



Policy and Procedures for Adding Non-Cancer Conditions To the List of WTC-Related Health Conditions

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I. Authority

The Policy and Procedures for Adding Non-Cancer Conditions to the List of WTC-Related Health Conditions is based on the James Zadroga 9/11 Health and Compensation Act of 2010 (“Act”)¹ and the World Trade Center (WTC) Health Program regulations.²

II. Introduction

The Act provides two pathways to initiate the process of deciding whether to propose adding a health condition to the List of WTC-Related Health Conditions (“List”). These pathways are: (1) the Administrator of the WTC Health Program initiates the process at his own discretion;³ or (2) the Administrator initiates the process after receiving a petition⁴ by an interested party.⁵ A health condition may only be added to the List by rulemaking.

¹ Pub. L. 111-347, as amended by Pub. L. 114-113, codified at 42 U.S.C. § 300mm *et seq.*

² 42 C.F.R. Part 88.

³ 42 U.S.C. § 300mm-22(a)(6)(A).

⁴ When the Administrator receives a submission from an interested party to add a health condition to the List, he follows the steps outlined in the “Policy and Procedures for Handling Submissions and Petitions to Add a Health Condition to the List of WTC-Related Health Conditions” (available at: <http://www.cdc.gov/wtc/policies.html>) and determines whether the submission meets the requirements for a petition specified in 42 C.F.R. § 88.17(a)(1).

⁵ 42 U.S.C. § 300mm-22(a)(6)(B).

III. Review of Scientific and Medical Information and Administrator Determination

Once the process of determining whether to propose adding a health condition to the List is initiated, the WTC Health Program's Science Team reviews the scientific literature to determine if the available scientific information has the potential to provide a basis for a decision on whether to add the condition to the List.

A. Systematic Literature Search

Information is obtained about the health condition among 9/11-exposed populations by performing a systematic literature search.

B. Literature Evidence Review

Scientific information obtained in the systematic literature search, as well as any medical basis⁶ provided in the case of a petition, are first evaluated for relevance. Information is determined to be relevant if it is presented in peer-reviewed,⁷ published,⁸ epidemiologic studies⁹ of the health condition in 9/11-exposed populations. The quantity and quality¹⁰ of relevant studies are then reviewed for their potential to provide a basis for deciding whether to propose adding the health condition to the List. The findings of the review are documented and discussed with the Administrator.

C. Administrator Determination

The Administrator determines whether the evidence available in peer-reviewed, published, epidemiologic studies about the health condition among 9/11-exposed populations has the potential to provide a basis for a decision on whether to add the health condition and whether to proceed with an assessment of that information [see Section IV].

⁶ See 42 C.F.R. § 88.17(a)(iii); see also "Policy and Procedures for Handling Submissions and Petitions to Add a Health Condition to the List of WTC-Related Health Conditions" (available at: <http://www.cdc.gov/wtc/policies.html>).

⁷ The Administrator has determined that articles and reports published in CDC's *Morbidity and Mortality Weekly Report* (MMWR) are also eligible for review for their potential to provide a basis for deciding whether to propose adding a condition to the List. MMWR publications undergo a review process that has been independently evaluated and found to be similar or equivalent to peer review.

⁸ Published studies include those published online ahead of print.

⁹ Epidemiologic studies include "descriptive epidemiologic studies" which describe the "what, who, where, when and why/how of a situation," as well as analytic epidemiologic studies which involve the use of a comparison group. See Centers for Disease Control and Prevention, HHS, *Principles of Epidemiology in Public Health Practice* (3rd ed. 2012), at 1-46. The WTC Health Program reviews these epidemiologic studies to determine if they identify causal associations between exposures and health outcomes with the potential to provide a basis for deciding whether to propose adding a condition to the List.

¹⁰ The evaluation of quantity and quality includes consideration of any limitations, such as bias or confounding, of the reviewed studies.

1. Where the Administrator determines that the evidence does not provide a sufficient basis for a decision:
 - a. The evaluation is documented and archived according to document management requirements; and
 - b. If the evaluation was initiated by a petition, the Administrator:
 - i. Publishes the determination in the *Federal Register* that the available information is insufficient to take action;¹¹ and
 - ii. Notifies the petitioner in writing of the decision simultaneously to the determination being published in the *Federal Register*.
2. Where the Administrator determines that the available evidence has the potential to provide a basis for a decision, the Administrator may:
 - a. Direct the Science Team to assess the scientific and medical evidence and provide input on whether the available information supports a causal association between 9/11 exposures and the health condition [see Section IV.A.], and
 - b. In addition, the Administrator may request advice from the WTC Health Program Scientific/Technical Advisory Committee (STAC) [see Section V.B.].

