Environmental Public Health Tracking Birth Defects on the NYS Portals



NBDPN 15th Annual Meeting Arlington, Virginia Feb 27 – Feb 29, 2012

Philip Cross

NYS DOH Center for Environmental Health



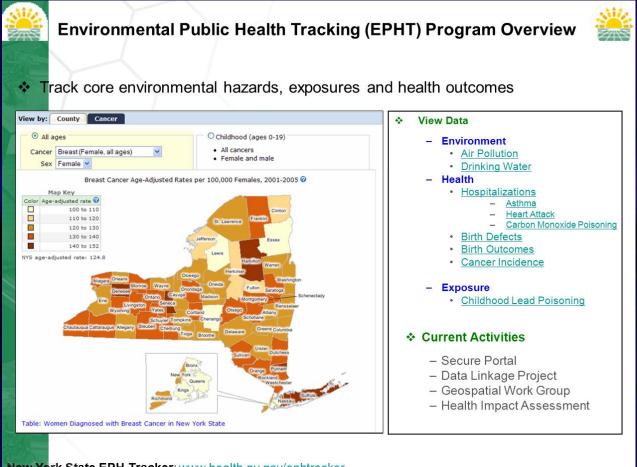
NYS Environmental Public Health Tracking

- NYS EPHT Program Overview
- Three Tiered System
 - Local Area Network (LAN)
 - Public Portal
 - Secure Portal
- Birth Defects Query and Displays





New York State's Environmental Public Health Tracking Program

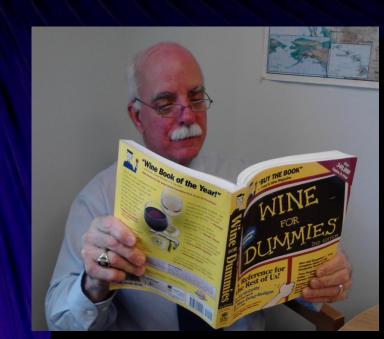


New York State EPH Tracker: www.health.ny.gov/ephtracker

CDC Grant 2006-2011 to implement a statewide EPHT Network as part of a National EPHT Network. Renewed for 2011-2014.

NYS EPHT Network

- We recognized early in the development of the Network that users will have different levels of expertise and needs for EPHT
- The NYS EPHT system consists of three tiers
- Each tier was designed to serve different user needs with multiple levels of access and security.

