CDC’s Environmental Public Health Tracking Network

Lisa Hines, MPH, CHES
Communication Team Lead
Environmental Health Tracking Branch

www.cdc.gov/ephtracking
The Tracking Network is a system of integrated health, exposure, and hazard information and data from a variety of national, state, and city sources.
National Data Sources

- CDC Programs
- Environmental Protection Agency (EPA)
- National Aeronautics and Space Administration (NASA)
- National Oceanic and Atmospheric Administration (NOAA)
- U.S. Census Bureau
- National Cancer Institute
State and City Data Sources: Tracking Network Grantees
Content on the Tracking Network

Health Effects:
- Asthma
- Birth Defects
- Cancer
- Carbon Monoxide Poisoning
- Childhood Lead Poisoning
- Developmental Disabilities
- Heart Attacks
- Reproductive and Birth Outcomes
Content on the Tracking Network

- **Environmental Health**
  - Outdoor Air
  - Community Water
  - Housing
  - Climate Change
  - Community Design

- **Population Health**
  - Population Characteristics
  - Biomonitoring: Population Exposures
  - Children’s Environmental Health
  - Health Behaviors (Smoking)
Data Use

• Supporting Epidemiologic Studies & Improving Surveillance

• Identifying Communities at Risk

• Focusing Prevention Activities & Educating Communities

• Informing Policy

• Impacting State and City Planning

www.cdc.gov/nceh/tracking/successstories.htm
Tracking Resources for Non-Funded Sites

• Tools and Communities of Practice
  – Guide to Building an Environmental Public Health Tracking Network
  – Access to workgroup documents

• Training: online training page on the Network

• Peer to Peer Fellowship

• Communication Tools

• List-serv: epht@cdc.gov
Thank you
Lhines@cdc.gov

Visit today: www.cdc.gov/ephtrack
Community Design, HIA, and Tracking

CDR Arthur Wendel, MD, MPH  
NCEH/EEHS/HCDI  
dvq6@cdc.gov  
www.cdc.gov/healthyplaces  
June 27, 2013
Healthy Community Design Initiative

- **Mission:** To understand and improve the relationship between community design and public health
How do people get exercise?

- **Leisure**
  - They walk
  - They ride bicycles

- **Utilitarian**
  - They walk
  - They ride bicycles

ACS, 2007
Health Impact Assessments

Health Impact Assessment (HIA)
- HIA is a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects.
  - National Research Council, 2011

Steps
- Screening
- Scoping
- Risk Assessment
- Recommendations
- Reporting
- Evaluation
Recommendations to Build the Practice of HIA
National Research Council, 2011

- Structural support
- Education
- Research
Recent HIA Activities
Healthy Community Design Initiative

- HIA cooperative agreement with 6 states/localities to build an HIA program
- Individual HIA opportunities
- HIA training
- Partnered with Health Impact Project to launch the National HIA Meeting
- HIA tool development – Transportation, Parks
- HIA research
HIA in the US

Champions
- San Francisco
- Oregon
- Alaska
- Minnesota
- Others

Professional
- APHA
- ASTHO
- NACCHO
- APA
- NNPHI
- SOPHIA
- Others

Foundation and Non-profit
- Health Impact Project
- Human Impact Partners
- Others

Academic
- UCLA
- Berkeley
- GA Tech
- Others

Federal
- CDC
- Others
Completed and In Progress HIAs
United States, 1999–2012 (N = 208)

Source: Health Impact Project and Centers for Disease Control and Prevention, September 2012
Opportunities for HIA and Tracking

- Robust collection of location based data for HIAs
- Targeting development of Tracking indicators to HIA needs
- Pre-populated, topic-focused templates for HIAs
- Monitoring impact of projects
Thank You

CDR Arthur M. Wendel, MD, MPH
dvq6@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.
Incorporating Environmental Public Health Tracking into Health Impact Assessments

Kelly Muellman
Tracking Webinar Series - Part II
June 27, 2013
Overview

• HIA Program
• Divine Mercy Development HIA
• Duluth HIA
HIA Program

- Bloomington Alternative Transportation Plan HIA
- Healthy Communities Act brought to state legislature
- Duluth 6th Avenue Redesign Concept/Complete Street Policy HIA
- Winona County Comprehensive Plan HIA
- School Integration Strategies in MN HIA
- Lowry Corridor HIA
- Columbia Heights Pedestrian and Bicycle Plan HIA
- Above the Falls HIA
- Douglas County Comprehensive Plan HIA
- St. Louis Park Comprehensive Plan HIA
- Divine Mercy Development HIA
- Small Area Plan for Gary and New Duluth HIA
- Design for Health, based at the University of Minnesota, assisted 19 cities and counties in incorporating health in plans, guidelines, and ordinances.
- Apple Valley Comprehensive Plan Update HIA
- City of Ramsey HIA
- Healthy Corridor For All HIA
- Bottineau Transitway HIA
Divine Mercy Development