IV. Assessment of Scientific and Medical Information

A. Assessment Process

1. Review Criteria

The peer-reviewed, published, epidemiologic studies of 9/11-exposed populations are assessed by applying the following criteria extrapolated from the Bradford Hill criteria,¹² as appropriate:

¹¹ 42 U.S.C. § 300mm-22(a)(6)(B)(iv).

¹² Injury studies are instead assessed for relevance, quantity, quality, known causation, and onsite occurrence. See generally Baker SP, O'Neill, Ginsburg MJ, & Guohua L. (1992), *The Injury Fact Book* 2nd ed. New York: Oxford University Press (regarding causation); see also National Academies Press (1985) *Injury in America: A continuing public health problem*. The injury studies provide information about injuries recorded in contemporaneous medical records and studies which when combined with known hazards and known connections between those hazards and injury may demonstrate concordance of an injury and 9/11 exposures, allowing the Administrator to evaluate whether there is support for a causal association between those exposures and the injury.

- a. Strength of the association between a 9/11 exposure and the health condition (including the precision of the risk estimate¹³);
- b. Consistency of the findings across multiple studies. If only a single study is available for assessment, the consistency of findings cannot be evaluated and more emphasis will be placed on evaluating the strength of the association and the precision of the risk estimate;
- c. Biological gradient or dose-response relationships between 9/11 exposures and the health condition; and
- d. Plausibility and coherence with known facts about the biology of the health condition.

2. Discussion with Administrator

The Science Team ensures that the results of the assessment are documented and discussed with the Administrator.

B. Administrator Actions

1. If the assessment was performed in response to a petition, the Administrator takes one of the following actions:¹⁴
 - a. If the evidence provides substantial support¹⁵ for a causal association between 9/11 exposures and the health condition, then the Administrator publishes in the *Federal Register* a notice of proposed rulemaking (NPRM) to add the health condition to the List;¹⁶ or
 - b. If the evidence provides substantial support that 9/11 exposures are not causally associated to the health condition, then the Administrator publishes in the *Federal Register* a determination not to propose a rule and the basis for such determination;¹⁷ or

¹³ A precision of the risk estimate describes the uncertainty inherent in estimating the strength of association (the effect size) between exposure and health effect from observational data. It is expressed as a confidence interval illustrating a range of values that contains the true effect size. A narrow confidence interval indicates a more precise measure of the effect size and a wider interval indicates greater uncertainty.

¹⁴ If the Administrator exercises his discretion to request review and recommendation from the STAC, he will also take the STAC's recommendation into consideration in determining which of the actions described in Section IV.B.1. to take [see Section V].

¹⁵ The substantial support standard is met when the WTC Health Program assesses all of the available, relevant information and determines with high confidence that the evidence supports a causal association between the 9/11 exposure(s) and the health condition.

¹⁶ 42 U.S.C. § 300mm-22(a)(6)(B)(ii).

¹⁷ 42 U.S.C. § 300mm-22(a)(6)(B)(iii).

- c. If the evidence is insufficient to take either of the actions in IV.B.1.a. or b. above, then the Administrator publishes that determination in the *Federal Register*,¹⁸ or
 - d. If the evidence provides only modest support¹⁹ for a causal association between 9/11 exposures and the health condition, then the Administrator requests additional assessment of whether a causal association is supported by other published, peer-reviewed, epidemiologic studies of associations between 9/11 agents²⁰ and the health condition.
 - i. The evaluation of these other studies must include an assessment of the similarity of the exposure conditions documented in the epidemiologic studies and the exposure conditions that occurred as a result of the 9/11 terrorist attacks and cleanup. Similarity of exposure conditions includes factors such as magnitude, route of exposure, physical form (e.g., particulate, gas, fume, vapor, or solute), duration, and timing. Consideration is given to adverse health outcomes from acute and subchronic exposures.²¹
 - ii. For outcomes from subchronic exposures, the consistency of the presence of the 9/11 agent during the response and recovery should be assessed.
 - iii. If the additional assessment adds enough support for the Administrator to determine that there is substantial support¹³ for a causal association between 9/11 exposures and the health condition, the Administrator publishes in the *Federal Register* an NPRM to add the health condition to the List. In the absence of substantial support for a causal association, the Administrator determines the evidence is insufficient to take action and then publishes that determination in the *Federal Register*.
2. If the assessment was initiated by the Administrator, the Administrator may take one of the actions described in Section IV.B.1. above.