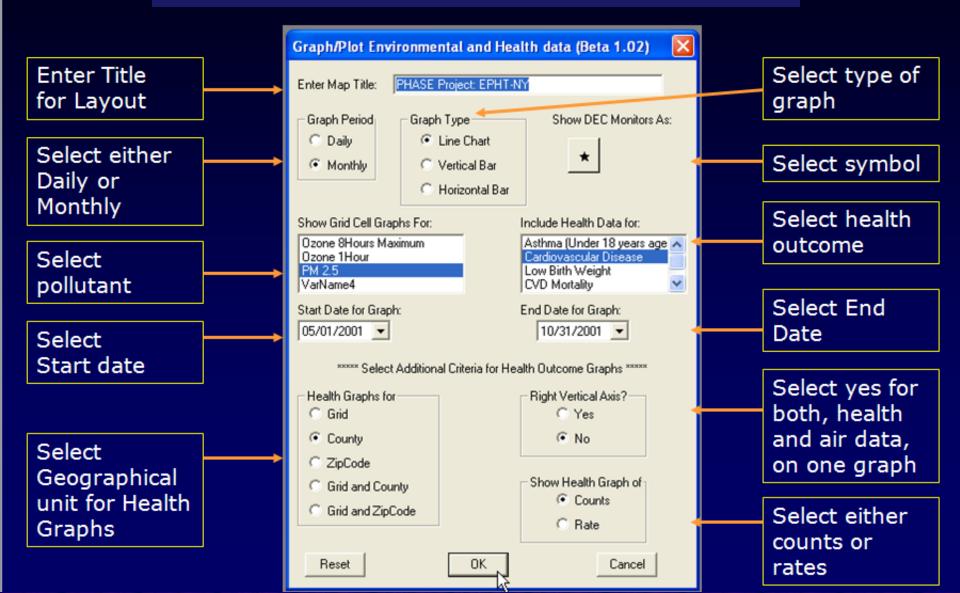


NYS EPHT Three Tiered System: General Approach

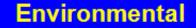
		Features	Access	Purpose
	Tier 1	Individual level dataStatistical toolsMapping tools	Researchers and project staff in Center for Environmental Health (CEH)	Research and Surveillance CEH LAN
Data and Tools	Tier 2	 Finer geographic resolution at sub-county level Data query tools Query based data displays including map and charts 	Role based access to DOH and County Health professionals Access determined by program areas/data owners	Secure Portal
	Tier 3	 County level data and display Simple data queries, maps, charts, and tables Public health message 	Open access	Outreach Public Portal

Information Background and Outreach

NYS EPHT Tier 1 Enables Complex Queries



Examples of NYS EPHT Tier 1 Datasets



- Air pollution data
- Toxic Release Inventory
- Hazardous Waste Sites
- Traffic Count

Sociodemographic

- Census population
- Inter-Census pop. estimate
- Housing data
- Poverty data
- Population projections

Built Environment

- Roads
- Airports
- Rail Lines
- Real Property Data
- Schools location
- Hospitals

Health and Exposure

- Hospital Discharge
- Emergency Department
- Live Births and Mortality
- Cancer
- Birth Defects
- Childhood blood lead levels

CEH Local Area Network (LAN)

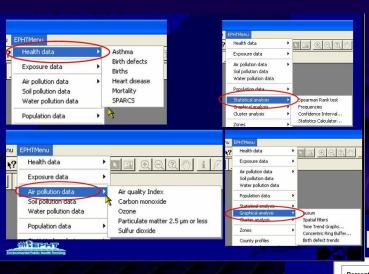
Political / Postal Boundaries

- County
- Town
- Legislative districts
- Zip Code

Natural Environment

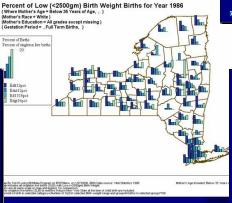
- Land use/land cover
- High resolution aerial imagery
- Geology and hydrology
- Topography

NYS EPHT Tier 1 LAN: Individual Record Level Data Interactive Mapping & Analysis Applications



Average annual asthma admissions per 10,000 children <18 years old, 2000-2003

Ith Data: Birth Ma



Hea

2

sthma

Average annual asthma admission

per 10,000 children, 2000-2002

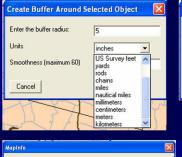
28 to 61 13 to 28 Air Monitor Values for Ozone 8 Hr Rolling Avg (ppm)

Year 201t Upper Hudson Valley Quarter 3 (Ably 01 to September 30)

Statistics Calculator

Statistics Calcul

Graphical Analysis: Concentric Ring Buffer









Environmental Public Health Tracking

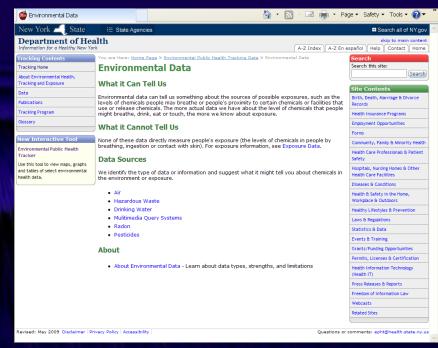


NYS EPHT Public Portal

Health Data



Environmental Data



Exposure Data



Demographic Data



Personal Choices



NYS EPHT Public Portal

Provides Background Information for Indicators



Environmental Public Health Tracker

About Birth Defects

(Also called congenital malformations or congenital anomalies)

Collecting and sharing good information about when and where birth defects happen is a first step in understanding how they might be related to the environment. Looking at patterns of birth defects rates can help health officials plan services and create ideas for research into environmental causes of birth defects. The New York State Department of Health's Congenital Malformations Registry (CMR) stores data on children with birth defects in New York State.

About one out of every 33 babies is born with a birth defect. Birth defects are the leading cause of infant death and babies with birth defects have a greater chance of illnesses and long-term disabilities than babies without birth defects. Lifetime costs to care for a person with a birth defect can be more than \$500,000.

