What Does an Industrial Hygienist Do?

Job diversity is a major benefit to consider when choosing a career in the environmental health and safety arena. Industrial hygienists are not limited to one particular type of industry; they are employed in a variety of organizations such as:

- Public Utilities
- Colleges and universities
- Government
- Insurance companies
- Labor unions
- Chemical companies
- Research laboratories
- Consulting firms
- Hospitals
- Manufacturing companies
- Hazardous waste companies



Many industrial hygienists work for private corporations or federal or state government agencies as salaried employees. However, the fastest-growing segment of the industrial hygiene profession is self-employment or consulting. Many industrial hygiene careers can lead to upper management positions. The hygienist's job is a multifaceted one that touches every aspect of an organization and benefits a company's bottom line through increased productivity, improved morale, and lower workers' compensation and liability costs. The industrial hygienist acts as an adviser, making recommendations and setting standards to keep the workplace safe. This requires working with employees at all job levels and requires a genuine commitment to caring about people and the environment.

What is "I Am IH"?

Industrial Hygiene (IH) is a science and art devoted to the anticipation, recognition, evaluation, prevention, and control of those environmental factors or stresses arising in or from the workplace which may cause sickness, impaired health and well being, or significant discomfort among workers or among citizens of the community.

In short, IHs are scientists and engineers committed to protecting the health and safety of people where they work. They are the "invisible heroes" who make sure our friends, acquaintances, and loved ones come home safe every day.

2020 PROFESSIONAL DEVELOPMENT SYMPOSIUM:

COVID-19 Industrial Hygiene Considerations & Response



Date: Friday, August 21, 2020

Time: 8:00 am – 3:00 pm (PDT)

Facilitator: San Diego Local Section of the American Industrial Hygiene Association

Time	Item	Owner
8:00 am	Opening Remarks	Mychelle Fernandez, 2020 SDAIHA President
8:10 am	Technical & Housekeeping Items	Victor Block, 2019 SDAIHA President
8:15 am	Protecting the Safety and Health of Workers - Coronavirus Disease 2019 (COVID-19)	Derek Engard, US DOL OSHA
9:15 am	Qualitative vs. Quantitative Fit Testing (as it relates to COVID-19	Dylan Staack, REPSS, Inc.
10:00 am	BREAK	
10:10 am	AIHA's Response to Covid-19 and the Creation of the Back to Work Safely Guidelines	Alan Fleeger & Justine Parker, AIHA
10:55 am	The COVID-19 Response Approach	Wilma Wooten, Public Health Officer, County of San Diego HHSA
11:30 am	Contact Tracing in Indoor Environments	Emily Gurley, Johns Hopkins Bloomberg School of Public Health
12:15 pm	BREAK	
12:45 pm	Filtration Efficiency of Masks	Toluwanimi Oni, Courtney Redmond, & Evan Floyd, Hudson College of Public Health, University of OK
1:30 pm	Engineering Controls and New Solutions in Changing Times	Patrick Santini & Boaz Avitall, ModTruss, Inc.
2:15 pm	Q&A ROUND TABLE	SDAIHA Board
2:45 pm	Closing Remarks	Jonathan Joyce, 2021 SDAIHA President

Our featured presentations and speakers:

Protecting the Safety and Health of Workers - Coronavirus Disease 2019 (COVID-19)

By: Derek Engard (CIH, CSP), San Diego Area Director, US Dept. of Labor OSHA, San Diego, CA His presentation will cover occupational exposure risk to SARS-CoV-2 along with OSHA standards and guidance. His talk will also cover current OSHA enforcement including recordkeeping.



Mr. Engard received a BS in Aviation Operations from San Jose State University and an MS from Colorado State University. He was commissioned in the United States Air Force. He began working with OSHA in 2009 as a safety and health compliance officer at the Denver area office. In 2014, he worked with the OSHA National Office working in the Directorate of Enforcement Programs, Office of Chemical Process Safety and Enforcement Initiatives. In 2016, he worked as the Region X VPP and Regional Consultation Program Manager in the Seattle Regional Office. He is currently the Area Director for the San Diego OSHA office.

Qualitative vs. Quantitative Fit Testing (as it relates to COVID-19)

By: Dylan Staack, REPSS, Inc., Glendale, AZ His presentation will cover qualitative and quantitative fit testing and the power of CNC technology for accurate fit testing. He will also present quantitative fit testing equipment, ventilation assessment equipment, and various particle counters.



Mr. Staack is the in-house industrial hygienist and National Sales Manager for REPSS. He has a Masters of Public Health from the University of Arizona, specializing in occupational health and safety and industrial hygiene. Prior to taking his position with REPSS, he spent two years as an independent consultant and worked for four years as a Research Project Manager at the University of Arizona. He coordinated and executed research on firefighter cancer rates, respiratory protection for first responders, and chronic exposures in fire houses.

AIHA's Response to Covid-19 and the Creation of the Back to Work Safely Guidelines

By: Alan Fleeger (CIH, CSP) and Justine Parker (CIH, CSP, CHMM, CPH), American Industrial Hygiene Association, Falls Church, VA.

The Back To Work Safely (BTWS) guides use science-based recommendations to help mitigate the spread of COVID-19 in the workplace to assist companies and workers as they plan to return to work. The speakers will discuss how the COVID-19 Re-Open America Guidelines task force came to be, the need, the focus and intent of the guides, the challenges, the impact, community feedback, and lessons learned.



Mr. Fleeger holds a Masters of Science and Public Health from the University of Utah and a Bachelor's of Science in Safety from the Indiana University of Pennsylvania. He recently retired from ExxonMobil with over 29 years of experience where he held multiple global management positions to protect worker and consumer health. Prior to ExxonMobil, he worked at the National Institute for Occupational Safety and Health (NIOSH). Allan is both a past president of the American Industrial Hygiene Association (AIHA) and was the founding and now a past President of the Product Stewardship Society.



