

ORIGINAL BOARD RECOMMENDATION (APRIL 2017)

Advisory Board on Toxic Substances and Worker Health Recommendations – Adopted at April 18-20, 2017 Meeting

Recommendation #4

Revisions of Occupational History Questionnaire

- A. The Advisory Board recommends expanding the current list of hazards, exposures, and materials on the current Occupational History Questionnaire (OHQ) to include the list of hazards and/or materials used by the Building Trades National Medical Screening Program (BTMed).
1. For each exposure reported, the worker should be asked to describe how he/she was exposed to each material with an emphasis on describing the tasks associated with the exposure; this would be captured using free text. The worker would also be asked to rate the frequency of exposure to each hazard, using the scale from BTMed. In addition, we suggest adding a box next to each exposure on the list, asking if the worker used the material directly or was exposed as a bystander.

The current version of the OHQ asks about specific exposures that could be expanded with the text box and assessment of exposure frequency.

2. The list of hazards should include asbestos; silica; cement dust; engine exhausts; acids and caustics; welding, thermal cutting, soldering, brazing; metal cutting and grinding; machining aerosols; isocyanates, organic solvents, wood dust, molds and spores. Each of these has been shown to cause chronic obstructive pulmonary disease (COPD) and other health conditions.

The Advisory Board also recommends adding to the OHQ the list of tasks that is currently used in the exposure assessment by BTMed.

Rationale

The goal of this recommendation is to expand the amount of information on specific hazards and materials available to the claims examiner, the consulting industrial hygienist, and the medical consultant. To determine if a disease is related to exposures one generally need to know whether an exposure occurred and to be able to assess duration and intensity in a qualitative way. The worker's description of hazards and associated tasks is widely considered the most important part of any occupational medicine consultation, and needs to be included in the OHQ.

A primary goal of the OHQ is to identify hazardous exposures for a specific worker, so that information can be used in a causation determination. A worker may not know the names of all the materials he/she used, but will know the tasks she/he performed. Task alone, even without the names of the associated hazards can give the industrial hygienist a good sense of what exposures occurred, and what additional questions need to be asked in the document acquisition request or directly from the worker.

EEOICP Bulletin 16 – 03 describes a new process, the direct disease link work process (DDLWP), to link medical conditions to specific tasks. The guidance document states that “Data supplied by an employee or survivor in an occupational history or other personal statements can be accepted as reliable when sufficient detail or other information is provided that documents the scope and type of work performed.” The subcommittee believes that the OHQ, if revised as recommended, would meet this standard.

As additional support for these recommendations, the Board notes that Bulletin 16 – 03 states “the CE needs to carefully compare what job tasks the employee actually performed” when using the DDLWP. It also states “To obtain a causation opinion, the CE prepares a summary of the employment that specifically references how much time the employee spent working on one or more DDLWP and describes the work.” Given that the current OHQ does not collect information on tasks, nor on length of time performing any specific task or operation, it is important to revise the OHQ to allow the claims examiner to effectively utilize the DDLWP.

The Board discussed the feasibility of creating a list of tasks for production workers similar to what BTMed uses for construction workers but felt that would be almost impossible given the wide range of tasks over the years in the DOE complex. The alternative, of getting a more detailed occupational history from each worker, will provide the comparable information.

- B. The Advisory Board recommends adding a specific question to the OHQ regarding vapors, gases, dusts and fumes (VGDF). We suggest adding:
1. The question: “Have you been exposed to vapors, gases, dusts and fumes in your work at DOE?”
 2. If the answer to (a) is “yes”, the worker should be asked about frequency of exposure to VGDF overall using the scale above.
 3. If the answer to (a) is “yes” the worker is then asked “Have you already reported all exposures to vapors, gases, dust and fumes in your answers above?” If not, he/she should be asked to describe additional tasks and materials associated with exposure, to VGDF, the frequency using the scale recommended above under recommendation (1), the assessment whether the exposure was through direct use or as a bystander, and an assessment of the number of years of exposure.

Rationale

Substantial medical literature has investigated the etiology of COPD among general populations in the U.S., Italy, New Zealand, Poland, Australia, Spain, and elsewhere (see reviews in ATS Statement, 2003; ATS Statement, 2010 (1;2)).

In 2003 the American Thoracic Society, which is the preeminent respiratory disease organization in the United States, published the enclosed paper concluding that occupational exposures were responsible for a substantial fraction of COPD in the United States. Another paper from the American Thoracic Society published in 2010, with Eisner as the lead author and the title “An Official American Thoracic Society Public Policy Statement: Novel Risk Factors and The Global Burden of Chronic Obstructive Pulmonary Disease,” describes that there is a very strong and well accepted relationship between occupational exposures and COPD; see the section starting on page 704. This document describes that it is a strong causal relationship and describes other literature that has identified some specific agents that are part of the overall occupational exposures to vapors gases dust and fumes. Table 5 in this paper lists some studies that have identified specific agents, including asbestos and quartz; quartz is another name for as crystalline silica.

