Addressing Gaps and Moving Forward

National Environmental Health Tracking Network

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Objectives

- Public portal
  - What’s new
  - What’s in development
- Secure portal
  - What’s in development
- Services for partners
- Addressing gaps
- Tracking in action
National Environmental Public Health Tracking Network

New and Improved Data Query and Results Panel!

The National Environmental Public Health Tracking Network (Tracking Network) is a system of integrated health, exposure, and hazard information and data from a variety of national, state, and city sources.

On the Tracking Network, you can view maps, tables, and charts with data about:

- chemicals and other substances found in the environment
- some chronic diseases and conditions
- the area where you live

Learn more about the Tracking Network
Explore Tracking Data
Map of US by county

Reproductive and Birth Outcomes | Low Birthweight among Singleton Births | Average annual percent of very low birthweight live singleton births over 5 year period | Multiple Geo | Multiple Times

2000-2004

Legend
- 0.00 - 0.76
- 0.77 - 0.95
- 0.96 - 1.15
- 1.16 - 1.46
- 1.47 - 1.46
- Suppressed
- Data Unavailable

View Options & Info <<
Average annual percent of very low birthweight (less than 1500 grams) live singleton births over 5 year period.
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About These Data

1. Data are classified by mother's residence at the time of birth which may or may not be the same as the mother's residence at the time of conception.

2. If you choose to view these data smoothed, do not attempt to interpret the results for any single county but instead use data to identify patterns across the state. Smoothing borrows information from neighboring areas to stabilize results from sparsely populated areas. Smoothing is used to reduce variability in the data, allowing patterns to emerge.

3. Data presented on this portal may differ from data for the same measure on State Tracking Portals, State Health Department Web sites, and other source Web sites. Refer to the Technical Notes for more information.

4. **** Non-zero counts less than 5 and corresponding rates have been suppressed to protect confidentiality.

5. Rates or measures with a relative standard error greater than 30% are unstable and have been highlighted in red or suppressed to prevent misinterpretation.


7. Only live singleton births were included in the calculation of this measure. Multiple births are excluded because infants of multiple births are more likely to be premature and have low birthweight compared to infants of singleton births.

8. Gestational age is based on an algorithm that uses both the mother’s reported last normal menses and the clinician’s estimate of gestational age.

9. This measure was calculated using population counts from the Vintage 2000 Bridged-Race Postcensal Population Estimates provided by the US Census
## Health Data

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<tr>
<th>Dataset</th>
<th>Source</th>
<th>Outcomes</th>
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<tr>
<td>BRFSS</td>
<td>CDC</td>
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<td>Birth Defects</td>
<td>State and local grantees</td>
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<td>NCI SEER; CDC NPCR</td>
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<td>ASDs; children receiving services</td>
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<td>State and local grantees</td>
<td>Asthma; MI; CO poisoning</td>
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<td>Hospitalizations</td>
<td>State and local grantees</td>
<td>Asthma; MI; CO poisoning</td>
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<td>Mortality</td>
<td>CDC NCHS</td>
<td>CO poisoning</td>
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<td>Natality</td>
<td>CDC NCHS</td>
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### Exposure Data

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<td>Childhood Lead</td>
<td>CDC; State and local</td>
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### Population Data

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<th>Source</th>
<th>Outcomes</th>
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<td>BRFSS</td>
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<tr>
<td>Census</td>
<td>Census Bureau</td>
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## Environmental Data

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<td>PM 2.5; Ozone</td>
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<tr>
<td>Air Quality - modeled</td>
<td>EPA</td>
<td>PM 2.5; Ozone</td>
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<tr>
<td>Census</td>
<td>Census Bureau</td>
<td>Housing</td>
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<tr>
<td>Community Water</td>
<td>State and local grantees</td>
<td>As; DBP; Nitrates</td>
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<tr>
<td>National Land Cover</td>
<td>USGS</td>
<td>Forrest; Developed; Crop</td>
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<td>NLDAS</td>
<td>NASA; NOAA</td>
<td>Temperature; Heat Index</td>
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<tr>
<td>Well Water</td>
<td>USGS</td>
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</tbody>
</table>
HIA - Data Inputs

- **Air Quality data**
  - Estimates from Hierarchical Bayesian Modeled (HBM) data

- **Effect Estimate**
  - Long-term associations of PM2.5 with all cause mortality from Krewski et al.

