

Air Pollution and Health:

Understanding the Problem and
Advocating for Solutions

CLINICIANS TRAINING OVERVIEW



AN AFFILIATE OF THE
International Union Against
Tuberculosis and Lung Disease

For more information about organizing a training, contact environmentalhealth@vitalstrategies.org

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Background

Air pollution is a major global environmental health risk factor that kills approximately 6 million people—mostly from underserved communities in low-and middle-income countries—every year. Though public awareness of air pollution is rising in many countries, major gaps remain between scientific evidence and public awareness of health risks, causes, and solutions. Historically, public awareness and resulting civil society movements have been important drivers of actions by government, businesses, and consumers to address environmental problems. Healthcare providers treating the respiratory, cardiovascular, and cerebrovascular illnesses that are caused or exacerbated by air pollution are already at the front lines of the struggle against air pollution and its health effects. As influencers of public discourse, healthcare providers of all types (e.g. physicians, nurses, community health workers, etc.) have a vital role in ensuring that the public, whose health they protect, is informed and engaged on the issue of air pollution.

The target audience for this workshop is clinicians who serve low and middle-income populations around the globe, work in areas where air pollution bares a significant burden on the health of the public, and/or manage the health of populations that are otherwise vulnerable to the health effects of air pollution. The inaugural workshop was held in Durban, South Africa, in April 2018, and the next workshop will be held in the Hague, the Netherlands, in October 2018. Separate modules tailored for other health care providers (including nurses and community health workers) will be developed in the near future.

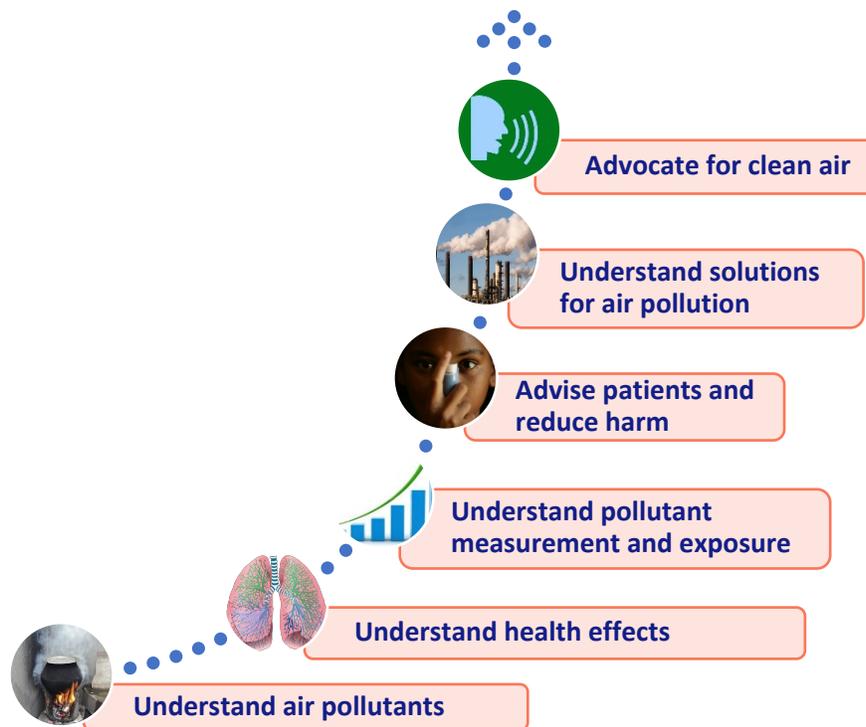
Training Goals

This 1-day training provides participants with a robust understanding of the sources, methods to characterize exposures, health effects, harm reduction techniques, policy implications, and communication strategies related to air pollution, and prepares clinicians to assume an active role in advocating for clean air policy on behalf of their patients and in their respective local contexts. The primary learning objectives of this training are to understand...

- ...the common air pollutants as well as their sources and adverse effects on health
- ...the health effects of air pollution exposure, global and regional trends in disease distribution, as well as the language and methods scientists use do study and describe these health outcomes
- ...the methodology for gathering measurement data on air pollutants, and human exposure
- ...the common interventions to reduce human exposure to and harm by air pollutants and assess fitness of these interventions in local contexts
- ...the air quality management framework and its link to climate change response and mitigation
- ...the roles of clinical advocates and sharpen communication skills necessary to advocate for clean air policies on behalf of patients

These goals have informed the training model against which seven sessions are mapped.

