GAO

U.S. GOVERNMENT ACCOUNTABILITY OFFICE

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February 8, 2022

The Honorable Jon Tester
Chairman
The Honorable Jerry Moran
Ranking Member
Committee on Veterans' Affairs
United States Senate

The Honorable Mark Takano
Chairman
The Honorable Mike Bost
Ranking Member
Committee on Veterans' Affairs
House of Representatives

VA Disability: Vietnam Veterans' Claims for Type 1 Diabetes

Accessible Version

About six million veterans living today served during the Vietnam War, and in fiscal year 2020 more than 1.4 million of these veterans received a total of $28 billion in disability compensation.[1] Diabetes mellitus is one of the most prevalent conditions for which the Department of Veterans Affairs (VA) pays compensation to Vietnam War era veterans. In 2020, diabetes represented roughly 6.5 percent of all service-related conditions for which these veterans received compensation, according to VA.

Diabetes mellitus can be classified as either Type 1 or Type 2. The Veterans Benefits Administration (VBA)—the administration responsible for processing veterans' disability compensation claims—evaluates claims for each type differently because Type 2 diabetes has been found to be related to exposure to tactical herbicides used in Vietnam, such as Agent Orange.[2] VA presumes that Vietnam veterans were exposed to Agent Orange.[3] VA also

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[1]Approximately six million U.S. veterans living today served in any country during the Vietnam War. See Veterans Benefits Administration, *Annual Benefits Report Fiscal Year 2020*, (Washington, D.C.: June 2021). Regarding those who served within the Republic of Vietnam, approximately 2.7 million veterans, living and deceased, served in Vietnam during the war. See VA Office of Research and Development, *Vietnam Veterans Fact Sheet*, https://www.research.va.gov/topics/vietnam.cfm.

[2]In this report, we refer generally to herbicides as "Agent Orange" because it was the most common herbicide agent used in Vietnam. However, there were a range of tactical herbicides used in Vietnam that are known as "rainbow herbicides" and included Orange, Purple, Pink, Green, Blue, and White.

[3]VA generally presumes that veterans who served in the Republic of Vietnam during the period beginning on January 9, 1962, and ending on May 7, 1975, were exposed to Agent Orange. See 38 U.S.C. § 1116(f) and 38 C.F.R. § 3.307(a)(6)(iii). VA also recognizes other locations such as Thailand and the Korean demilitarized zone as areas of Agent Orange exposure.

presumes that Vietnam veterans' Type 2 diabetes is connected to their military service based, in part, on the National Academy of Sciences' conclusion that there is at least "limited or suggestive" evidence of an association between Type 2 diabetes and Agent Orange.[4] In contrast, VA does not presume Type 1 diabetes is associated with exposure to Agent Orange, and, therefore, requires evidence to support a possible connection between veterans' Type 1 diabetes and their military service.

The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 includes a provision for GAO to examine how VA processes disability compensation claims submitted by veterans who have Type 1 diabetes and were exposed to an herbicide agent used in Vietnam during the Vietnam War.[5] This report examines (1) what is known about the number of Vietnam veterans granted or denied disability compensation benefits for Type 1 diabetes, and (2) how VA evaluates disability compensation claims for veterans with Type 1 diabetes who served in the Vietnam War and were exposed to an herbicide agent.

To determine how many Vietnam veterans' claims for Type 1 diabetes VBA granted or denied, we interviewed VBA officials on the types of data they collected and could compile for our purposes. To identify as many Type 1 diabetes claims as possible using available data, VBA performed a customized text search of claims decisions from fiscal years 2003 through 2021 (as of July).[6] We reviewed these data to identify the information VBA captures on these decisions.[7] We determined that these data were sufficiently reliable for the purposes of stating how many claims decisions VBA identified as potentially involving Type 1 diabetes and, as discussed below, for selecting a non-generalizable sample of claims decisions for review.