Learn more about 45 Birth Defects. Definitions and information links for 45 reported birth defects.

Risk Factors

Doctors and researchers know how certain birth defects occur, but there are a large number of birth defects that are not well understood. Very few birth defects have a definite link to environmental hazards, although possible links have not been well studied. It is likely that most birth defects happen for many reasons, not just one reason.

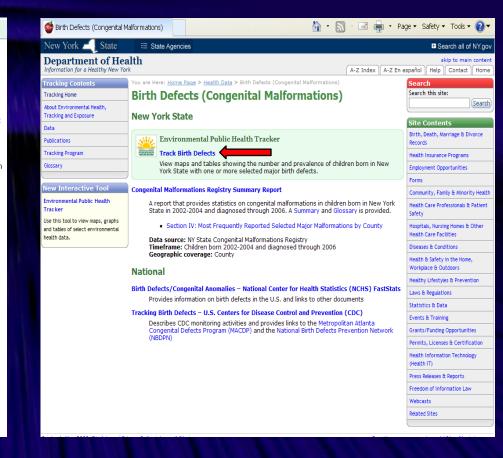
Known and probable risk factors for birth defects include the following:

- · Smoking, alcohol and other drugs
- · Poor nutrition and/or health (such as low levels of folic acid, obesity and poorly controlled diabetes)
- Medicines (prescription & over-the-counter)
- Toxic chemicals & their fumes (such as lead, paint and paint thinner, gasoline, pesticides, and second-hand smoke)
- · Infectious agents (such as rubella and toxoplasmosis)
- Radiation (X-rays)

Birth Defects Research

Prevention for Women Planning to Have Children

- Have regular medical checkups
- Eat healthy foods and maintain a healthy weight.
- · Make sure that medical conditions like diabetes are under control
- Take a vitamin with folic acid every day



NYS EPHT Public Portal Examples

Comparison of BD Prevalence by County



203

105

193.1

193.1

193.7

209.5

200.1

250.2

152.1

10,513

4,868

4,337

7,397

5,247

2.758

3,814

Broome

Cayuga

Cattaraugus

Chautaugua

Chemuna

Chenango

Clinton

Specific Birth Defects Within a County

Environmental Public Health Try ske.

Children Born With Birth Defects in New York County (Manhattan)

Reporting period: 2000-2004

Children born with birth defects (out of 101,010 live births)

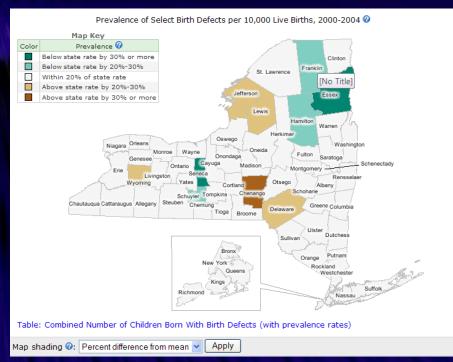
		Prevalence per 10,000 Live Birt		
Birth Defect	Children	County	State	
All Birth Defects	1,498	148.3	182.3	
Anencephaly	2	0.2 🚣	0.5	
Aniridia	0	0 🚣	0	
Anophthalmia/Microphthalmia	5	0.5 🚣	0.6	
Anotia/Microtia	3	0.3 🚣	0.6	
Aortic Valve Stenosis	12	1.2	1.6	
Atrial Septal Defect	338	33.5	34.9	
Biliary Atresia	6	0.6 🚣	0.9	
Bladder Exstrophy	2	0.2 🚣	0.2	
Choanal Atresia	13	1.3	1.5	
Cleft Lip with or without Cleft Palate	51	5	7	
Cleft Palate without Cleft Lip	45	4.5	5.8	
Cloacal Exstrophy/Persistent Cloaca	0	0 🔥	0	
Coarctation of Aorta	32	3.2	4.4	
Common Truncus	6	0.6 🔥	0.6	
Congenital Cataract	4	0.4 🗘	0.9	
Craniosynostosis	21	2.1	2.6	

