying the studies becomes public, veteran claimants may be able to use it to engage their own experts and turn to other avenues to continue pursuing their claims, including litigation.

This proposal is only one of many possibilities to increase veteran power to force presumption creation or to increase the likelihood that the Secretary exercises his discretion generously. To further support presumption creation where evidence of an association is weaker, VA could, for example, reduce monthly disability compensation proportionally by the uncertainty of the

244. 42 C.F.R. pt. 83.

245. 42 C.F.R. § 83.9 (listing the range of testimonial, medical, and scientific evidence that may "justify a petition," and providing that only one form of evidence is necessary).

246. 42 C.F.R. § 83.13(c)(3) (using the same language as Exec. Order No. 13,179, 65 Fed. Reg. 77487, 77490 (Dec. 11, 2000)).

247. *See NIOSH Radiation Dose Reconstruction Program: Advisory Board: Reports from the Technical Support Contractor*, CTRS. FOR DISEASE CONTROL & PREVENTION (June 30, 2022), https://www.cdc.gov/niosh/ocas/bdscarpts.html [https://perma.cc/HBX7-V4U8] (collating reports).

248. 38 U.S.C. § 501(a) ("The Secretary has authority to prescribe all rules and regulations which are necessary or appropriate to carry out the laws administered by the Department and are consistent with those laws . . . .").

association underlying the service connection grant.[249] (Though I would not recommend this, as an "uncertainty reduction" would undercut the income replacement rationale for service-connected disability compensation, at the very least.) As for additional tools for veterans, the Secretary could name veteran stakeholders to the Working Group to give them a direct voice in recommendations for formal evaluation.[250]

Policymakers should continue to strengthen alternatives to presumptive service connection as well. Congress could create private causes of action for veterans to litigate toxic exposure and other claims in district court, for example, or allow the Veterans Court to refer or appellants to remove complex toxic exposure appeals to district court for de novo review. District court proceedings with the promise of attorneys' fees would facilitate expert evidence development for classes of exposed veterans.

This is what is happening under the Camp Lejeune Justice Act, a section of the PACT Act that allows veterans exposed to toxins in the water at the base from the early 50s through the late 80s to sue for tort damages in the Eastern District of North Carolina.[251] As the first district court cause of action for veterans injured in service, the Act provides that any damages will be awarded in lieu of VA disability compensation and offset by prior disability compensation received.[252] This cause of action has already given Camp Lejeune-exposed veterans alone access to district court expert discovery tools, as well as to aggregate proceedings. In a multi-district litigation-esque setup, the Eastern District has tasked counsel with developing a schedular method for resolving claims, though each claim that does not settle would need to be tried individually.[253] Remarkably, these Camp Lejeune claims are subject not to the civil preponderance of the evidence standard but to the veterans benefits system's "benefit of the doubt" standard.[254] Importing the veterans' equipoise standard to the district court forum neutralizes what had been the major argument against segregation of veterans' claims in the Veterans Court.

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249. For a similar proposal, see David Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 849, 856–59 (1984). Rosenberg argued for proportional liability according to potential risk created by one of multiple potential tortfeasors in toxic tort cases where the factfinder cannot pinpoint the cause of a toxicogenic disease for an individual plaintiff. Congress has made VA the sole payer for in-service toxic exposure injuries (now with the Camp Lejeune exception). So, in the case of a veteran with lung cancer who was exposed to burn pits but also smoked and worked post-serve at an oil refinery, the proposal would be that VA would simply pay its "share" of possible causation.

250. The IOM had recommended including VSOs and other veteran stakeholders in the formal advisory committee for presumption decision-making, for example, commingling their voices with scientists'. NASEM REPORT 2008, *supra* note 39, at 330–31.

251. Honoring our PACT Act of 2022, Pub. L. No. 117-168, § 804, 136 Stat. 1759, 1802.

252. *Id.* § 804(e)(2).

253. *See generally* Order, *In re* Camp Lejeune Water Litig., No. 23-cv-897 (E.D.N.C July 19, 2023) (providing a detailed plan for the attorneys involved in this action).

254. Honoring our PACT Act of 2022 § 804(c)(2) ("To meet the burden of proof described in paragraph (1), a party shall produce evidence showing that the relationship between exposure to the water at Camp Lejeune and the harm is . . . sufficient to conclude that a causal relationship is at least as likely as not.").