Other primary research studies have defined the causative occupational exposures as a combined exposure to vapors, gases, dusts and fumes (VGDF). These large studies of varying study designs have consistently shown that occupational exposures defined as “gases, dusts, vapors, and fumes” increase the risk of COPD. A dose-response relationship has been seen (7;8), and the effect is observed among both smokers and non-smokers (4;5). The effect of smoking and occupational exposures appears to be additive. A recent study published looked at COPD and occupational risks in DOE facilities specifically, and found that VGDF significantly increased the risk for COPD (9).

Therefore, it is essential to assess workers’ exposures to VGDF. As noted above, research has shown that the question “Have you been exposed to vapors, gases, dusts and fumes?” predicts COPD in population-based studies.

COPD is caused by cumulative exposure, as demonstrated by the presence of a dose-response in population-based studies. This fact means that all on-going exposures to VGDF contribute and aggravate dust-induced COPD.

- C. The Board recommends that the version of the OHQ developed in response to these recommendations be tested multiple times to determine if it is user friendly and has face validity.

Rationale

The Board understands that these changes would make for a longer questionnaire, but we believe adding the worker's description of how they were exposed to materials is essential for development of the claim. We understand the Department's concern that workers, when presented with a list of hazards, might check off all hazards. Adding a narrative description of how the worker was exposed to that hazard would provide validation of the exposure, since such a narrative requires knowledge and understanding of tasks. When the questionnaire is reviewed by the industrial hygienist, the hygienist will be able to see if the narrative is consistent with general IH knowledge about that occupation or specific knowledge about the site, and can determine if the OHQ can be used as the basis for exposure assessment.

References

1. Eisner MD, Anthonisen N, Coultas D, Kuenzli N, Perez-Padilla R, Postma D, et al. An official American Thoracic Society public policy statement: Novel risk factors and the global burden of chronic obstructive pulmonary disease. *Am J Respir Crit Care Med* 2010 Sep 1;182(5):693-718.
2. Balmes J, Becklake M, Blanc P, Henneberger P, Kreiss K, Mapp C, et al. American Thoracic Society Statement: Occupational contribution to the burden of airway disease. *Am J Respir Crit Care Med* 2003 Mar 1;167(5):787-97.
3. Balmes JR. Occupational contribution to the burden of chronic obstructive pulmonary disease. *J Occup Environ Med* 2005 Feb;47(2):154-60.
4. Blanc PD, Iribarren C, Trupin L, Earnest G, Katz PP, Balmes J, et al. Occupational exposures and the risk of COPD: dusty trades revisited. *Thorax* 2009 Jan;64(1):6-12.
5. Dement JM, Welch L, Ringen K, Bingham E, Quinn P. Airways obstruction among older construction and trade workers at Department of Energy nuclear sites. *Am J Ind Med* 2010 Mar;53(3):224-40.
6. Bergdahl IA, Toren K, Eriksson K, Hedlund U, Nilsson T, Flodin R, et al. Increased mortality in COPD among construction workers exposed to inorganic dust. *Eur Respir J* 2004 Mar;23(3):402-6.
7. Weinmann S, Vollmer WM, Breen V, Heumann M, Hnizdo E, Villnave J, et al. COPD and occupational exposures: a case-control study. *J Occup Environ Med* 2008 May;50(5):561-9.
8. Mehta AJ, Miedinger D, Keidel D, Bettschart R, Bircher A, Bridevaux PO, et al. Occupational exposure to dusts, gases, and fumes and incidence of chronic obstructive pulmonary disease in the Swiss Cohort Study on Air Pollution and Lung and Heart Diseases in Adults. *Am J Respir Crit Care Med* 2012 Jun 15;185(12):1292-300.
9. Dement J, Welch L, Ringen K, Quinn P, Chen A, Haas, S. A case-control study of airways obstruction among construction workers. *Am J Ind Med* 58:1083-1097, 2015.

DOL RESPONSE (NOVEMBER 2017)

Department of Labor Responses to Recommendations from the April 2017 Public Meeting of the Advisory Board on Toxic Substances and Worker Health

Response:

Upon review of the Board's Recommendations in section A, OWCP agrees that claimants who provide detailed accounts of work processes, labor activities, and other operational descriptions of an employee's work activities are the most reliable and substantive mechanism for assessing employee occupational exposure to toxic substances. In fact, OWCP has revised the OHQ, and the Board's recommendation that the worker be asked to describe how he/she was exposed to each material using free text is included. The draft OHQ also provides more room for description of job tasks, and requests that the claimant advise as to whether he/she was in a particular union or was part of the Former Worker Program. In the draft, OWCP reduces the lists of toxic substances and instead lists broad categories under which the claimant may provide specific toxic substances (e.g. "high explosives," or "metals.") Over the last 10 years of conducting OHQ's, OWCP has found that the ability of a claimant (particularly a survivor) to affirmatively self-select toxic substance exposures from a list oftentimes does not produce reliable or useful information. With regard to the list used by BTMed (Reference <https://www.btmed.org/pdf/WorkHistoryQuestionnaire.pdf>), this list refers solely to construction and trades positions, and therefore would not be applicable to a general OHQ that applies to employees in all occupations.

