

Lecture Hall

Session Abstracts

National Environmental Health Association (NEHA)
72nd Annual Educational Conference & Exhibition

Indoor Air Quality

Wednesday, June 25

8:00 – 8:50am

Implementing the Smoke-Free Arizona Act: It's a Benefit, Not a Ban

Brigitte Dufour, RS, Smoke-Free Arizona Program Manager, Arizona Dept. of Health Services, AZ
Harmony Duport, RS, Smoke-Free Arizona Program Legal Liaison, Arizona Dept. of Health Services, AZ

“Put those ashtrays away and get the no-smoking signs posted!” Looking for a better way to “walk the talk” with business owners? This presentation enlightens the successful approach taken by the Arizona Department of Health Services (ADHS) to enable business proprietors and the general public to take the new Smoke-Free Arizona Act in stride. Realized or not, the Smoke-Free Arizona Act impacts all Arizonan’s. The journey through the challenges faced when bars and restaurants tried to skirt the Law and the steps taken to overcome them is included.

The Smoke-Free Arizona Act (previously called Prop 201) was voted for and passed by the citizens of Arizona in November 2006. The Law went into effect on May 1st, 2007. In only six months, a new website was launched, a 24/7 hotline was set up, a media campaign was created, the exempt rules were crafted, three public hearings were held, and a statewide complaint reporting system was implemented. On May 1st, the new Law was effectively enforceable.

The first part of this presentation reviews the implementation process and the basics of the Smoke-Free Arizona Act including the seven exemptions of the Law and the “20 Foot Rule.”

The second part of the presentation addresses the challenges that ADHS faced when a few bars and restaurants tried to skirt the Law. Some businesses claimed to be retail tobacco stores while others attempted to open walls in order to dodge the “enclosed area” definition. A review with pictures of the most creative cases will be presented.

9:30 – 10:20am

Air Quality Inside Schools and EPA's Indoor Air Quality Tools for Schools Program

Shelly Rosenblum, Environmental Engineer, EPA, CA

Air quality inside school buildings affects our children’s and their teachers’ health and academic achievement. Poor indoor air quality results from: reduced maintenance budgets; occupant activities; and miscommunication. Even in the middle of a budget crisis, simple steps can be taken to improve air quality inside schools.

The EPA’s Indoor Air Quality (IAQ) Tools for Schools program is a voluntary and commonsense approach to improving indoor air quality and for preventing problems. The Tools for Schools Kit contains concise technical guidance; easy to follow checklists; a framework for organizing district

and school-site staff into an IAQ team; and sets up an overall approach which helps to build trust and credibility with the entire school community. The Tools for Schools program is used by thousands of schools across the country. Users attest to its value in conserving resources and improving student, teacher and parent satisfaction.

11:00 – 11:50am

Update of Radon Health Risk Science

CAPT Susan M. Conrath, PhD, MPH, Epidemiologist, USPHS, EPA, Washington, DC

The presentation will explain what the USEPA radon action level is, what it is based on, and the average risks at the action level. It will review the findings of NAS BEIR VI Report and the latest EPA risk assessment. The strengths of the radon risk assessment will be delineated. The results of the European and North American residential radon pooling studies will be reviewed, and the World Health Organization's International Radon Project will be described.

1:30 – 2:20pm

Going Zero to 60: Clean Indoor Air in the Kansas City Metro

Leon F. Vinci, DHA, MPH, RS, Director of Public Health, Johnson County Dept. of Public Health, KS

Secondhand tobacco smoke is a known public health hazard accounting for added exposure to several carcinogenic substances. This fact was greatly substantiated by the recent Surgeon General's Second Report on this health concern.

As recently as 2006, public establishments in the Kansas City metro region (population of nearly 3 million) were not smoke-free. As a result, exposure to second-hand tobacco smoke was still prevalent though the metro area. This situation continued to concern public health officials because of the ongoing exposure and health risk to children, adults, and employees confined to these smoky indoor air environments, and to visitors coming to the area.