- **Health data**
  - County-level mortality data from NCHS
  - We created a 3-yr baseline rate by including the year for which mortality benefits are calculated and two preceding years

- **Population data**
  - County-level census vintage data (version 2010)

HIA - Indicator and Measures

Mortality benefits associated with reducing PM$_{2.5}$ levels

- Estimated number of deaths prevented
- Estimated percent change in death rate from baseline
- Ranked groupings of counties based on percent change in death rate from baseline
HIA - Filter Variables

- Air pollution reduction percent
  - 5%, 10%, 15%, 20%, 25%

- Social/demographic variables
  - Percent of population living in poverty
  - Percent of population (under 65) uninsured
  - Percent of population over 65 years of age
  - Population density
  - Percent non-whites
  - Smoking rates
HIA - Future work

- Phase II: Other Mortality end points for PM$_{2.5}$ (est. July ‘12)
  - Ischemic Heart Disease
  - Lung Cancer

- Phase III: Morbidity end points for PM$_{2.5}$ and Ozone reductions (est. Dec. ‘12)
  - Asthma
  - Acute Myocardial Infarction
Continued Efforts

- Adding data and content
  - Biomonitoring
  - Children’s environmental health
  - Additional HIA and Climate Change
  - New drinking water analytes
  - More cardio and respiratory health outcomes
  - BRFSS smoking data and others
  - Air toxics
Continued Efforts

- Adding new functionality
  - Improved metadata
  - Enhanced charting options
  - Ability to compare populations
  - Animated time map
  - View benchmarks and confidence intervals
  - Ability to compare related measures
Secure Portal Vision and Implementation

- **Components envisioned**
  - National data repository
  - Metadata services
  - Tools, methods and other resources
  - Collaboration and knowledge management functions

- **Coming soon: Phase II**
  - Role-based access control
  - Drag and drop query and custom report building

Phase I

[Images of portals and tools related to secure portal vision and implementation]
Services for Partners

- Publish and share data on public portal
  - Community Design
  - Developmental Disabilities
  - Acute Toxic Substance Releases
  - Disaster Planning and Response

- Maintain national data repository and release to partners via secure portal
  - Radon
  - Private Well Water
Tracking’s Approach to Addressing Gaps

- Engage partners across disciplines
- Leverage resources and expertise
- Foster collaboration and capacity building
- Support existing data sources
- Examine “non-traditional” data sources
- Develop methods and tools to use the data we have
Academic Partners

- Use satellite data to extend air quality data
- Use urinary PAH data to improve HB PM$_{2.5}$ exposure estimates
- Use biomarkers of cardiovascular effects to estimate exposure to ambient PM$_{2.5}$ air pollution
- Develop, test, and disseminate a protocol for air pollution HIA
- Use the ACS Cohort to estimate smoking or obesity
- Develop and evaluate methods for estimating exposure to constituents in drinking water and linking to health data
Tracking in Action

Click on the map for more details about Tracking in Action

http://www.cdc.gov/nceh/tracking/successstories.htm
Reducing Asthma Hospital Stays in New York City

- Increase in childhood asthma hospital stays and ED visits
- Data used to urge update of asthma management plans for school start
- Decreasing rates of asthma hospital stays
- Advisories now standard practice
Protecting People During the Deepwater Horizon Oil Spill

- Louisiana Tracking Program captured health complaints and environmental monitoring results
- Used information to educate:
  - personal protective equipment
  - seafood safety
  - chemicals of concern
  - potential exposure &
  - associated health effects
Reducing Effects of Extreme Heat in California

- Cooling centers costly, but can be life-saving
- San Jose city leaders needed proof of health impacts of heat before approving cooling centers
- Tracking identified increase of heat-related ER visits during heat events
- City leaders approved cooling centers to open
Addressing Community Concerns about Cancer in Maryland

- 2 communities worried about a possible cancer cluster
- Tracking Program created maps showing distribution of cancer and analyses of cases
- No evidence of a cancer cluster
- Questions answered to end community fears
Thank you

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http://ephtracking.cdc.gov

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov  Web: www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.