NYS EPHT Public Portal Examples Birth Defects Prevalence Maps

NYS Counties Equal Intervals



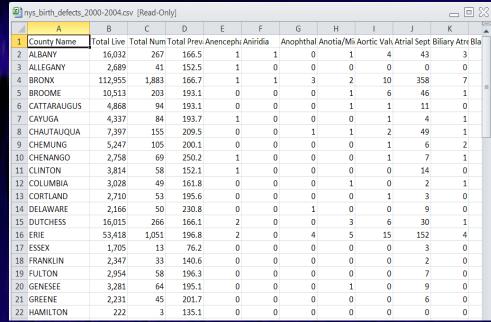
NYS Counties - Percent Difference From Mean



NYS EPHT Public Portal

Allows Export of County Level Data in comma-separated values (CSV) Format





Tier 2 – Health Commerce System NYS EPHT Secure Portal

Local and State Public Health Agencies

Welcome to NYSDOH HCS

David A. Paterson, Governor | Richard F. Daines, M.D., Commissioner

Please login to begin using the Health Commerce System







User Id:

Password:

Sian In

If you have forgotten your password, please call the Commerce Accounts Management Unit (CAMU) at 1-866-529-1890 (M-F 8-5pm)

Site Policies/Terms of Use

Violation of the security and use agreement (e.g. sharing your account userid and password with someone else)will result in the temporary suspension of your account privileges until required remedial action is taken by executives at your facility.

Repeat offenses may result in the permanent removal of the account.

Contacting the Commerce Accounts Management Unit with someone else's account information will result in the account being disabled due to a security. breach.

Important Site Notices

If you are having problems with the website, please email hinweb@health.state.nv.us

The Office of Cyber Security necessitates that passwords for secured sites meet minimum requirements. In order to comply with these requirements, HCS password rules will be modified Q2 2010. More information will be sent at a later date.

Environmental Public Health Tracking Secure Portal

Environmental Public Health Tracking

Ver: 1.0 Revised: April 2011 About | Comments

Date:2/22/2011

Time: 2:50:29 PM

| Help

Environmental Public Health Tracking

Metadata Search

Learn More

HCS Home > Environmental Public Health Tracking Secure Portal



NEW YORK STATE DEPARTMENT OF HEALTH HEALTH COMMERCE SYSTEM

Request for Access to the Environmental Public Health Tracking Secure Portal

Although you have a valid HCS user account, access to this area must be approved by the New York State Department of Health. Please complete the form and click on the SEND button below.

Note: All fields are required.

After clicking SEND button below, you will receive a response by e-mail within one week.

Name: Phillip K Cross

pkc02@health.state.ny.us E-mail Address:

Organization: NYSDOH CEH

518-402-7950 Phone Number:

Supervisor/HPN Coordinator:

Supervisor/HPN Coordinator's Phone:

Data Requested: Birth Defects

Please enter the reason access is being requested:

EPHT Secure Portal Request for Access

"Role-Based Access"

Press SEND to submit your request or RESET to clear form.

EPHT Secure Portal Home

NYS EPHT Secure Portal Landing Page

Home

Documents

Applications

My Account | Help | Contact Us |



Environmental Public Health Tracking Secure Portal

Environmental Public Health Tracking

Ver: 1.0 Revised: April 2011 About | Comments | Help

Environmental Public Health Tracking

Metadata Search

Learn More

Environmental Public Health Tracking Secure Portal

The New York State Environmental Public Health Tracking (EPHT) Secure Portal is intended for use by scientists, program staff and policy makers of the New York State (NYS) Department of Health and NYS county and local health departments. It makes data available at a finer resolution than what are available on the public portal (such as ZIP Code level disease counts or county rates stratified by sex or race). It will also provide mapping and discovery capabilities to track trends, promote public health planning and control, and help efforts to protect New York State's communities.

Some datasets are available to anyone with access to the Environmental Public Health Tracking Secure Portal, while others require the user to request access from the data owners. All users are expected to honor state and federal statutes regarding confidentiality and release of health information.

Please select a dataset to begin your query.

