



# 2008 NIOSH Direct-Reading Exposure Assessment Methods (DREAM) Workshop

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## Rapporteur Report

### Hazard Session: Noise

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# Noise Exposure Assessments

- Noise exposure instruments (Noise dosimeters and Sound Level Meters) are already direct-reading
- Standards (ANSI, ISO, IEC) exist for all instruments
- Regulations guidelines are well-established
- Several DRI/DRM issues still need development

# Noise Instruments





# Mixed or Combined Exposures

- Exposure to continuous, intermittent, and impact/impulse noise
- Exposure to chemicals or other hazards that can (additively or synergistically) cause hearing loss
- Issues related to different scenarios in which workers are exposed to mixed noise
- Non-auditory effects of noise exposure



# Impulse/Impact Noise

- Impulsive noise more damaging than continuous noise
- No instrument capable of characterizing exposure or hazard on the market
- Direct-reading methods are not universally accepted
- Damage risk criteria based on incomplete data
- Rethink the damage risk concept



# Worker Empowerment

- Will the worker modify behavior if they have access to direct, real-time, noise exposure readings?
- How to deal with occupational vs. non-occupational environments (musicians, soldiers, etc..)
- Inexpensive “dose” indicators are currently available





# Testing, Evaluation, Certification

- Sound instruments must comply with current ANSI and IEC standards
- No entity to test and certify noise instruments today
- NIOSH was involved in the testing and certification of noise dosimeters in the 70's
- Suggestion that NIOSH might want to consider testing and certification



# Top Five Research Priorities

1. Re-examine the basis for current damage risk criteria
2. Determine the relationship between DRM metrics and achieving behavioral modification
3. New sensor technology (better microphones, acoustic manikins)
4. Metrics to quantify performance and economic impact of not having solid hearing conservation program
5. Develop a repository of exposure and risk data