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## VISION And Mission

### VISION

The Alliance of Nurses for Healthy Environments (ANHE) is the leading global nursing organization focused on the intersection of human health and planetary health. ANHE champions nurses as critical to promoting and protecting human health from environmental harm associated with degradation and disruption of Earth's natural systems, especially for populations that are disproportionately exposed and overburdened. ANHE leads in engaging, educating, and mobilizing nurses in support of environmental health equity and justice.

### MISSION

Support nurses in promoting planetary health and equity globally by educating and leading the nursing profession, advancing research, incorporating planet-safe practice, and influencing policy



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## Overview



Cardiovascular disease (CVD) remains the leading cause of death worldwide and environmental stressors such as air pollution have become its silent accelerators.

Around one in five cardiovascular deaths worldwide are attributable to environmental exposures, exceeding the impact of many traditional cardiovascular risk factors.

This presentation strives to show how nurses are ideally positioned to lead in environmental health exposure management for CVD prevention, acting as critical intermediaries between environmental risks and patient care

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### Learning Objectives

-  Explain the biological mechanisms through which environmental exposures contribute to cardiovascular disease development and progression
-  Examine the impact of environmental exposures on cardiovascular outcomes through a health equity lens
-  Describe evidence-based strategies nurses can use to reduce cardiovascular risk associated with environmental exposures

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### Key Pollutants

Epidemiological Evidence

Key:

- PM2.5/PM10: increased risk of morbidity & mortality
- NO2: traffic-related cardiovascular risk
- SO2: linked to hospitalizations
- O3 & CO: contribute to cardiopulmonary burden

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### Sources of Pollution

-  Traffic emissions
-  Industrial processes
-  Energy production
-  Domestic heating

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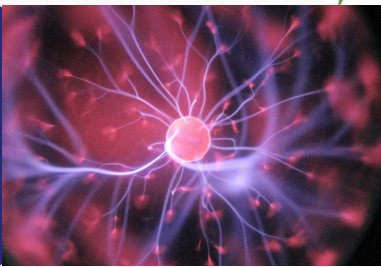
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### Mechanisms of Harm



- Systemic inflammation
- Oxidative stress
- Endothelial dysfunction
- Thrombosis risk

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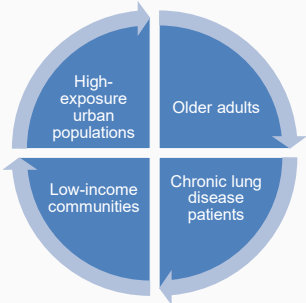
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### Vulnerable Populations



High-exposure urban populations

Older adults

Low-income communities

Chronic lung disease patients

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### Disparities in Health Equity



Nearly half of the U.S. population lives with unhealthy levels of air pollution



85M

85 million people live in counties with failing grades for year-round particle pollution

Graphics included in and used with permission by: American Lung Association, (2025). State of the air 2025. <https://www.lung.org/research/soa>

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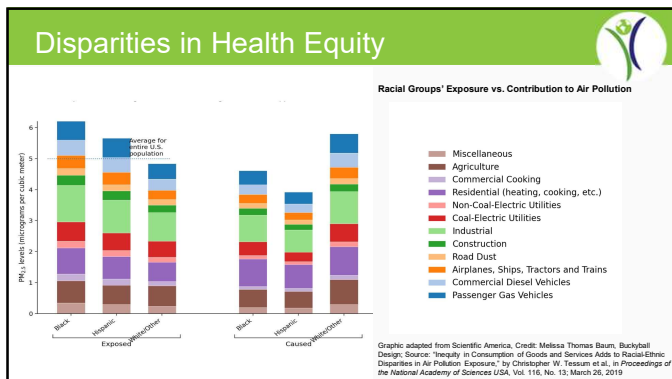
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### Special Considerations: AQI, Extreme Heat

- The US Air Quality Index (AQI) measures air pollution on a 0-500 scale based on EPA standards, with 0-50 being "Good" and over 300 "Hazardous." (AirNow, n.d.)
- AirNow.gov is the official source for real-time monitoring, which is critical during wildfire season. (AirNow, n.d.)
- High heat increases Air Quality Index (AQI) levels. (University Corporation for Atmospheric Research, n.d.)

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### Clinical Implications for Nursing

Integrate	Recognize	Personalize
Integrate air quality into risk assessment	Recognize exposure windows (1-3 days)	Personalize care for high-risk patients

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### Case Study



Maria, a 68-year-old Hispanic female with a history of heart failure and hypertension presents to the emergency department with dyspnea and signs of fluid overload.

It is summer, and the Air Quality Index (AQI) in her urban community has reached 165.

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### Case Study Question



What environmental exposure question would be important for the clinician to include in the assessment to evaluate the potential impact of air pollution on her current presentation?

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### Strategies for Healthcare Systems



-  INVEST IN RENEWABLE ENERGY SOURCES
-  Support Clinical Leadership and Education
-  Operational Waste Management
-  Green Transportation and Logistics

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### Legislative Policy & Advocacy

-  Advocate for strong air quality standards
-  Promote environmental justice
-  Support nursing leadership in policy

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### Conclusion



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**THANK YOU!**

[www.envirn.org](http://www.envirn.org)

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