

NIOSH Responds to the Challenges

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In the past several years, NIOSH has been undertaking a review of its roles and responsibilities regarding the application of lung imaging for the pneumoconioses, and has sought input from interested stakeholders, health professionals, and the general public. This workshop has helped to highlight the critical issues in this area, and should enable the Institute to continue to focus actions on strengthening existing programs as well as evaluating new approaches in this changing field.

Quality Assurance

The workshop discussed one of the major challenges for NIOSH in the application of radiographs for research and surveillance: the enhancement of the quality and utility of pneumoconiosis classifications. Dr. Shipley's talk emphasized the important problem of reader variability, and current approaches to minimizing it. The B reader examination program and the related training activities comprise one important focus of action. The American College of Radiology, in partnership with NIOSH, completed a revision of the periodic training seminar on the radiology of the pneumoconioses in March 2004. NIOSH is seeking to migrate the current home study syllabus to a CD-based teaching program, and in 2004 awarded a contract to accomplish this. The psychometric performance of the examination items has been reviewed by a nationally recognized organization devoted to competency assessments, and an internal report has been prepared for NIOSH entitled "A Report on the Statistical Characteristics of the B Reader Certification Examination and the B Reader Recertification Examination." NIOSH is currently in the process of identifying additional candidate images for the examinations, and is also evaluating the existing approach to examination scoring, with the objective of enhancing the overall performance of the examinations.

Dr. Shipley's talk recognized the importance of film quality in inter-reader variability. The NIOSH radiographic facility approval process was established to address film quality issues. This process requires each candidate facility to submit a series of films, which are assessed for film quality criteria prior to approval of the facility. To further strengthen film quality for the Coal Workers' Health Surveillance Program, NIOSH initiated a pilot activity in which film quality is tracked, with specific feedback provided to all NIOSH-approved radiographic facilities. The impact of this voluntary program, which was initiated in 2002, is currently being assessed.

Another critical challenge addressed by Dr. Shipley, is reducing reader bias, particularly in relation to the classification of small opacities at low profusion levels and in the identification of localized pleural abnormalities. NIOSH is currently evaluating several approaches for reducing the potential for reader bias which may occur in readings performed between certification examinations while at the same time maintaining specificity and sensitivity to abnormality. Calibration and feedback were discussed as feasible by Dr. Shipley, but approaches that limit the total number of B readers or require auditing of individual readers were judged difficult to implement in routine readings done for clinical and legal purposes. To improve the availability of information regarding the appropriate application of chest radiography for evaluating occupational lung disorders, to emphasize procedures recommended for reducing bias, and to further inform occupational health professionals concerning the revisions in international criteria (see below), in April 2005 NIOSH posted a greatly expanded web page on this topic, <http://www.cdc.gov/niosh/topics/chestradiography/breader-info.html>

Dr. Shipley discussed the 2000 revision of the ILO International Classification of Radiographs of

The **NIOSH**
B Reader
Certification
Program:
Looking into
the Future



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DHHS (NIOSH) Publication No. 2009-140