



Bullard-Sherwood Research-to-Practice (r2p) Awards

NIOSH presents the Bullard-Sherwood Research-to-Practice (r2p) Awards to recognize outstanding efforts by its scientists and their partners in applying occupational safety and health research to prevent work-related injury, illness, and death. The award is named in honor of two distinguished individuals who have made significant improvements in workplace injury and illness prevention.

Edward W. Bullard designed the first "hard hat" as protective headgear for miners. He combined his experience with dough boy Army helmets during World War I and his understanding of customer needs to develop the "Hard Boiled Hat." The name was derived from the use of steam during the hat manufacturing process. Joseph Strauss, the engineer in charge of constructing the Golden Gate Bridge, requested that Mr. Bullard adapt his mineworkers helmet to help protect Bridge workers from falling rivets. The Bridge site became the first designated "Hard Hat Construction Area." In related history, the steel used in the building of the Bridge oxidized during transport to San Francisco from Pennsylvania, and therefore required sandblasting before it could be painted. As a result, Mr. Bullard designed and sold another helmet to the Bridge builders to specifically protect the sandblasting workers. This helmet was similar to the Hard Boiled Hat but included a hood or "canopy" over the hat, a window to see through, and supplied air for respiratory protection in its design. Today, approximately six million hard hats, also known as "skull buckets," are sold annually throughout the world to protect workers. Bullard's family-owned company, now entering its fifth generation, still produces many of those hard hats as well as more modern sandblasting helmets.

R. Jeremy (Jerry) Sherwood successfully merged research and industrial hygiene by inventing the first practical personal sampling pump in the late 1950s. He identified a need for sampling pumps that could be worn by workers and not impede their work processes. Until then, sampling was done on an area basis or an industrial hygienist followed a worker while carrying heavy, bulky, and short-term sampling equipment. Using the newly developed personal sampling pump, he demonstrated that area sampling often severely underestimated worker exposures. Within a few years of this invention, personal sampling pumps became the staple in industrial hygiene work that they are today. He also developed a miniature sampler for sulfur dioxide which became commercially available and was widely used throughout Europe. His research on respirators led to the first fit testing. While at the International Labor Organization and later at the World Health Organization, Mr. Sherwood put his own knowledge and research experiences into practice by training others in occupational safety and health, particularly in developing countries. This became one of his greatest passions and many workers around the globe have benefited from his efforts.

NIOSH is pleased to recognize one current or former employee each year for exceptional service to the field of occupational safety and health. This award honors the contributions made by public health workers who fight long odds to achieve safer and healthier workplaces.

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