- Divine Mercy Development:
  - South of Twin Cities metro in Faribault, MN (23,000)
  - Previous land use: agriculture/vacant
  - Proposed development: Mixed use development, 181 acres
    - church campus, school, low-density residential, senior living, townhomes, commercial
  - **Desktop** HIA
Divine Mercy Development

- Completed Environmental Assessment Worksheet (EAW)

- HIA reviewed EAW for health issues:
  - Air quality
  - Land use
  - Parks and open space
  - Trees and Vegetation
  - Transportation
  - Housing
  - Food Access
  - Water Quality
  - Noise
  - Safety
Tracking data: Baseline health characteristics

• Asthma hospitalizations
  – County level - MN Tracking portal
    • Emergency department visits added since report was completed in 2011
  – State level - National Tracking portal
## Asthma Hospitalizations: Rice County

<table>
<thead>
<tr>
<th>Years</th>
<th>Age-Adjusted Rate (per 10,000)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnesota</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-2007</td>
<td>8.7</td>
<td>(8.6 – 8.9)</td>
</tr>
<tr>
<td>Rice County</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-2007</td>
<td>7.6</td>
<td>(6.4 – 8.9)</td>
</tr>
<tr>
<td>Minnesota</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008-2010</td>
<td>7.3</td>
<td>(7.2 – 7.4)</td>
</tr>
<tr>
<td>Rice County</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008-2010</td>
<td>8.1</td>
<td>(6.8 – 9.4)</td>
</tr>
</tbody>
</table>
Asthma ED visits: Rice County

**new**

<table>
<thead>
<tr>
<th></th>
<th>Years</th>
<th>Age-Adjusted Rate (per 10,000)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnesota</td>
<td>2005-2007</td>
<td>38.6</td>
<td>(38.3 – 38.9)</td>
</tr>
<tr>
<td>Rice County</td>
<td>2005-2007</td>
<td>35.5</td>
<td>(32.7 – 38.5)</td>
</tr>
<tr>
<td>Minnesota</td>
<td>2008-2010</td>
<td>39.2</td>
<td>(38.9 – 39.5)</td>
</tr>
<tr>
<td>Rice County</td>
<td>2008-2010</td>
<td>32.4</td>
<td>(29.7 – 35.0)</td>
</tr>
</tbody>
</table>
Tracking data: Baseline health characteristics

- Chronic Obstructive Pulmonary Disease (COPD) hospitalizations - MN Tracking portal
  - State level (county level data added since report was completed)
# COPD hospitalizations: Statewide 2010

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Rate (per 10,000)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ages 45+ combined</td>
<td>29.7</td>
<td>(29.0 – 30.4)</td>
</tr>
<tr>
<td>0 – 24 years</td>
<td>0.3</td>
<td>(0.3 – 0.4)</td>
</tr>
<tr>
<td>25 – 44 years</td>
<td>0.7</td>
<td>(0.6 – 0.8)</td>
</tr>
<tr>
<td>45 – 54 years</td>
<td>6.8</td>
<td>(6.2 – 7.4)</td>
</tr>
<tr>
<td>55 – 64 years</td>
<td>18.8</td>
<td>(17.7 – 19.9)</td>
</tr>
<tr>
<td>65 – 74 years</td>
<td>52.5</td>
<td>(50.1 – 54.8)</td>
</tr>
<tr>
<td>75 – 84 years</td>
<td>84.0</td>
<td>(80.2 – 87.8)</td>
</tr>
<tr>
<td>85+ years</td>
<td>78.7</td>
<td>(73.3 – 84.0)</td>
</tr>
</tbody>
</table>

COPD data is available on Minnesota Environmental Public Health Tracking portal, not National
# COPD: Rice County

**new**

<table>
<thead>
<tr>
<th>Years</th>
<th>Age-Adjusted Rate (per 10,000)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnesota</td>
<td>2005-2007</td>
<td>33.4</td>
</tr>
<tr>
<td>Rice County</td>
<td>2005-2007</td>
<td>34.4</td>
</tr>
<tr>
<td>Minnesota</td>
<td>2008-2010</td>
<td>34.9</td>
</tr>
<tr>
<td>Rice County</td>
<td>2008-2010</td>
<td>45.3</td>
</tr>
</tbody>
</table>

COPD data is available on Minnesota Environmental Public Health Tracking portal, not National.
Research Question 1

• Are all sensitive uses (e.g., residential areas, schools, day care facilities, playgrounds and sports fields) at least 200 meters (m) (656 feet (ft)) from a major road, and at least 150m (492 ft) from a truck route? If not, does the project reduce population contact to air pollution?
RQ1: Findings

- It is expected that there will not be increased risk of health conditions such as asthma, COPD hospitalizations, cancer, birth defects, or premature death.
Research Question 2