Under the Camp Lejeune Justice Act, litigants are comparatively disadvantaged primarily by application of the Federal Rules of Evidence in an adversarial factfinding setting, not their burden of proof.[255]

The Camp Lejeune Justice Act's move to outsource complex veteran toxic exposure claims to the district court may well be the pilot for future transfer of mass tort-esque claims out of the Veterans Court. However, we might assume that Congress and VA's massive investment in the PACT Act's passage and implementation means that veterans of other toxic exposure events must operate within the system it has created for some time yet.

As such, VA should use tools it already has—chiefly, the Board's of Veterans' Appeals subpoena power[256]—to improve its factfinding in the regular course of service connection adjudications where the veteran's evidence for positive association between their exposure and condition contradicts VA's evidence against, as was the case in *Skaar*.[257] The Board should be using its subpoena power to secure for claimants' review (and the regional offices should be requesting, pursuant to their duty to assist)[258] records of exposures, raw data, studies VA examiners rely on, and more from the DoD and the National Academies. Where claimants have credibly challenged VA experts' opinion evidence against service connection, the Board should further use its subpoena power to compel experts to appear at hearings, lifting the "battle of the experts" off paper.[259]

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255. Brooks, *supra* note 5, at 180–89. The Camp Lejeune Justice Act conjures up the specter of the pre-VJRA *Agent Orange Product Liability Litigation*, in which Judge Jack Weinstein found plaintiffs' expert evidence to be inadmissible, inevitably leading them to lose the case. *In re* "Agent Orange" Prod. Liab. Litig., 611 F. Supp. 1223, 1256 (E.D.N.Y. 1985).

256. Although the Secretary has limited the Board's subpoena power by regulation to circumstances where "necessary evidence cannot be obtained in any other reasonable way," 38 C.F.R. § 20.709(a) (2023), the underlying statute contains no such restrictions. *See* 38 U.S.C. § 5711. The Secretary should consider amending the Board subpoena regulation to liberalize its use.

257. *See supra* Section II.A.3. Whether the appellate Veterans Court should in turn be bolder in reversing Board fact-finding to grant veterans' claims instead of remanding for further consideration is outside the scope of this Article but may help toxic exposure claimants as well. *See* Michael P. Allen, *Commentary on Three Cases from the Federal Circuit and the Court of Appeals for Veterans Claims as We Approach Twenty-Five Years of Judicial Review of Veterans' Benefits*, 5 VETERANS L. REV. 136, 151–55 (2013) (sketching out the authority for greater Veterans Court oversight of Board fact-finding).

258. The Appeals Modernization Act of 2019 ("AMA") relieved the Board of the "duty to assist," but appellants retained the ability to present new evidence at the Board. Veterans Appeals Improvement and Modernization Act of 2017, Pub. L. No. 115-55, Sec. 5103A, § 2(d), 131 Stat. 1105, 1105–06; 38 U.S.C. § 7105(b)(3). While this change means the Board is no longer required to remand claims for additional fact development, there is nothing to suggest that its subpoena power is affected, especially as the regulation is in the part that applies to both AMA and non-AMA claims. However, prior to implementation of the AMA in 2019, the Board also had the power to request an independent medical opinion from a non-VA expert to assist with complex factfinding as to the nexus element. This tool is still available to the Board in adjudicating appeals filed before the AMA took effect but is no longer available for post-AMA claims. *See* 38 C.F.R. § 20.901; 38 U.S.C. § 7109 (repealed 2017).

259. *But see generally* Michael D. Green, *Expert Witnesses and Sufficiency of Evidence in Toxic Substances Litigation: The Legacy of* Agent Orange *and Bendectin Litigation*, 86 NW. U. L. REV. 643 (1992) (arguing that only changes to the causation standard used, not expert witness reform, can solve the problem).

Beyond use of subpoena power, advocates have also argued that the Board should adopt Social Security-esque hearing procedures to improve the quality of VA factfinding where complex scientific evidence is at stake.[260] Social Security claimants have timely access to the administrative record and the agency's expert medical opinions, and the medical expert can be required to testify, just as the claimant can subpoena and cross-examine other witnesses.

