Development of a national job exposure matrix for occupational noise in the US

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ABSTRACT

The assessment of occupational noise exposure in the United States is challenging. While a substantial number of noise measurements is made each year through government and industry efforts, these data are not easily available to epidemiologists or occupational health researchers and practitioners. We requested and compiled measurements from government and industrial sources, as well as from the peer-reviewed literature, to create a national job exposure matrix for noise for the United States and Canada. This job exposure matrix is based on over 1.1 million noise measurements spanning 1979-2015. Using this extensive dataset, we have estimated occupational noise exposures for thousands of job titles and hundreds of industries. The tool is now accessible through a searchable website, and the entire job exposure matrix can also be downloaded. The creation of this job exposure matrix has yielded a valuable new tool for researchers and practitioners to easily and efficiently estimates noise exposures for research subjects or workers in a wide array of jobs and industries.