To determine how VBA evaluates Type 1 diabetes claims, we reviewed VBA's guidance and procedures as well as relevant federal laws and regulations. We also reviewed a non-generalizable sample of 30 claims decisions involving Type 1 diabetes from fiscal years 2017 through 2021 to better understand the types of evidence claims processors consider when determining whether to grant or deny benefits.[8] We did not assess whether VBA made the

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[4]38 C.F.R. § 3.309(e) and 66 Fed. Reg. 23,166, 23,167 (May 8, 2001). See also National Academies of Sciences, Engineering, and Medicine, *Veterans and Agent Orange: Update 11* (Washington, D.C.: The National Academies Press, 2018).

[5]Pub. L. No. 116-283, § 9108, 134 Stat. 3388, 4785 (2021).

[6]VBA performed a search of the free text entered by claims processors as part of their claims decisions from fiscal year 2003 through July 2021 for terms such as "Type 1" and "T1D," among several others. According to VBA officials, 2003 is the earliest full year with available administrative data both on decisions to grant and to deny disability claims, and with searchable text that can help identify claims involving Type 1 diabetes.

[7]Our analysis included all veterans who, during active military, naval, or air service, served in or off the coast of the Republic of Vietnam during the period beginning on January 9, 1962, and ending on May 7, 1975, and were exposed to an "herbicide agent" as defined in 38 U.S.C. § 1116(a)(3).

[8]We selected a total of 30 claims from a list of 304 claims decisions identified by VBA as potentially involving Type 1 diabetes from fiscal years 2017 through 2021. We randomized this list of 304 claims decisions and selected the first 10 claims on the list that were grants and the first 20 that were denials, given that the large majority of decisions were denials. As part of our selection process, we skipped cases in which it was unclear based on VBA's data whether the claim decision was actually for Type 1 diabetes. For example, in one case, the free text only included a brief, generic statement about the claim decision and mentioned both Type 1 and Type 2 diabetes. Ultimately, our sample included 11 grants and 19 denials because one of the claims we selected for review was initially denied but later granted. To ensure that we collected accurate information from the claims files, two GAO reviewers independently reviewed each claim file and completed a data collection instrument. Following the independent reviews, reviewers compared their responses in the data collection instruments and reconciled any differences.

correct decision to grant or deny benefits; rather, our claims file review focused on the reasons veterans said they had diabetes, evidence they cited, and how claims processors addressed such evidence in explaining their decisions.

For both questions, we interviewed VA officials familiar with Type 1 diabetes claims, and representatives from selected servicemember and veterans service organizations, as well as an expert from the National Academy of Sciences.[9] We also reviewed available literature on the potential association between Type 1 diabetes and herbicides used in Vietnam.

We conducted this performance audit from April 2021 to February 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Type 1 and Type 2 Diabetes

Diabetes mellitus is a disease that occurs when a person's blood glucose, also called blood sugar, is too high. Blood sugar levels increase because the body either produces too little, or does not effectively use, insulin to move glucose from food into cells to be used for energy. Over time, having too much glucose in the blood can cause health problems, such as heart disease, nerve damage, eye problems, and kidney disease. Diabetes mellitus is categorized in two primary types:

- Type 1 diabetes is usually diagnosed in children and teens, but may also develop in adults. It is a chronic condition in which the pancreas produces little or no insulin. Symptoms for Type 1 diabetes can start quickly—in a matter of weeks. Different factors, including genetics and some viruses, may contribute to Type 1 diabetes, but the exact causes are unknown.

- Type 2 diabetes is the most common form of diabetes. Type 2 diabetes can develop at any age, although it occurs most often in middle-aged and older adults. Individuals with Type 2 diabetes can still produce insulin, but the body becomes resistant to its effects, and, over time, the pancreas may stop producing insulin altogether. Additionally, symptoms of Type 2 diabetes often develop slowly—over the course of several years—and some individuals may not find out they have the disease until they have diabetes-related health problems. Several factors, including genetics, physical inactivity, obesity, and environmental factors may contribute to Type 2 diabetes.