Environment

- Ambient Air Pollution
- Drinking Water
- Environmental Facilities and Cancer Mapping 🗗
- National Toxic Substance Incident Program (NTSIP)

Health

- Birth Defects
- Birth Outcomes
- Hospitalizations

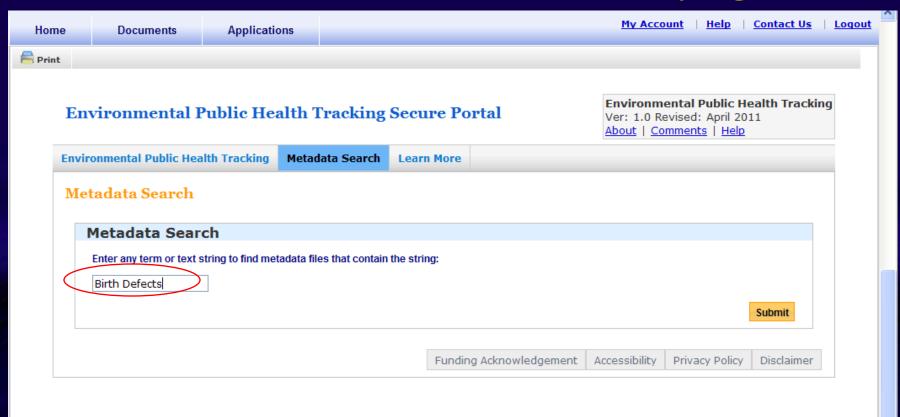
Access beyond this page may be restricted to approval by program area

Funding Acknowledgement | Accessibility

Privacy Policy

Disclaimer

NYS DOH Secure Portal Confidentiality Agreement



NYS EPHT Secure Portal Birth Defects Metadata

New York State Birth Defects (Congenital malformations)

FGDC Metadata Show Definitions

Description | Spatial | Data Structure | Data Quality | Data Source | Data Distribution | Metadata

+ Resource Description

Citation

Title: New York State Birth Defects (Congenital malformations)

Originators: Congenital Malformations Registry

Publication date: 20110214

Description

Abstract: This dataset contains counts for 45 congenital malformations among New York State live births. These data are stratified by birth year, maternal age group, maternal ethnicity/race and infant sex. Birth defects are also grouped by 11 organ systems.

Purpose: To provide data for the National Environmental Public Health Tracking Network consistent with the guidance for creating birth defects rates that follow Nationally Consistent Data and Measures (NCDMs).

Supplemental information: Data has been de-identified to protect patient confidentiality. Birth defects are selected based on a specific list of ICD-9-CM codes and narratives. Further information about the Congenital Malformations Registry can be obtained at:

