

Application of Indicators . . .

Environmental Public Health Indicators Can Be Used For:

1. Surveillance of health status or trends in order to:

- Prevent and/or detect existing or new, known or suspected adverse public health events associated with environmental exposures
- Provide efficient and consistent reporting mechanism(s)

2. Program and policy development, planning, and evaluation by:

- Tracking program goals and objectives
- Supporting existing programs
- Guiding research initiatives
- Developing new program initiatives

3. Build core environmental public health capacity with other agencies

5-Point Approach for Selecting an Environmental Public Health Indicator

1. **CLASSIFY THE LINK** between the proposed indicator and the public health issue. Preference should be given to direct measures.
2. **DETERMINE THE PUBLIC HEALTH IMPACT** of using the proposed indicator.
3. **EVALUATE THE FEASIBILITY** of using the proposed indicator category.
4. **ASSESS THE ABILITY** to incorporate the proposed indicator into public health interventions and environmental regulations.
5. **CONSIDER THE FOLLOWING CRITERIA** for determining priority:
 - Scientific basis
 - Public health importance
 - Public concern
 - Feasibility
 - Public health capacity (resource needs)
 - Degree to which exposure can be avoided

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Environmental Public Health Indicators:



*A guide for monitoring the occurrence of
environmentally-related exposures and diseases*

Council of State and Territorial Epidemiologists

In Collaboration with:
Centers for Disease Control and Prevention
Agency for Toxic Substances and Disease Registry
US Environmental Protection Agency
National Association of County and City Health Officials
Public Health Foundation

Track Environmental Exposures and Diseases ...

The Pew Environmental Health Commission has proposed a nation-wide tracking network to monitor the occurrence of environmentally-related exposures and diseases.¹ The following set of indicators can be used by local, state, and national agencies to track environmental hazards, exposures, and adverse health events.

Hazard Indicator: A condition or activity that identifies the potential for exposure to a contaminant or hazardous condition. Hazard indicators are:

- Criteria pollutants in ambient air
- Hazardous substances or toxics released in the ambient air
- Residence in non-attainment areas (for criteria air pollutants)
- Motor vehicle emissions
- Tobacco smoke in homes with children
- Residence in a flood plain
- Pesticide use and patterns of use
- Residual pesticide or toxic contaminants in foods
- Ultraviolet radiation
- Chemical spills
- Monitored contaminants in ambient and drinking water
- Point-source discharges into ambient water
- Contaminants in shellfish and sport and commercial fish

Exposure Indicator: A biological marker in tissue or fluid that identifies the presence of a substance or combination of substances that may potentially harm the individual. The exposure indicator is:

- Blood lead level in children

1. The Pew Environmental Health Commission Johns Hopkins School of Public Health. *Strengthening Our Public Health Defense Against Environmental Threats: Transition Report to the New Administration.* (January 2001).

Environmental Public Health Indicators ...

provide information about a population's health status with respect to environmental factors. Core Indicators can be used to measure health or a factor associated with health such as a risk or intervention in a specified population. Specific measures are under development for each of these indicators.

CATEGORIES OF CORE INDICATORS:

<i>Air, Ambient (Outdoor)</i>	<i>Noise</i>	<i>Toxics and Waste</i>
<i>Air, Indoor</i>	<i>Pesticides</i>	<i>Water, Ambient</i>
<i>Disasters</i>	<i>Sentinel Events</i>	<i>Water, Drinking</i>
<i>Lead (Pb)</i>	<i>Sun and Ultraviolet Light</i>	

Health Effect Indicator: A disease or condition that identifies the occurrence of an adverse effect from exposure to a known or suspected environmental hazard. These indicators are:

- Carbon monoxide poisoning
- Deaths attributed to extremes in ambient temperature
- Lead (Pb) poisoning in children
- Hearing loss in adults who have no occupational exposure to noise
- Pesticide-related poisoning and illness
- Individual cases of illnesses or conditions such as asthma death, food-borne outbreaks (including seafood consumption), methemoglobinemia, and ambient or drinking water contaminant outbreaks
- Unusual patterns in incidence or prevalence of acute asthma events, cardiovascular and respiratory events, and other acute illnesses
- Melanoma
- Possible child poisoning resulting in consultation or emergency department visit

Monitor Health Status ...

Intervention Indicator: Implementation of a program or official policy that minimizes or prevents an environmental hazard, exposure, or health effect. Intervention indicators are:

- Programs that address motor vehicle emissions
- Alternate fuel use in registered motor vehicles
- Availability of mass transit
- Policies that address indoor air hazards in schools
- Laws pertaining to smoke-free indoor air
- Complaint-related indoor air inspections
- Emergency preparedness, response, and mitigation training programs, plans, and protocols
- Annual multi-institutional exercises for disaster response
- Compliance with pesticide workers training standards
- Health-based activity restrictions in ambient water
- Implementation of sanitary surveys
- Compliance with operation and maintenance standards for drinking water systems
- Boil-water advisories