Ms. Parker is a Managing Health Scientist with Cardno ChemRisk with over 15 years of experience in areas of industrial hygiene, exposure assessment, and occupational health. She previously served as Health and Safety consultant and nine years as a Health &Safety Manager for ABC News in New York City. She is a graduate of Sam Houston State University where she earned a B.S. in Industrial Design with a minor in Environmental Science.

The COVID-19 Response Approach

By: Wilma Wooten (MD, MPH), Public Health Officer and Director of Public Health Services, County of San Diego Health and Human Services Agency, San Diego, CA



Dr. Woooten received both professional degrees from the University of North Carolina, Chapel Hill. In 1989, she completed the joint San Diego State University (SDSU), Graduate School of Public Health (GSPH)/University of California San Diego (UCSD) Preventive Medicine Residency, with an emphasis in Sports Medicine. Dr. Wooten practiced medicine as a faculty member in the UCSD Department of Family and Preventive Medicine from 1990 to 2001. She has been with the County of San Diego Health and Human Services Agency since 2001. She is an ardent supporter of public health and has a strong interest in health disparities and health equity. Dr. Wooten is a current Board member of the Public Health Accreditation Board (PHAB) of Directors (2011-present), member of the NACCHO Big Cities Health Coalition (2014-present), and member of the Advisory Committee to the Director of the Centers for Disease Control and Prevention (CDC) (2015-2019).

Contact Tracing in Indoor Environments

By: Emily Gurley (PhD), Johns Hopkins Bloomberg School of Public Health, Baltimore, MD Contact tracing is an important tool that can be used to prevent transmission of SARS-CoV-2. The talk will review how contact tracing works and some operational definitions, including what defines a potentially infectious contact. She will discuss how these definitions may be operationalized in the workplace to promote safer occupational environments.



Dr. Gurley is an infectious disease epidemiologist and Associate Scientist in the Department of Epidemiology at the Johns Hopkins Bloomberg School of Public Health. She spent 12 years at the International Center for Diarrheal Diseases Research, Bangladesh where she led the Surveillance and Outbreak Investigation Unit, served as Director of the Program on Emerging Infections, and a mentor for the Field Epidemiology Training Program. She worked closely with the US CDC and the Government of Bangladesh to establish national infectious disease surveillance programs and investigate outbreaks. She leads multi-disciplinary studies on the transmission, burden and epidemiology of a variety of emerging and vaccine preventable diseases, taking into account the ecological context in which human disease occurs.

Filtration Efficiency of Masks

By: Toluwanimi Oni, Courtney Redmond (MS), and Evan Floyd (PhD), University of Oklahoma Health Sciences Center, Occupational and Environmental Health Department)

This presentation will discuss an ongoing study that compares the effectiveness of surgical masks, cloth masks, N95s, and KN95s at suppressing speech-related aerosols. Data will be used to assess the quality of masks needed to prevent aerosol transmission in public spaces.



Mr. Oni is a doctoral student and has been involved in the filtration efficiency testing of masks. He is currently leading an ongoing study comparing the effectiveness of surgical masks, cloth masks, N95s, and KN95s at suppressing speech-related aerosols.



Ms. Redmond arrived in Oklahoma in 2010 from California to join the Air Force Reserves where she served for 8 years. She received a BS in Biology in 2018 and completed her MS in Industrial Hygiene/Environmental Health Sciences in May 2020. The focus of her MS thesis centered around the determination of adsorption characteristics of activated carbon fibers (ACF) utilizing a new technique called diffusion adsorption isotherm chamber (DAIC). She is pursuing a doctorate degree and her research interests include bioaerosols and analyzing current respirator functionality.



Dr. Floyd has led efforts on filtration efficiency testing of masks for the Oklahoma State Health Department and the University of Oklahoma Health Sciences Center. He has a publication on the effect of different sterilization techniques on masks and another on evaluating the sufficiency of the current filtration testing procedure against submicrometer particles containing Sars-Cov-2. He currently has two seed grants - one on 3D Printable Respirators and the other on Mask Effectiveness with extended use and reuse.

Engineering Controls and New Solutions in Changing Times

By: Patrick Santini and Boaz Avitall (MD, PhD), ModTruss, Inc., Allenton, WI.

This presentation will discuss ways to safeguard environments so they can be as hygienic as possible. Mr. Santini will be speaking on engineered solutions, such as the modular Airborne infection Isolation Room, so all businesses can have access to negative pressure environments. The importance of negative pressure environments and methods on how to implement and engineer them will be discussed. Dr. Avitall will discuss his invention. the hand sanitizing wrist dispenser.



Mr. Santini is the inventor and patent holder of the ModTruss product line. As previous owner and President of Kernwer LLC, he has over 20 years' experience in the entertainment production industry. It is this experience and knowledge that led to the design of ModTruss and its accessories. During his time as an Army medic, he gained a skillset which helped developed solutions for the healthcare industry. As CEO, he will continue to develop and engineer ModTruss' product line.



Dr. Avitall is an internationally known pioneer and inventor. His interests include heart rhythm monitoring and management, ablation of cardiac arrhythmia, pacemakers and defibrillators, and cardiac electrophysiology ablation technologies. He holds numerous patents in cardiac arrhythmia ablation and has published extensively on the subject. The first researcher to test endocardial atrial fibrillation ablation, he introduced linear ablation technology to the field of atrial fibrillation ablation. He also invented and was the first to examine the applicability of cryoballoon technology to the treatment of atrial fibrillation, which led to this technology becoming a commonly used approach to ablate atrial fibrillation.

SD AIHA would like to thank our sponsors:



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