

Office of Compensation Analysis and Support Program Evaluation Report		Document Number: OCAS-PER-016 Effective Date: 9/25/2007 Revision No. 0
Implementation of IREP procedure for claims near 50% probability of causation		Page 1 of 3
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ISSUE AUTHORIZATION DATE	EFFECTIVE DATE	REV. NO.	DESCRIPTION
9/25/2007	9/25/2007	0	New document to evaluate the effect of implementing a new IREP procedure on previously completed claims

1.0 Description

Prior to June 6, 2006, each case with a probability of causation (PC) value of at least 45% but less than 50% at the upper 99th percentile credibility limit (C.L.), using the default NIOSH-IREP settings (simulation sample size = 2000, random number seed = 99), was processed by increasing the simulation sample size to 10,000, choosing a new random number seed, and rerunning each cancer associated with the claim in NIOSH-IREP. The resulting upper 99% C.L. of PC determined the case outcome, supplanting the initial PC value that had been obtained using a sample size of 2000. This procedure was employed in order to provide better statistical precision for cases approaching the compensation threshold of 50% (1).

To achieve even greater statistical precision for cases close to the compensation threshold, a revised procedure was adopted on June 6, 2006 (2) and replaced the procedure described above.

Revised procedure for cases with PC values close to 50% (effective 6/6/06)

For “single cancer” cases in which the initial PC is equal to or greater than 45% but less than 50% using the default sample size of 2000 and default random number seed of 99:

Step 1: The simulation sample size is increased to 10,000.

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Step 2: 30 additional IREP runs are performed, using a new random number seed for each run.

Step 3: The average value (arithmetic mean) of the upper 99% C.L. of PC of the 30 runs is calculated. The average value of the 30 runs determines the outcome of the case.

For cases with more than one cancer in which the initial “combined” PC calculated from the “multiple primary” equation is equal to or greater than 45% but less than 50%, 30 runs are performed for each primary cancer per steps 1 and 2 above. The average value (arithmetic mean) of the upper 99% C.L. of PC of the 30 runs for each cancer is then entered into the online “multiple primary” equation. The newly calculated PC, based upon the average PC value of each cancer as entered into the equation, determines the outcome of the case.

The Department of Labor (DOL) implemented this procedural change on June 6, 2006 (3), and NIOSH revised the NIOSH-IREP User's Guide accordingly. The most recent edition of the User's Guide is Version 5.5.2 (4).

2.0 Evaluation

In accordance with the procedural change described above, claims with a PC $\geq 45\%$ but $< 50\%$ completed by NIOSH and submitted to DOL prior to 6/6/06 were eligible for review. For quality assurance purposes, however, it was decided to extend the eligibility date through 6/30/06 to allow for possible processing errors during NIOSH's transition to the new policy. For claims that had been reworked due to DOL returns, only the most recent revision of each such claim was considered. A database search identified 109 claims that met the above criteria.

It should be noted that most of the “45.00-49.99% PC” cases forwarded to DOL from June 2005 to June 2006 had already been subjected by NIOSH to 30 IREP runs in order to establish an average PC value. This is because NIOSH used the “30 run” procedure as an in-house pilot test before DOL adopted it as official policy on June 6, 2006. Although NIOSH submitted those claims to DOL in “single IREP run” format in accordance with pre-6/6/06 policy, the average PC value (based on 30 IREP runs) was below 50% for each such claim involved in the pilot test. Thus, for those cases in which earlier “30-run” records were available (59 of the 109 claims evaluated), it was possible to rely upon the existing results rather than rerun the claims.

For claims that had not already been subjected to 30 IREP runs per cancer (50 of the 109 claims evaluated) as part of the pre-6/6/06 pilot test described above, 30 new IREP runs were conducted for each cancer to establish the average PC value for each claim. Since many of these claims were “multiple cancer” cases (i.e., more than 1 cancer was reported per claim), 30 new IREP runs were conducted for 91 separate cancers. For these 50 claims that required 30 new IREP runs to establish a new PC value, the average difference between the original PC (based on 1 IREP run per cancer) and the new PC (based on the arithmetic mean of 30 runs for each cancer) was 0.04 percentage points. The largest increase in PC (30-run average compared to the original,

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single run value) was 2.27 percentage points, and the largest decrease was 2.71 percentage points. The newly established average PC value based on 30 IREP runs remained below 50% for each claim. A breakdown of the 109 evaluated claims is displayed in Table 1.

Table 1: Claims with a probability of causation $\geq 45\%$ but $< 50\%$ completed by NIOSH and submitted to the Department of Labor prior to 7/1/06

Type of Claim	Number of Claims	Claims With 30 IREP Runs From Pre-6/6/06 Pilot Test ¹	Claims Requiring 30 New IREP Runs	Claims in Which the Average PC Value (Based on 30 IREP Runs) Changed to $\geq 50\%$
Single cancer	54	27	27	0
Multiple cancers	55	32	23	0
Total	109	59	50	0

¹See text

3.0 Resolution or Corrective Action

A total of 109 previously non-compensable claims with PC values of 45% or greater were evaluated. The average PC value remained below the 50% compensation threshold for each of the 109 claims. An itemized list of claims was provided to DOL containing the final evaluation result for each of the 109 claims.

4.0 Effect of other PER issues

The IREP runs conducted for this PER utilized the latest version of the dose estimate submitted by NIOSH to the Department of Labor. If subsequent technical modifications have been made that increase the dose estimate in any of these claims, NIOSH, as part of its ongoing review process, will request the return of almost all of these claims. The exception to this would be the situation in which it could be readily demonstrated that the change would not increase the probability of causation to greater than 45% without performing a new dose estimate.

5.0 References

1) Senes Oak Ridge Inc., under contract with NIOSH. User's Guide for the Interactive RadioEpidemiological Program (NIOSH-IREP), Version 5.2. January 15, 2003.

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2) National Institute for Occupational Safety and Health, Office of Compensation Analysis and Support. New procedure for resolving cases close to 50% probability of causation (<http://www.cdc.gov/niosh/ocas/ocasirep.html>). June 6, 2006.

3) U.S. Department of Labor, Employment Standards Administration, Office of Workers' Compensation Programs. EEOICPA Transmittal No. 06-09: Revision to Chapter 2-600 Section 16, Federal (EEOICPA) Procedure Manual. June 6, 2006.

4) Senes Oak Ridge Inc., under contract with NIOSH. User's Guide for the Interactive RadioEpidemiological Program (NIOSH-IREP), Version 5.5.2. June 2007.