

Health Statistics and Informatics

NH Health WISDOM & Environmental Public Health Tracking Division of Public Health Services Department of Health and Human Services

Program Goals

- To provide meaningful, useful, and valid data to improve health outcomes across New Hampshire.
- To support a web-based, interactive data system that supports DPHS (i.e. WISDOM).
- To automate reporting of key data metrics relevant to the State Health Improvement Plan .
- To disseminate accurate health data to stakeholders while expanding partnerships.
- To identify and integrate public health and environmental data.
- To enhance organizational capacity to support and sustain these efforts.

Key Terms

Epidemiology - field of public health that studies the distribution of disease and associated determinants of health

Exposure - contact with a substance by swallowing, breathing, or touching; may be short-term (acute), intermediate, or long-term (chronic)

Hazard - source of potential harm

Risk - probability that something will cause injury or harm

Surveillance - ongoing, systematic collection, analysis, and interpretation of health data.

What are the key data assets?

Summary of Key Datasets Managed by the Bureau of Health Statistics and Informatics.

Datasets	Source	Years Available (Pending)
Behavioral Risk Factor Surveillance Survey (BRFSS)	NH DPHS (and CDC)	2005-2015 (2016)
NH Hospital Discharge Data Set (In-State)	NH Hospital Association	2000-2009; 2012-2015 (2016)
NH Hospital Discharge Data Set (Out-of-State)	NH Hospital Association	2000-2009 (2012-2016)
NH State Cancer Registry (NHSCR)	NH DPHS and Dartmouth School of Medicine	2000-2014 (2015)
NH Vital Records (Births and Deaths)	NH Vital Records (Secretary of State)	2000-2014 (2015, 2016)
Youth Risk Behavior Surveillance System (YRBSS)	NH DPHS (and CDC)	2007-2017 (every other year)

How are chronic disease indicators defined?

The chronic disease indicators (CDI) are a set of surveillance indicators developed by consensus among the Centers for Disease Control and Prevention (CDC), the Council of State and Territorial Epidemiologists (CSTE), and the National Association of Chronic Disease Directors (NACDD). For more information visit the CDC Chronic Disease Indicators website: <https://www.cdc.gov/cdi/index.html>

Summary of Chronic Disease Indicators by Indicator Group (2013)

Indicator Group	Total Number of Indicators	Individual measures
Alcohol	10	14
Arthritis	5	8
Asthma	6	12
Cancer	10	20
Cardiovascular Disease	11	18
Chronic Kidney Disease	3	4
Chronic Obstructive Pulmonary Disease	8	13
Diabetes	13	20
Disability	1	1
Immunization	1	1
Mental Health	3	3
Nutrition, Physical Activity, and Weight	22	38
Older adults	4	5
Oral health	5	9
Overarching Conditions	8	16
Reproductive Health	3	3
School Health	0	0
Tobacco	11	16
Total	124	201

The Chronic Disease Indicators draw on several federal databases including, but not limited to: Behavioral Risk Factor Surveillance System (BRFSS), State Cancer Registries, the American Community Survey (ACS), National Vital Statistics System (NVSS), Youth Risk Behavior Surveillance System (YRBS), Pregnancy Risk Assessment Monitoring System (PRAMS), Alcohol Epidemiologic Data System, National Survey of Children's Health, Centers for Medicare and Medicaid Services Chronic Condition Warehouse, National Immunization Survey, and others.

What is Environmental Public Health Tracking?

- Environmental Public Health Tracking (EPHT) is the ongoing collection, integration, analysis, and dissemination of data. It is environmental public health surveillance.
- These data can be used to:
 - Quantify the magnitude of a public health problem
 - Detect unusual trends in hazards, exposures, and health outcomes.
 - Identify populations at risk of environmentally related exposures or outcomes.
 - Generate hypotheses about the relationship between health and the environment.
 - Direct and evaluate prevention measures at the individual and community level.
 - Facilitate environmental health policy development.

How are environmental health indicators defined?

