

Hi Everyone,

This month's Update is about hearing protection. I hope this is a timely and helpful topic. As always, please feel free to contact me with questions, comments, or requests for full articles.

Thank you

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August 2019 Update from the Field: Hearing Protection

Prevalence of Hearing Loss among Noise-Exposed Worker within the Agriculture, Forestry, Fishing, and Hunting Sector, 2003-2012. (2018). Masterson EA, Themann CL, & Calvert GM. *American Journal of Industrial Medicine*, 61, 42-50.

Background: The purpose of this study was to estimate the prevalence of hearing loss among noise-exposed US workers within the Agriculture, Forestry, Fishing, and Hunting (AFFH) sector.

Methods: Audiograms for 1.4 million workers (17 299 within AFFH) from 2003 to 2012 were examined. Prevalence, and the adjusted risk for hearing loss as compared with the reference industry (Couriers and Messengers), were estimated.

Results: The overall AFFH sector prevalence was 15% compared to 19% for all industries combined, but many of the AFFH sub-sectors exceeded the overall prevalence. Forestry sub-sector prevalences were highest with Forest Nurseries and Gathering of Forest Products at 36% and Timber Tract Operations at 22%. The Aquaculture sub-sector had the highest adjusted risk of all AFFH sub-sectors (PR = 1.70; CI = 1.42-2.04). **Conclusions:** High risk industries within the AFFH sector need continued hearing conservation efforts. Barriers to hearing loss prevention and early detection of hearing loss need to be recognized and addressed.

Rural Adult Perspectives on Impact of Hearing Loss and Barriers to Care. (2019). Powell W, Jacobs JA, Noble W, Bush ML, & Snell-Rood C. *Journal of Community Health*, <https://doi.org/10.1007/s10900-019-00656-3>.

Adult hearing loss has a significant impact on communication and quality of life. In spite of effective methods of diagnosis and treatment, many rural adults face significant barriers and delays in accessing care. The purpose of this study is to characterize the impact of hearing loss and the barriers for hearing healthcare in rural adults. Using stratified purposeful sampling, the study design involved semi-structured phone interviews with adults in the Appalachian region of Kentucky between 2016 and 2017 to describe perceived susceptibility to hearing loss; knowledge of hearing loss; cues leading to help-seeking; barriers limited access to care; benefits of seeking help; and self-rated confidence in seeking treatment. Thematic qualitative analysis was performed to identify recurring content themes. Forty adults participated in the study. Participants reported susceptibility to noise induced hearing loss with infrequent hearing protection use. Participants described concern with hearing loss-related communication barriers that could affect compliance with medical care, employment performance, personal safety, and relationship communication. Rural adult expressed willingness to seek hearing healthcare but reported a lack of providers in rural areas. The cost and the lack of insurance coverage for hearing aids were the most clearly articulated obstacles influencing access to care. Hearing loss has a significant impact on adults in rural areas. A lack of providers and the overwhelming cost of treatment are barriers to care. Further research is needed to identify novel methods to support rural adults seeking affordable hearing healthcare.

Efficacy of Technology-Based Interventions to Increase the Use of Hearing Protections among Adolescent Farmworkers. (2018). Khan KM, Evans SS, Bielko SL, & Rohlman DS. *International Journal of Audiology*, 57(2), 124-134.

Objective: Adolescent farmworkers are exposed to loud noise during farm activities. We present a prospective study that evaluated the efficacy of low-cost, technology-based intervention approaches in high schools to enhance the use of hearing protection among adolescent farmworkers. **Design:** Six high schools in Iowa that agreed to participate in the study were divided into three equal groups through cluster-randomisation with each group receiving one of the three formats of hearing protection intervention: (a) classroom training, (b) classroom training coupled with smartphone app training and

(c) computer training. Participants completed baseline (pre-training) and six-week post-intervention surveys for assessing hearing protection knowledge, attitudes and behaviour. **Study Sample:** Seventy participants from six schools were initially enrolled but 50 completed both pre- and post-intervention surveys. **Results:** In most cases, all three groups showed significant improvement in hearing protection knowledge, attitude and frequency of use from pre- to post-intervention. However, changes between groups were statistically non-significant. **Conclusions:** Although all three formats led to improvements on hearing protection knowledge, attitude and behaviour, the findings of the study, perhaps due to the small sample size, did not allow us to detect whether technology-based hearing protection interventions were more effective than the traditional face-to-face training for adolescent farmworkers.