National Academy of Sciences' Reviews on Veterans and Agent Orange Exposure

The Agent Orange Act of 1991 identified certain medical conditions as warranting a presumption of service connection for Vietnam veterans. The act directed VA to process claims submitted by eligible veterans for these conditions on a presumptive basis, that is, without requiring veterans to prove that their condition was caused by military service. The act also included provisions for the National Academy of Sciences to study whether additional conditions are associated with Agent Orange exposure. In addition, the act stated that when VA determines that a positive

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[9]We interviewed representatives from Vietnam Veterans of America, Disabled American Veterans, and the Military Officers Association of America. We also interviewed a senior program officer with the National Academy of Sciences.

association exists between exposure to an herbicide agent and the occurrence of a condition, VA is to develop regulations providing a presumption of service connection for that condition.[10]

Accordingly, the National Academy of Sciences produced a series of 12 reports on *Veterans and Agent Orange* from 1994 to 2018 to assess available evidence on various medical conditions and potential associations with Agent Orange exposure.[11] VA presumes that various medical conditions examined in these reports, including Type 2 diabetes, are related to Agent Orange exposure.[12] If a Vietnam veteran is diagnosed with one of these conditions, and other requirements are met, the condition is presumed to be connected to service.

Type 1 diabetes is not among the conditions that the National Academy of Sciences has identified as being associated with Agent Orange exposure.[13] Nonetheless, as with any other medical condition, VBA may grant disability benefits to veterans with Type 1 diabetes if veterans can provide evidence to support that their condition was caused or aggravated by their military service. As we have previously reported, it is often difficult to establish causation between an exposure and an adverse medical condition because scientific research has not always established a clear link between the contaminant and an adverse condition.[14]

Limited Information Is Available on the Number of Vietnam Veterans Granted or Denied Benefits for Type 1 Diabetes

VBA does not have comprehensive data to identify how many Vietnam veterans have applied for disability compensation for Type 1 diabetes, according to VBA officials. Specifically, VBA does not have data prior to 2003 on the number of decisions regarding veterans' claims for Type 1 diabetes. Consequently, Vietnam veterans who may have filed claims for Type 1 diabetes closer to completing their service in Vietnam could not be included in our analysis.

In addition, VBA does not have administrative data to distinguish between Type 1 and Type 2 diabetes because VA uses a single diagnostic code for diabetes mellitus that includes both types.[15] As a result, it is not possible to reliably identify all claims decisions that involved Type 1 diabetes, even for the years since 2003. Further, while the disability benefits questionnaire VBA uses when it asks a disability medical examiner to assess a veteran's condition does distinguish

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[10]Pub. L. No. 102-4, §§ 2-3, 105 Stat. 11, 11-15.

[11]For example, see National Academies of Sciences, Engineering, and Medicine, *Veterans and Agent Orange: Update 11*.

[12]For a complete list of these conditions, see 38 C.F.R. § 3.309(e).

[13]In addition to reviewing the National Academy of Sciences reports, we conducted a search of the available scientific literature on environmental exposures (including Agent Orange) and Type 1 diabetes. We did not identify any comprehensive studies that specifically examined Agent Orange exposure and Type 1 diabetes in humans. Some studies have examined dioxin (a key toxic component of Agent Orange) exposure and the development of Type 1 diabetes in mice but have reported differing results. See Johanna Bodin, Lars Christian Stene, and Unni Cecilie Nygaard, "Can Exposure to Environmental Chemicals Increase the Risk of Diabetes Type 1 Development?" BioMed Research International, vol. 2015, no. 208947 (2015). Several studies also highlighted Type 1 diabetes and dioxin exposure as an area for additional future research. For example, see also Barbara Predieri et al., "Endocrine Disrupting Chemicals and Type 1 Diabetes," International Journal of Molecular Sciences, vol. 21, no. 8, (2020): 2937.

[14]GAO, *Defense Infrastructure: DOD Can Improve Its Response to Environmental Exposures on Military Installations*, GAO-12-412 (Washington, D.C.: May 1, 2012).

[15]Diagnostic codes are numbers that VA assigns to show conditions that are the basis of the disability evaluation. Not every condition has its own diagnostic code, and sometimes multiple conditions may be captured by the same code.

