ISRP 1999 abstract

Presenter/author	Title	Abstract
McCullough, N. V. **Brosseau**, L. M. *3M Company OH&ES Division Building 260-3A-09 3M Center St. Paul, Minnesota 55144 USA*	**Selecting Respirators for Exposures to Infectious Aerosols**	A method has been developed for selecting respirators for protection in infectious aerosol environments, which builds on a procedure used to choose respiratory protection for environments containing non-biological contaminants. Modifications in the traditional respirator selection method are proposed for situations where information is absent regarding level of hazard and airborne concentrations. Until the necessary quantitative information is available to allow use of the traditional respirator selection method, it is suggested that qualitative methods of ranking hazard and concentration be used. Methods for ranking hazard utilize risk rankings assigned by several organizations including the Centers for Disease Control and Prevention, the National Institutes for Health, the Canadian Laboratory Center for Disease Control, the European Community and the one proposed by the European Federation of Biotechnology. In general, the least hazardous organisms (those with low risk rankings) have a low potential to cause health effects in individuals and are unlikely to result in community outbreak while more hazardous organisms (with higher risk rankings) may threaten life and result in widespread outbreaks. The nature of the activity or procedure allows an assessment of the generation rate from a source, which is combined with room volume and air flow through the room to obtain a ranking of airborne concentration. Finally, concentration and hazard ranks determine a minimum assigned protection factor, which corresponds to a respirator class. Case studies are presented to illustrate the proposed decision logic. For each situation, the procedure yielded choices that were both protective and reasonable. These results suggest that the proposed decision process will be applicable to a variety of settings for a range of infectious organisms.