Importing discovery-like tools into Board practice may allow some sophisticated claimants to overcome evidentiary disadvantages in the claim adjudication process, though success is likely to be limited to claimants with their own experts in cases where sufficient data already exists. In well-developed cases, the Board might consider conducting factfinding hearings on complex scientific and medical questions common to certain toxic-exposed claimants on a class basis, as advocates have argued.[261] Although the Board has never done so, there is nothing in statute or regulation preventing it from conducting aggregate factfinding to promote evidentiarily fair and efficient adjudications for veterans seeking benefits for toxicogenic and radiogenic conditions. The Board's use of aggregate procedures would be a particular boon to efficiency in the veterans benefits adjudication system now that the Federal Circuit has brought about the death of the nascent veterans class action at the Veterans Court.[262]

CONCLUSION

The PACT Act is unquestionably a victory for toxic-exposed veterans. It establishes presumptive access to disability compensation and healthcare for the first time for veterans with twenty-three enumerated cancers and respiratory illnesses linked to burn pit exposure. It rolls out healthcare access for *all* burn pit-exposed veterans, regardless of whether they have a presumptive condition. And the TEAM Act codifies a new standardized mechanism for VA to consider whether to add (or remove) medical conditions and toxic exposure events to the presumptives list.

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260. McClean, *supra* note 135, at 311; *see also* Ridgway, *supra* note 119, at 408 ("[T]he initial decision-makers at the fifty-seven regional offices . . . are neither medical professionals nor attorneys.").

261. *See* Michael Sant'Ambrogio & Adam S. Zimmerman, *Inside the Agency Class Action*, 126 YALE L.J. 1634, 1688–91 (2017) (arguing for the fairness and efficiency of agency class actions to decide general causation in medically complex National Vaccine Injury Compensation Program adjudications, among other agency examples); *see also Proposed Feeley Class Action at the Board of Veterans' Appeals*, YALE L. SCH., https://law.yale.edu/studying-law-yale/clinical-and-experiential-learning/our-clinics/veterans-legal-services-clinic/proposed-feeley-class-action-board-veterans-appeals [https://perma.cc/C9YH-ELS4] (describing efforts to initiate aggregate action at the Board).

262. The Federal Circuit held in *Skaar v. McDonough* that the Veterans Court lacks the jurisdiction to hear claims of putative class members without a Board decision in their individual claim. Skaar v. McDonough, 48 F.4th 1323, 1333 (Fed. Cir. 2022). Although in some rare circumstances equitable tolling might permit inclusion of appellants whose 120-day window to appeal their Board decision to the Veterans Court has expired, class participation is now limited to veterans with a Board decision on the common question of law or fact issued within 120 days of the class filing. It is therefore difficulty to imagine that the numerosity requirement could ever be met unless the Board were to aggregate claims and release of individual decisions.

The question is whether VA's implementation of the Act will let it live up to its potential. The new toxic exposure template is, in many ways, still a black box.[263] And where there is room to maneuver in an administrative process, there is room for political actors to influence outcomes. There is significant room in this new structure for the VA Secretary to act generously—this Article provides a principled basis for veterans' advocates to argue he should do so on a case-by-case basis moving forward. But those same arguments also support creating a transparent mechanism for veterans to put their conditions and exposures on the agenda to make the PACT Act's promise real for all toxic-exposed veterans.

263. *See* NASEM REPORT 2023, *supra* note 102, at 14 ("The committee finds that the presumption decision process is not inherently flawed; rather, the incomplete and opaque documentation of it makes it difficult to ascertain whether the process is fair, consistent, timely, and veteran centric.").

That said, from what is visible thus far outside of the black box, there is reason to hope that the Secretary will in fact use his presumption creation power generously moving forward. The Secretary has proposed to recognize Somalia as a presumptive location for burn pit exposure and has generously interpreted the PACT Act's presumption of service connection for burn pit-exposed veterans with "reproductive cancer of any type" to include breast and urethra and paraurethral gland cancers, for example. VA Adjudication Regulations for Disability or Death Benefit Claims Based on Toxic Exposure, 89 Fed. Reg. 79815, 79822–24 (proposed on Oct. 1, 2024).