http://www.health.state.ny.us/diseases/congenital_malformations/cmrhome.htm

Point Of Contact

Person: Congenital Malformations Registry

Organization: Bureau of Environmental and Occupational Epidemiology, NYSDOH

Phone: 518-402-7990 **Fax:** 518-402-7969

Email: cmr@health.state.ny.us

Hours of service: 8:30 AM - 4:30 PM

Address type: Mailing and Physical

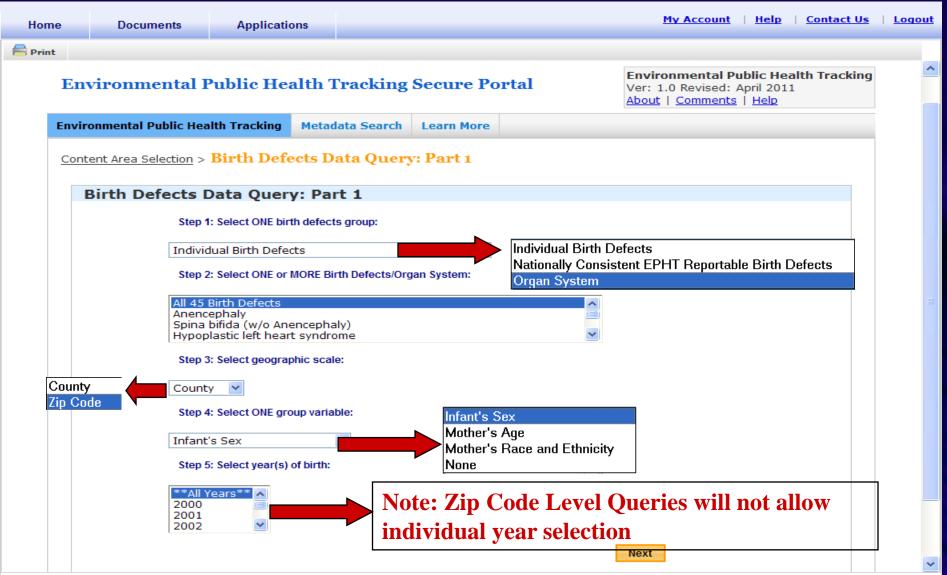
Address: 547 River Street; Room 200

City: Troy

State or Province: NY Postal code: 12180

Country: United States Of America

NYS EPHT Secure Portal Birth Defects Query



Environmental Public Health Tracking Secure Portal

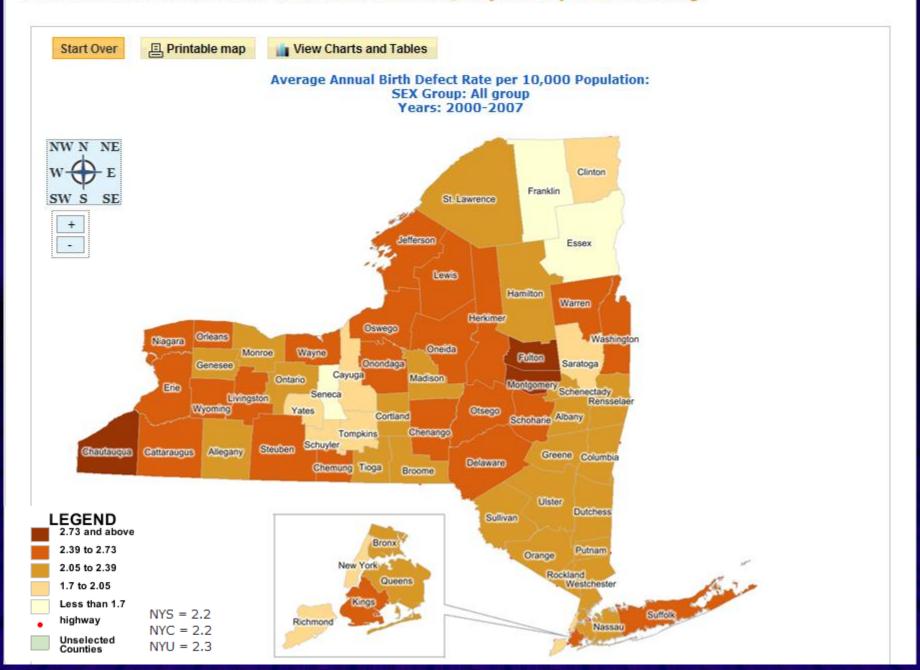
Environmental Public Health Tracking

Ver: 1.0 Revised: April 2011 <u>About | Comments | Help</u>

Environmental Public Health Tracking Metadata Search Learn More Content Area Selection > Data Query > Birth Defects Data Query Summary **Query Summary: Health Data Individual Birth Defects Birth Defects** All 45 BirthDefects Geographic Scale County **Group Variable** Infant's Sex Year(s) of Birth 2000-2005 County or Counties of patient All New York State residence **Display Output** Map (All group variables) Submit Funding Acknowledgement Accessibility Privacy Policy Disclaimer

About Us | Terms of Use Version

Content Area Selection > Data Query > Birth Defects Data Query County Thematic Map