With regard to the Board's Recommendation in section B that proposes to add a section on reported exposure to vapors, gases, dusts, and fumes, our concerns are contained in our response to Recommendation #3 regarding the use of this language. If the Board develops a list of toxic substances that represents vapors, gases, dusts, and fumes, OWCP will consider how that list may be addressed in the OHQ.

OWCP agrees with the Board's Recommendation in section C that the new version of the OHQ be tested multiple times prior to becoming final, and will have the resource centers conduct these tests.

Attached is a copy of the draft OHQ. OWCP welcomes specific recommendations concerning modifications to the draft that the Board may have.

REVISED BOARD RECOMMENDATION (FEBRUARY 2018)

Advisory Board on Toxic Substances and Worker Health, Department of Labor

Revised Recommendations and Comments on Board's October 2016 and April 2017 Recommendations and the Department of Labor Responses

Issues for Consideration by the Future Advisory Board on Toxic Substances and Worker Health

ABTSWH responses to DOL's comments

The Advisory Board made several specific recommendations for revision of the current occupational history questionnaire at the April 2017 meeting. The DOL response to the Advisory Board's recommendation contains the following specific points:

1. OWCP has already developed a revised OHQ that:
 - Provides space for workers to provide free text descriptions of how they were exposed.
 - Provides space to record union membership and participation in a Former Worker Program.
 - Reduces the lists of toxic substances and instead lists categories under which the claimant may provide specific toxic substances.

2. OWCP did not accept the Board's recommendation to add a section on reported exposure to vapors, gases, dust, and fumes (VGDF) based on the following reasoning:
 - EEOICPA specifically states that a condition can only be accepted as a compensable covered illness if it is at least as likely as not that exposure to a specific toxic substance was related to employment at a Department of Energy facility.
 - The program has defined a "toxic substance" - as "any material that has the potential to cause illness or death because of its radioactive, chemical, or biological nature".
 - VGDF lexicon is a broad reference that encompasses many different specific toxic substances that exist in either occupational or non-occupational settings.

The Advisory Board discussed the OHQ recommendations and the OWCP response in detail at the meeting held in November 2017. The Board's recommendation to add questions concerning VGDF exposures is tied to the recommended presumption for COPD and will be addressed in the responses to the COPD recommended presumption.

The Advisory Board's recommended OHQ revisions are closely tied with other recommendations intended to improve the quality of claimant-provided exposure information

and use of this information during claim adjudication. These other Advisory Board recommendations include:

1. Use of former DOE workers to assist claimants in completing the OHQ, and
2. Providing industrial hygienist the opportunity to speak directly with claimants to clarify information provided in the OHQ.

The Advisory Board was provided and did review the revised draft of the OHQ in the process of developing its specific OHQ recommendations. The Board believes that there remains considerable room for improvement in the draft OHQ. The draft OHQ is largely a form that allows the claimant space for recording free text descriptions of their exposures. While recording free text descriptions of work performed is helpful, the draft OHQ does not provide sufficient structure and ‘memory triggers’ to help claimants recall specific tasks and exposures at DOE sites. Experience gained through the Former Worker Programs including the Building Trades National Medical Screening Program (BTMed) has shown that listings of materials and tasks on the OHQ provide memory triggers often useful in stimulating recall of exposures that may have occurred decades in the past. Furthermore, industrial hygienists use tasks and materials collectively as indicators of exposure and exposure intensity. In addition to asking about materials and tasks, the Advisory Board recommended that a scale of task frequency be included the OHQ. The BTMed program has found that tasks and task frequency by job, in combination with job duration, can be used to generate exposure indices that are indicative of risk for occupational diseases such as pulmonary fibrosis and COPD.

The Advisory Board acknowledges that the BTMed list of tasks is largely specific to construction and maintenance workers. A similar list is not available for production workers and production tasks are likely to differ substantially by DOE site. Acknowledging this limitation, the Advisory Board recommended that the OHQ provide space to record free text descriptions of tasks associated with recorded exposures. This would allow industrial hygienists reviewing the claimant file better information to assess the likely range of exposure intensity. Additionally, this free text description could provide a useful flag to industrial hygienists when the task description is insufficient and discussion with the claimant for clarification is needed.

DOL RESPONSE TO FEBRUARY 2018 RECOMMENDATIONS (AUGUST 2018)

**DOL Responses to Advisory Board on Toxic Substances and Worker Health
February 16, 2018 Clarifications to Recommendations**

**7. Comments on Recommendation: Revisions of the Occupational History Questionnaire.
~~The Advisory Board recommends several revisions to the Occupational History
Questionnaire.~~**

DEEOIC is continuing to review revisions to the OHQ and it will consider the suggestions of the Board.