The CDC National Environmental Public Health Tracking Program (EPHT) defines Nationally Consistent Data and Measures (NCDMs). The purpose of these NCDMs is to develop standard definitions for key environmental health indicators. For more information visit the CDC National Environmental Health Tracking Program website: <https://ephttracking.cdc.gov>

Summary of Nationally Consistent Data and Measures (NCDMs) Available on the Environmental Public Health Tracking Web Portal

Content Area	Indicator	Number of Measures	Temporal Resolution	Geographic Resolution
Air Quality	Days Above Regulatory Standard ¹	3	Annual	County
Asthma	Hospitalizations and ED Visits for Asthma	4	Annual	County
Birth Defects	Prevalence of Birth Defects ²	12	5 year	County
Cancer	Cancer Incidence ³	17	Annual	County
COPD	Hospitalizations and ED Visits for COPD	4	Annual	County
Childhood Lead Poisoning	Annual Blood Lead Levels	8	Annual	Water System
Community Drinking Water	Level and Potential Population Exposures ⁴	5	Annual	County
Heart Attacks	Hospitalizations for Heart Attacks	2	Annual	County
Reproductive Health Outcomes	Percent of Adverse Reproductive Outcome ⁵	5	5-year	County

¹Air quality variables include: ozone and particulate matter.

²Birth defect outcomes include: anencephaly, spina bifida, hypoplastic, tetralogy, transposition, cleft lip and palate, hypospadias, gastroschisis, and limb deficiencies.

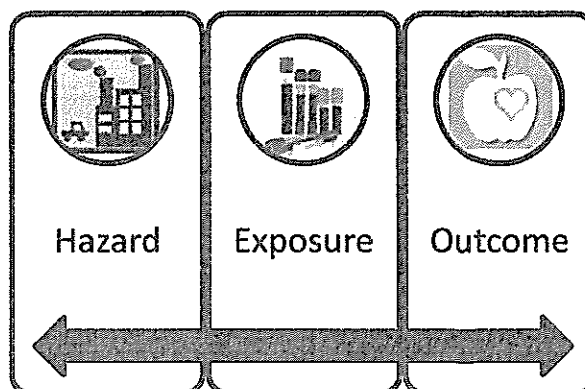
³Cancer outcomes include: mesothelioma, melanoma, liver, kidney & renal, breast, lung, bladder, brain, thyroid, non-Hodgkin's lymphoma, and leukemia.

⁴Water quality standards include: arsenic, nitrate, and disinfection byproducts.

⁵Reproductive health outcomes include: prematurity, low birthweight, and infant mortality.

How are hazards and exposures connected to health outcomes?

It is important to note that correlation does not equal causation. Specific study designs and statistical analysis must be used to evaluate relationships between Hazards, Exposures, and Outcomes. Linking data is useful to explore patterns and generate hypotheses, however, more complex methods must be used to draw an inference.



How is data reported by NH DPHS?

Data specific to New Hampshire is publicly available on the NH Health WISDOM Portal:
<https://wisdom.dhhs.nh.gov>



Navigation: [Getting Started](#) | [Data Sources](#) | [Data Lists](#) | [Reports](#) | [Advanced Display](#) | [Customize](#)

State Health Improvement Priorities

- Asthma
- Cancer
- Healthy mothers and babies
- Heart disease and stroke
- Injury prevention
- Misuse of alcohol and drugs
- Obesity/Diabetes
- Tobacco

State Initiatives

- NH Environmental Public Health Tracking Program
- Perfluorochemical (PFC) Blood Testing and Community Exposure
- Health Equity
- NH Youth Risk Behavior
- Occupational Health Surveillance Program

Where do we go from here?

The Bureau of Public Health and Informatics, NH Health WISDOM, and NH EPHT are committed to accessing, linking, analyzing, interpreting, and disseminating meaningful data for public health action and policy development. Over the next 3-5 years there will be extra emphasis placed on linking data on hazards, exposures, and outcomes in order to generate small-area estimates where possible. The table below outlines a vision for the future of Environmental Public Health Tracking. As this work continues, it is as important as ever to work to maintain confidentiality and reliability of data.

CDC and the Robert Wood Johnson Foundation continue to lead the way in this area with the 500 Cities Project: Local Data for Better Health. More information can be found at: <https://www.cdc.gov/500cities/>

A Vision for Environmental Public Health Tracking

	State	County	Public Health Region	Hospital Service Area	Town
Hazard/Exposure Data					
Health Care Access					
Air Quality					
Biomonitoring					
Community Design					
Hazardous Sites					
Lead					
Water Quality					
Outcome Data					
Births					
Cancer Registry					
Deaths					
Hospital Discharges					
ED Visits					