Air Pollution and Health Workshop Roadmap



The objective of this course is to equip clinicians with evidence needed to advocate for clean air. The long-term projected outcomes of this training include:

- **Improved clinician awareness** of air pollution health effects, sources, solutions and harm reduction measures for patients
- **Increased involvement** of clinicians and clinical organizations in civil society advocacy for clean air policies
- A **global network** of informed clinician champions and speakers advising media discourse on air pollution and health
- Greater **public awareness** of the dangers of air pollution and **political pressure** for aggressive clean air policies by governments

Instructors & Materials

This is a “hands-on” workshop in which clinicians participate in exercises, reviewing sources of air quality and public health data, and exploring best practices for locating, interpreting, and using data, journalists build practical skills that they can immediately put into action in reporting on air pollution. Instructors for this training include global and regional experts in air pollutants, health effects of air pollution, air quality management, and communications.

Each clinician will receive a Participant Manual that hosts all exercises, references, and practical guidelines for finding, understanding, and communicating information on air pollution and health.

Proposed Schedule

All times are approximate, and flexibility is built in for trainers to solicit participants' experiences with given topics.

Session No.	Session Title	Duration (min)	
0	Introduction and Overview	20	8:00-8:20
1	Major Air Pollutants and Sources	30	8:20-8:50
2	Air Pollution Epidemiology, Health Effects & the Burden of Disease	30	8:50-9:20
3	Measuring Air Pollutants & Exposure Assessment	40	9:20-10:00
	Break	30	10:00-10:30
4	Harm Assessment and Clinical Intervention	40	10:30-11:10
5	Air Quality Management and Climate Change Mitigation	60	11:10-12:10
	Break	30	12:10-12:40
6	Introduction to Advocacy and Communications	60	12:40-13:40
7	Integrating Information	20	13:40-14:00

Session 1: Major Air Pollutants and Sources

Objectives: By the end of the session, participants will be able to:

- Identify the common components of air pollution
- Understand the distinctions between outdoor, agricultural, traffic-related, and household air pollution
- Understand the patterns of transport of air pollutants in the environment

Purpose: To provide a broad background on air pollution and describe how air pollutants enter and behave in the environment. To introduce the concept of air pollution source apportionment.

Session 2: Air Pollution Epidemiology, Health Effects & the Burden of Disease

Objectives: By the end of the session, participants will be able to:

- Understand the global scope of the health effects of air pollution
- Describe the health impacts of air pollution exposure over the life course
- Identify populations that are especially susceptible to negative health effects

Purpose: To provide a background on the adverse effects of air pollution exposure on human health and emphasize air pollution's status as a major global and local risk factor, to introduce the concept of attributable risk.

Session 3: Measuring Air Pollutants & Exposure Assessment

Objectives: By the end of the session, participants will be able to:

- Identify and define terms used in air quality and exposure measurement
- Describe the common methods employed to measure air quality and human exposure to air pollution
- Describe the implications of common patterns

Purpose: To familiarize participants with the terminology and measurement methods used to understand pollutant measurement and human exposure.

Session 4: Harm assessment and clinical intervention

- Objectives:** By the end of the session, participants will be able to:
- Describe guiding principles of harm reduction
 - Understand clinical interventions against air pollution exposure that can be applied in LMIC contexts

Purpose: To provide an understanding of the efficacy of intervention that may reduce harm imposed by exposure to air pollutants.

Session 5: Air Quality Management and climate change mitigation

- Objectives:** By the end of the session, participants will be able to:
- Understand the air quality management theory
 - Describe the long-term solutions to the air pollution crisis, as well as their requirements and challenges

Purpose: To provide clinicians with a background on the classes of long-term solutions that address the air pollution crisis

Session 6: Introduction to Advocacy and Communications

- Objectives:** By the end of the session, participants will be able to:
- Identify and describe the activities of an advocate
 - Identify civil and social actors, roles and relationships
 - Master communication techniques for audiences with the general public

Purpose: To understand how advocacy can be a tool to affect health behavior change and influence policy related to air pollution. To understand civil society roles and actors as well as communication techniques for lay audiences, journalists and officials.

Session 7: Integration Information

- Objectives:** By the end of the session, participants will be able to:
- Identify and describe the activities of an advocate
 - Identify civil and social actors, roles and relationships
 - Master communication techniques for audiences with the general

Purpose: To understand how advocacy can be a tool to affect health behavior change and influence policy related to air pollution. To understand civil society roles and actors as well as communication techniques for lay audiences, journalists and officials.