The recognition of a strong need for governmental intervention surfaced. However, state governments on both sides of the metro had failed to take action in this regard.

The public health community formed the Clean Air Coalition–Kansas City consortium and local advocates began to write letters to local and state elected officials. Public health entities attended public meetings, provided draft ordinance language, and participated on special task forces in order to impact public policy. One significant and unique intervention involved a local health official that visited each city mayor to discuss the importance of local action and the need for local regulations.

By early 2008, 95 percent of the metro became covered with local regulations promoting smoke-free environments. The dramatic change contributing to this phenomenon will be discussed in this presentation. The issue around public policy and public participation pertinent to this subject will be covered during the discussion. The employment of data concerning environmental considerations, worker safety issues, and exposures to toxic substances as part of the change process will also be covered.

3:00 – 3:50pm

Assessment, Interpretation, and Reporting of Bioaerosol Sampling Results in Indoor Environments

Hernando R. Perez, PhD, MPH, CIH, HHS, Assistant Professor, Drexel University School of Public Health, PA

Shawn G. Gibbs, PhD, Assistant Professor, The University of Texas Health Science Center at Houston, TX

Exposure to molds, bacteria and other bioaerosols in indoor environments has become a significant concern among the general public. Environmental health practitioners are often called upon to address these concerns and to assess and report on hazard levels in contaminated or potentially contaminated environments. In the event of gross visible contamination, assessment is often straightforward. However, during situations in which this type of contamination is not present, hazard assessment often involves interpretation of environmental sampling results performed in conjunction with a visual walkthrough survey. Interpretation of bioaerosol sampling results is complicated by several factors including the lack of both consensus exposure limit standards and standardized collection protocols. In order for the results of sampling surveys to be utilized effectively environmental health professionals must become familiar with sampling methodologies and understand the limitations of bioaerosol sampling. This presentation will address these needs and provide an overview of bioaerosol sampling result interpretation and reporting.

4:00 – 4:50pm

Study of Public Health Risks Associated with Indoor Radon Gas in Mansfield, Pennsylvania

Azizur Molla, MPH, PhD, Assistant Professor of Anthropology, Mansfield University of Pennsylvania, PA

Fazlay S. Faruque, PhD, Director of GIS and Remote Sensing, Professor of Health Systems, The University of Mississippi Medical Center, MS

Mansfield, PA, is a typical rural area located in the Mountainous High Plateau Section and Glaciated Low Plateau Section of the Appalachian Plateaus Province, which is underlain by highly deformed sedimentary rocks. The dominant rock types in this area consist of sandstone, shale, and limestone, some of which contain radon-forming minerals. According to an EPA estimate, radon is the number one cause of lung cancer among non-smokers in the US. A high percentage of people living in the Mansfield area rely on private wells for their water supply, which may contain elevated levels of dissolved radon. The geologic, topographic, hydrologic, soil and building conditions in the study area appear to be conducive for radon gas formation. The major objectives of this study were to: (i) analyze the relationship between indoor radon levels and socio-economic status of the participating households, (ii) assess the degree of public awareness about the danger of indoor radon gas, and (iii) recommend appropriate intervention strategies.

Water used in the households was tested using standard methods to determine the amount of dissolved radon gas. The indoor radon gas was measured in numerous households in the Mansfield area by an electronic radon detecting device approved by the Environmental Protection Agency (EPA). Socioeconomic data were collected using a survey questionnaire and through Focus Group Discussions.

The radon data were analyzed in the context of local geology, sources of water used in households, demography in terms of socio-economic status and level of education of the participants. Geographic distribution and spatial correlations of the above variables were analyzed using GIS.

The results of this research are in agreement with the USGS study that indicates a high geologic potential of radon gas in the study area. This research highlights spatial distribution of indoor radon gas and its relationship to household socio-economic status. The results of this study will be made available via the Internet and publications. The findings of this research are expected to contribute in designing local public health intervention strategies.