• Does the project avoid locating sensitive uses in close proximity to a major industrial stationary source of air pollution?
RQ2: Findings

- It is possible that there will not be any negative health outcomes.
Gary/New Duluth Small Area Plan

- Neighborhood adjacent to Superfund site and landfill
- Lower income and education levels
- Last small area plan completed in ‘70s
- Issues yet to be selected by stakeholders, but strong interest in environmental contamination
Asthma ED - Zip Code Tracking per Special Request

Gary/New Duluth

4th highest asthma ED visit rate

St. Louis County 41.9
Minnesota 39.5

Age-adjusted rates per 10,000 residents, All ages, 2007-2011

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>Asthma ED Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>55802</td>
<td>107.4</td>
</tr>
<tr>
<td>55803</td>
<td>25.5</td>
</tr>
<tr>
<td>55804</td>
<td>24.3</td>
</tr>
<tr>
<td>55805</td>
<td>105.9</td>
</tr>
<tr>
<td>55806</td>
<td>80.5</td>
</tr>
<tr>
<td>55807</td>
<td>39.7</td>
</tr>
<tr>
<td>55808</td>
<td>44.7</td>
</tr>
<tr>
<td>55810</td>
<td>21.0</td>
</tr>
<tr>
<td>55811</td>
<td>24.3</td>
</tr>
<tr>
<td>55812</td>
<td>36.5</td>
</tr>
<tr>
<td>St. Louis County</td>
<td>41.9</td>
</tr>
<tr>
<td>Minnesota</td>
<td>39.5</td>
</tr>
</tbody>
</table>
Potential Health Outcomes

• Land use changes could
  – Improve asthma ED rates
  – Worsen asthma ED rates
  – Have no impact on asthma ED rates
  – Disproportionately affect certain populations (positively or negatively)
National Tracking Data Useful to HIA

- **Community Design measures**
  - access to parks, age of housing, blood lead levels, motor-vehicle fatalities, air quality, transportation to work

- **Climate Change measures**
  - heat vulnerability

- **Population Characteristics - Socioeconomic measures**
  - population without health care, income, poverty, educational attainment
Using Tracking Data in HIAs

**Challenges**
- Spatial resolution
- Data privacy & stability
- Available resources

**Opportunities**
- Access to multiple data sets
- Expertise
- Ability to customize data
State & Local Portals
Example: Minnesota

By 2014:
• Implement asthma ED data by zip code (metro area)
• Evaluate additional topics (population characteristics, lead poisoning...
3 Steps for HIA Practitioners

1) **Identify data needs/specifications**
   - geography, time period, data elements, classification

2) **Consult with the Tracking Network**
   - determine what data are available (feasibility)
   - examine methods and tools to customize data
   - determine display (map, chart, table); file format
   - identify appropriate comparison values
   - evaluate/interpret data

3) **Integrate data & messaging into assessment**
   - share examples (assessments) with the Tracking Network
State & Local Portals

Access all 24 portals at: http://ephtracking.cdc.gov/showStateTracking.action

The Tracking Program provides information communities can use to improve their health. This information comes from a nationwide network that integrates health data and environmental data. CDC's Tracking Program has laid the foundation for this national system by providing grants to state and local health departments.

CDC funds health departments in 23 states and 1 U.S. territory to build and implement local tracking networks. These state and local data systems feed into the national Tracking Network. Previous projects by these grantees have improved information technology through better infrastructure, expanded environmental public health tracking capacity, and trained public health workers. Most importantly, grantees have developed better ways to make information accessible on the Tracking Network, allowing those who need it to take action, such as policy makers and public health officials.
Tracking & HIAs: Examples

• Massachusetts (Grounding McGrath Study)

• New York City (Air Pollution Report)

• Minnesota (Divine Mercy Development)
Next Steps (2013-14)

**Minnesota**
- Prepare custom data sets (by request)
- Enhance portal (usability testing with HIA practitioners)
- Evaluate additional data topics (population characteristics, community design, transportation, heat vulnerability)
- Develop/share case studies (Duluth HIA)

**National**
- Develop HIA Toolkit (CDC Tracking Network)
- Collaborate with partners (CDC, states, Health Impact Project)
- Share case studies; identify data and informatics needs to inform portal development/HIAs
Keeping Informed

• National Tracking Network (listserv, data, new toolkit in 2014)
  www.cdc.gov/ephtracking

• National Health Impact Assessment Meeting (Washington, DC, Sept. 2013)
  http://www.nationalhiameeting.com/

• Additional Resources
  • CDC Health Impact Assessment: http://www.cdc.gov/healthyplaces/hia.htm
  • Health Impact Project: http://www.healthimpactproject.org/hia/us
  • Minnesota HIA Program: http://www.health.state.mn.us/divs/hia/
  • Minnesota Tracking Program: http://www.health.state.mn.us/tracking/