¹⁸ 42 U.S.C. § 300mm-22(a)(6)(B)(iv).

¹⁹ The modest support standard is met when the WTC Health Program assesses all of the available, relevant information and determines with moderate confidence that the evidence supports a causal association between the 9/11 exposure(s) and the health condition.

²⁰ 9/11 agents are chemical, physical, biological, or other agents or hazards reported in a published, peer-reviewed exposure assessment study of responders or survivors who were present in the New York City disaster area or at the Pentagon site, or the Shanksville, Pennsylvania site, as those locations as defined in 42 C.F.R. § 88.1.

²¹ Adverse health outcomes are a function of both exposure concentration and duration. Exposure must have been substantially likely to have been a significant factor resulting in an adverse health outcome.

V. WTC Health Program Scientific/Technical Advisory Committee (STAC)

A. Convening the STAC

The Administrator may convene the STAC if he determines that its advice would be helpful. For example, where there is need of an interpretation of conflicting or inconclusive published scientific evidence, the Administrator may convene the STAC.

B. Meeting Procedures

If the Administrator decides to request a recommendation from the STAC regarding a health condition, the Administrator provides a charge to the STAC, and the Designated Federal Official (DFO) works with the STAC to schedule meetings and assemble information needed to develop recommendations on whether 9/11 exposures have a causal association with the health condition.

C. Time Limits

1. If a petition to add a health condition to the List has been received and the Administrator decides to exercise his discretion to convene the STAC, then the Administrator must make his request for a STAC recommendation within 90 days of receipt of the petition.
2. If the Administrator requests a recommendation from the STAC, whether following the receipt of a petition or as part of an Administrator-initiated review, the Administrator will send a letter to the STAC Chair requesting advice on whether to add the health condition and establishing a time period of 90 days, with potential extension up to 180 days, for the committee to provide recommendations and the scientific and medical basis for those recommendations.
3. After receiving the recommendations from the STAC, the Administrator evaluates the STAC's advice and takes appropriate action under Section IV.B. not later than 90 days after receipt of the recommendation.

Exception: The option found in Section IV.B.1.c. above is not an option for the Administrator when advice has been requested from the STAC in response to a petition.

VI. Rulemaking

A. NPRM

If the Administrator decides to propose adding the health condition to the List, he publishes an NPRM in the *Federal Register* to that effect. The NPRM solicits public comments. The Administrator also conducts an independent peer review of the

Program's evaluation of the scientific and technical evidence supporting the addition of the condition.

1. Public comments. All public comments received are considered and responded to, as appropriate, in the final rule preamble. The public comments are posted to the rulemaking docket.
2. Independent Peer Review. The Program requests peer review from three subject matter experts for the health condition to be added.
 - a. Identification of peer reviewers. The Administrator identifies qualified peer reviewers who are outside of NIOSH, with input provided by the STAC.
 - b. Charge to peer reviewers. Peer reviewers are asked to review the evaluation of the evidence for adding the health condition to the List within the context of this policy, and provide a brief written report answering the following questions:²²
 - i. Are you aware of any other studies which should be considered? If so, please identify them.
 - ii. Have the requirements of this *Policy and Procedures* been fulfilled? If not, please explain which elements are missing or deficient.
 - iii. Is the interpretation of the available evidence appropriate, and does it support the conclusion to add the health condition, as described in the regulatory text, to the List? If not, please explain why.
 - c. All peer reviewers' comments are considered and responded to in the final rule preamble. The peer reviews are compiled without attribution and posted to the rulemaking docket.

B. Final Rule

After reviewing the public comments and peer reviews, the Administrator determines whether the rationale discussed in the NPRM is changed by the information supplied by commenters. If the evidence continues to support the addition of the health condition:

1. A final rule is developed and published in the *Federal Register*;
2. The condition is added to the List; and

²² The questions given to the peer reviewers may be modified by the Administrator, as necessary, for the specific health condition being considered.

3. Implementation procedures are developed, which may include:
 - a. Exposure qualifications;
 - b. Time intervals for diagnosis and/or symptom onset; and
 - c. Other procedures as appropriate to the particular health condition.

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