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between Type 1 and Type 2 diabetes, VBA does not systematically capture these data from the forms. Rather, it uses this information on a claim-by-claim basis to make a disability rating decision.[16] VBA officials stated that while they do not capture the data separately, they are able to customize searches of claims to identify those with Type 1 diabetes, and they do similar searches for other types of claims.

Given that VBA does not specifically track data on Type 1 diabetes, we cannot reliably report the number of claims that VBA has granted or denied for Type 1 diabetes. However, based on the text search VBA performed for us covering fiscal year 2003 through July 2021, VBA identified around 1,900 decisions—for about 1,500 veterans—in which claims processors referred to Type 1 diabetes.[17] This rough estimate represented less than 1 percent of all decisions for diabetes mellitus during that time.[18] Among this subset of decisions that VBA identified as potentially involving Type 1 diabetes, VBA denied benefits in most cases.

During our interviews, VA officials and representatives of veterans service organizations said they did not expect there would be many claims for Type 1 diabetes. VBA and Veterans Health Administration officials stated that Type 1 diabetes most often develops in childhood or adolescence, and that individuals diagnosed with Type 1 diabetes would generally not be admitted into military service. Additionally, representatives from the two veterans service organizations and one servicemember association we interviewed stated that they have rarely seen claims from veterans for Type 1 diabetes.

VBA Evaluates Type 1 Diabetes Claims Using Evidence of a Direct Connection to Service or Presuming a Connection if the Condition Developed within a Year Following Service

VBA evaluates veterans' claims for Type 1 diabetes using two primary methods, direct service connection and presumptive service connection.

Direct service connection. As with any other condition, claims processors may be able to grant benefits for Type 1 diabetes if veterans can provide evidence that their condition was caused or aggravated by their military service. According to VBA officials, direct service connection would potentially apply if the veteran developed symptoms of Type 1 diabetes (e.g., elevated blood sugar levels)—or a related condition—during active service.[19] Officials stated that in this case, a claims processor would generally need to request that a disability medical examiner provide a medical opinion on whether the veteran's Type 1 diabetes is "at least as likely as not" to be related to their military service. Then, a VBA rating veterans service

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[16]A rating decision includes the decision on whether to grant or deny benefits and, for grants, a percentage rating indicating the amount of compensation to be paid.

[17]Some veterans filed claims for Type 1 diabetes multiple times during this period. As discussed in the next section, not all of these decisions necessarily included veterans who had a diagnosis of Type 1 diabetes. For example, while VBA's text search may have identified possible Type 1 diabetes claims, our file review found examples in which the veteran was actually diagnosed with Type 2.

[18]This percentage is our calculation using aggregate data provided by VBA.

[19]According to VA's "presumption of soundness," a veteran is "considered to have been in sound condition when examined, accepted and enrolled for service, except as to defects, infirmities, or disorders noted at entrance into service, or where clear and unmistakable (obvious or manifest) evidence demonstrates that an injury or disease existed prior thereto and was not aggravated by such service." See 38 C.F.R. § 3.304(b). Thus, a veteran would not necessarily have to prove that Type 1 diabetes was not present prior to military service. Conditions related to Type 1 diabetes would be medical conditions that may potentially lead to or be caused by Type 1 diabetes, such as retinopathy.

representative—a claims processor responsible for evaluating the evidence—would use that assessment to help make the decision about whether to grant or deny benefits.

Even if the veteran does not have evidence of Type 1 diabetes during service, officials said that VBA claims processors are expected to consider all potential evidence provided by the veteran that could support service connection. According to VBA claims processing procedures, relevant evidence may include (but is not limited to): oral and written statements; documents such as medical records or scientific studies, demonstrative evidence (e.g., photos), direct evidence (evidence capable of establishing a fact), and circumstantial evidence (evidence that may be used to help deduce a fact).

