Toxic exposure: The intersection between air pollution & public health

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TOPIC/TARGET AUDIENCE: Public health professionals/Environmentally conscious health professionals

ABSTRACT: Air toxins pose a significant public health concern, from increasing rates of asthma and lung cancer to the development of blood clotting and the destruction of myocardial collagen. Oregon, lacking the public health focus on air toxins that has been developed in California and Washington, has several opportunities this year to correct that wrong. Three of those opportunities will be provided with the proper exposure on this panel. The first is Cleaner Air Oregon, an initiative from Governor Kate Brown's office that is set with the pivotal task of creating a set of stationary industrial toxins regulations with a specific focus on the intersection between equity and public health. The second is BREATHE Oregon, a pioneering local initiative creating a local, public-health focused program that includes the pivotal components of community science and education initiatives. The third component compromises research on public health effects of black carbon and other air quality-related environmental stressors.

OBJECTIVE(S):

- Identify the public health risks posed by air toxins and air quality-related environmental stressors.
- Discuss the formation of public health-focused programs and initiatives being developed in Oregon.
- Explain the relationship between public health, black carbon and air quality-related environmental stressors.
- Differentiate the various public health risks posed by air toxins from common perception.
- Evaluate the pros and cons of the approach to public health within air quality programs and initiatives, both at the state and municipal levels.

PANEL ABSTRACT 1: Black carbon is the second highest contributor to climate change, in significant part due to the ability of its particles to absorb solar radiation. Its effects on public health are significant, from increasing the risk of asthma and lung cancer to contributing to the thinning of myocardial collagen and increased risks of blood clotting. A year-long research project was developed through the Institute for Sustainable Solutions and Neighbors for Clean Air to compile a report on the chemical components of black carbon particulate matter, its effects on public health, and plausible mitigation measures. The report was broken down at a fifth-grade reading level in order to make the public health-focused report more viable as an educational tool for community members and policymakers alike. The report will be disseminated in a variety of workshops, community events, and presentations in order to keep the public health focus at the forefront of air quality discussions.

PANEL ABSTRACT 2: Governor Kate Brown's Cleaner Air Oregon initiative task force was created to address the critical lack of regulatory infrastructure around air toxins emissions in the state of Oregon. The Department of Environmental Quality and the Oregon Health Authority are

leading the overview of Cleaner Air Oregon, whose task force members are comprised of community advocates, industry representatives, environmental lawyers, non-profit representatives, and public health officials. Governor Brown's directive towards task force members was clear: create a regulatory framework on stationary sources of industrial toxins focused specifically around public health. That centering around public health in and of itself is revolutionary as public health concerns and costs often take a backseat to the economic drivers of air pollution regulation, if public health happens to be a part of the conversation at all. The discussion will analyze the successes and failures so far of centering that critical framework around public health and where the improvements can come from.

PANEL ABSTRACT 3: BREATHE (Bringing Research, Engagement, and Action To a Healthier Environment) Oregon is based on the fundamental principle that all people, regardless of race or income, have a basic human right to breathe clean air. The overarching goal of this project is to reduce community exposure to air toxics through: (1) Increasing community awareness and a shared understanding about the relative risks of air pollution based on scientific data and educate communities about the social, legal and political drivers of air pollution and air pollution disparities (2) Conducting a systems-level analysis of social, legal and governance drivers to identify unexplored opportunities for improving air quality and (3) Build community capacity to drive policy, especially in overburdened and environmental justice (EJ) communities and those most vulnerable to negative impacts of air pollution, to engage in the public processes surrounding air quality.

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