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**Workshop on Respiratory Protection
for Airborne Infectious Agents
Atlanta, Georgia
November 30-December 1, 2004**

Breakout Summary Report
Questions Related to
Plenary Sessions 3 & 4



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Breakout Summary Report

Questions Related to

Plenary Sessions 3 & 4

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Tripartite Research Opportunities



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#1--PLENARY SESSION 3: Current state-of-science about respiratory protection

What scientific or anecdotal evidence is there of the effectiveness of respirators and/or surgical masks to filter airborne infectious agents and reduce infection?

- Do respirators perform any differently with viable aerosols compared to toxic dusts and chemicals?
- Are there any different concerns on the face-to-respirator seal when dealing with infectious aerosols?



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- Investigate WPFs and health outcomes of workers exposed to infectious aerosols
- ?Significance of hand-mouth-face contamination and relationship to respirators/surgical masks
 - How much secondary infection can be prevented?



- ?Extent to which surgical masks prevent dissemination of viable organisms into the environment



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#2--PLENARY SESSION 4: Research on Respirator Performance

- *What research or data are available that could guide decisions on the necessary periodicity for fit-testing?*
 - Under what conditions can respirators be used without requiring fit-testing?
 - What is the benefit of respirator fit-testing?
 - Impact on appropriate use?
 - Impact on exposure prevention?
 - Impact on infection prevention?
 - Does it ensure proper fit during use?



- Breakout sessions included discussions of all aspects of fit-testing
- Develop guidelines for trainers, including fit testers
- Need for algorithm to follow when fit testing is not possible (emergency situations)



- Workplace surveillance and assessment pre- and post-fit testing
 - How predictive is fit testing of continuing good fit
 - What factors impact change in fit test results (anthropometrics, changes in respirator, fit test process, etc.)



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- Quantify the “incremental” benefit of various components (or combinations of components) of RPP
 - Fit test, training, user seal checks



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#4--PLENARY SESSION 4: Research on Respirator Performance

What are the design considerations/parameters to guide design of good respirators?

- Are there data that determine the effectiveness of NIOSH-certified filtering face-piece respirators?
- How well do currently NIOSH-certified (and/or CEN or other organization) respirators fit the general population?
- Is it possible to design a respirator to fit the general population without fit testing?



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- Develop or integrate new technologies into respirators to improve performance
 - Smart seals
 - Sensors
 - New materials (elements & facepieces)



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- Need to better define “working population”
 - National, regional, special populations, industry-specific, etc.
- Need to expand upon BLS survey
 - Validate data
 - Evaluate why so few companies are doing fit testing



#5--PLENARY SESSION 4: Research on Respirator Performance

- *Does disinfection and reuse affect the performance of respirator face-seal fit or filtration efficiency? Can respirators be safely disinfected and reused; and if so, under what circumstances (i.e., method of disinfection, organism of interest, application/procedure, etc.)? What research has been done in this area?*



- Develop guidance concerning disinfection of respirators
 - Disposable vs elastomeric
 - Contact time
 - Effect on respirator and respirator fit
- Develop performance guideline for manufacture of respirators with disinfection in mind



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