Presumptive service connection for chronic conditions. VBA may provide benefits to veterans on a presumptive basis for conditions classified as "chronic" under federal law and regulations, which includes Type 1 diabetes.[20] In particular, VBA claims processors may be able to grant benefits for Type 1 diabetes to any veterans who have evidence that their diabetes developed to a compensable degree—as determined by VA's Schedule for Rating Disabilities— within a year following military service. Depending on the evidence, claims processors may still request that a medical examiner provide a medical opinion to help inform the decision about whether presumptive service connection applies.

Among 30 VBA claims decisions we reviewed potentially involving Type 1 diabetes, claims processors granted or denied benefits for various reasons, and generally explained whether the veteran had evidence to support service connection:[21]

Reasons for grants. Among 11 decisions in which VBA granted benefits, claims processors provided four primary reasons for granting service connection; however, for more than half, the veteran had a diagnosis of Type 2 diabetes instead of Type 1:

- In six decisions, veterans had a diagnosis of Type 2 diabetes, and VBA granted benefits on a presumptive basis.[22]

- In two decisions, the veteran had evidence of Type 1 diabetes during or within a year of completing service, and a disability medical examiner opined that it was at least as likely as not that the veteran's condition was due to their military service.

- In one decision, the veteran had evidence of a medical condition during service that is related to Type 1 diabetes.

- In one decision, a disability medical examiner cited the veteran's medical history and scientific studies provided by the veteran to opine that it was at least as likely as not that the veteran's Type 1 diabetes was caused by the veteran's exposure to Agent Orange.

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[20]38 U.S.C. §§ 1101(3) and 1112(a) and 38 C.F.R. § 3.309(a).

[21]As previously noted, not all of the claims decisions VBA identified as potentially involving Type 1 diabetes necessarily involved a veteran who had a diagnosis of Type 1 diabetes. Stating that these claims decisions involved Type 1 diabetes means that claims processors at least mentioned Type 1 diabetes as part of their rating decision.

[22]Though the focus of our review was on Type 1 diabetes, we are reporting these results related to Type 2 diabetes because veterans may not necessarily report whether they have Type 1 or Type 2 diabetes when they file a claim. Whether a veteran files a claim for Type 1 or Type 2 diabetes—or does not specify a type—VBA claims processors are expected to evaluate service connection for whichever condition they may have, according to VBA officials.

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- In one decision, however, a claims processor incorrectly stated that Type 1 diabetes is eligible for presumptive service connection due to herbicide exposure and did not provide any other reason for granting service connection.[23]

Reasons for denials. For all 19 decisions we reviewed in which VBA denied benefits, claims processors explained why veterans were not approved for benefits. According to VBA officials, if a veteran files a claim for Type 1 diabetes due to Agent Orange exposure, claims processors still need to assess the claim for all potential routes to service connection before denying the claim solely because the Agent Orange presumption does not apply. No matter what reasons veterans provided for their condition, claims processors explained why the veteran did not qualify for service connection in all 19 decisions to deny benefits. For example, in eight decisions, claims processors noted that the veterans' treatment records did not include complaints, treatments, or diagnoses for Type 1 diabetes during service. In another example, the claims processor noted that the disability medical examiner did not find a link between the veteran's Type 1 diabetes and military service.

Agency Comments

We provided a copy of this draft to VA for review and comment. VA provided technical comments, which we incorporated as appropriate.

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We are sending copies of this report to appropriate congressional committees, the Secretary of VA, and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

GAO Contact and Staff Acknowledgments

If you or your staff have any questions about this report, please contact me at (202) 512-7215 or CurdaE@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made contributions to this report are Nyree Ryder Tee (Assistant Director), Justin Gordinas (Analyst in Charge), and David Reed. Also contributing to this report were Caitlin Dardenne, Eliot Fletcher, Alex Galuten, Monica Savoy, Joy Solmonson, Almeta Spencer, Barbara Steel, and Patrick Walsh.

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[23]VBA agreed that the claims processor did not provide an adequate explanation to support presumptive service connection. VBA also stated that the claim was prematurely granted and that they would facilitate corrective action with the regional claims processing office that completed the decision.