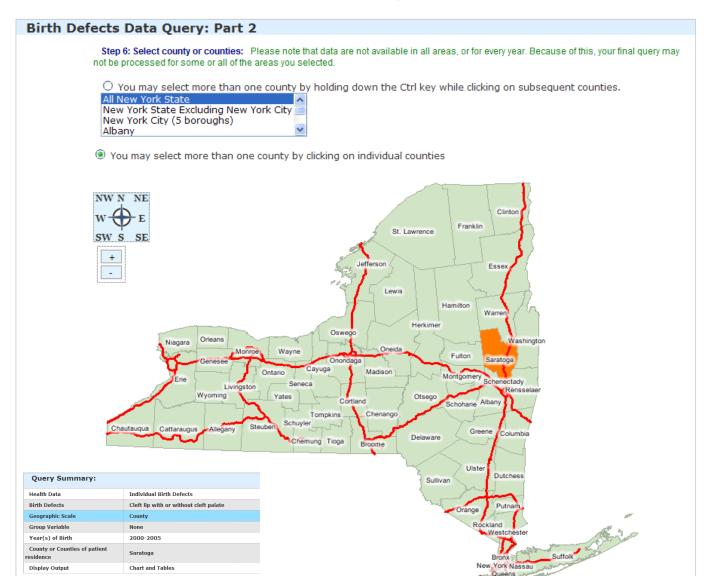


Content Area Selection > Chart and Tables

			Female		Male		Sex Unk	cnown	Total	
	Year	Birth Defect	No. of Birth Defects	Rate per 1000 Births	No. of Birth Defects	Rate per 1000 Births	No. of Birth Defects	Rate per 1000 Births	No. of Birth Defects	Rate per 1000 Birth
New York State	2000	Anencephaly	6	0.05	10	0.08	0	0.00	16	0.06
		Anomalous Pulmonary Venous Return	6	0.05	6	0.05	0	0.00	12	0.05
		Anophthalmia/Microphthalmia	8	0.06	11	0.08	0	0.00	19	0.07
		Anotia/Microtia	4	0.03	11	0.08	0	0.00	15	0.06
		Aortic Valve Stenosis	19	0.15	27	0.20	0	0.00	46	0.18
		Atrial Septal Defect	355	2.82	399	3.01	0	0.00	754	2.92
		Biliary Atresia	10	0.08	14	0.11	0	0.00	24	0.09
		Bladder Exstrophy	3	0.02	3	0.02	0	0.00	6	0.02
		Choanal Atresia	16	0.13	18	0.14	0	0.00	34	0.13
		Cleft lip with or without cleft palate	61	0.48	125	0.94	0	0.00	186	0.72
		Cleft palate w\o Cleft Lip	77	0.61	68	0.51	0	0.00	145	0.56

NYS DOH EPHT Secure Portal Birth Defects County Level Query

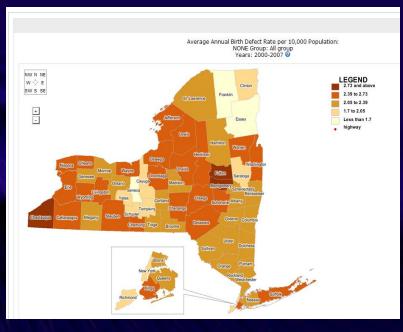
Content Area Selection > Data Query: Part 1 > Birth Defects Data Query: Part 2



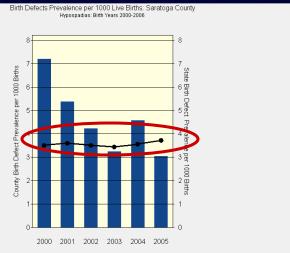
EPHT Secure Portal Displays Birth Defects Query

Prevalence	of Selected	Birth Defects	in New York

			Female		Male		Sex Uni	cnown	Total	
	Year	Birth Defect	No. of Birth Defects	Rate per 1000 Births	No. of Birth Defects	Rate per 1000 Births	No. of Birth Defects	Rate per 1000 Births	No. of Birth Defects	Rate per 1000 Births
New York 20 State	2000	Anencephaly	6	0.05	10	0.08	0	0.00	16	0.06
		Anomalous Pulmonary Venous Return	6	0.05	6	0.05	0	0.00	12	0.05
		Anophthalmia/Microphthalmia	8	0.06	11	0.08	0	0.00	19	0.07
		Anotia/Microtia	4	0.03	11	0.08	0	0.00	15	0.06
		Aortic Valve Stenosis	19	0.15	27	0.20	0	0.00	46	0.18
		Atrial Septal Defect	355	2.82	399	3.01	0	0.00	754	2.92
		Biliary Atresia	10	0.08	14	0.11	0	0.00	24	0.09
		Bladder Exstrophy	3	0.02	3	0.02	0	0.00	6	0.02
		Choanal Atresia	16	0.13	18	0.14	0	0.00	34	0.13
		Cleft lip with or without cleft palate	61	0.48	125	0.94	0	0.00	186	0.72
		Cleft palate w\o Cleft Lip	77	0.61	68	0.51	0	0.00	145	0.56

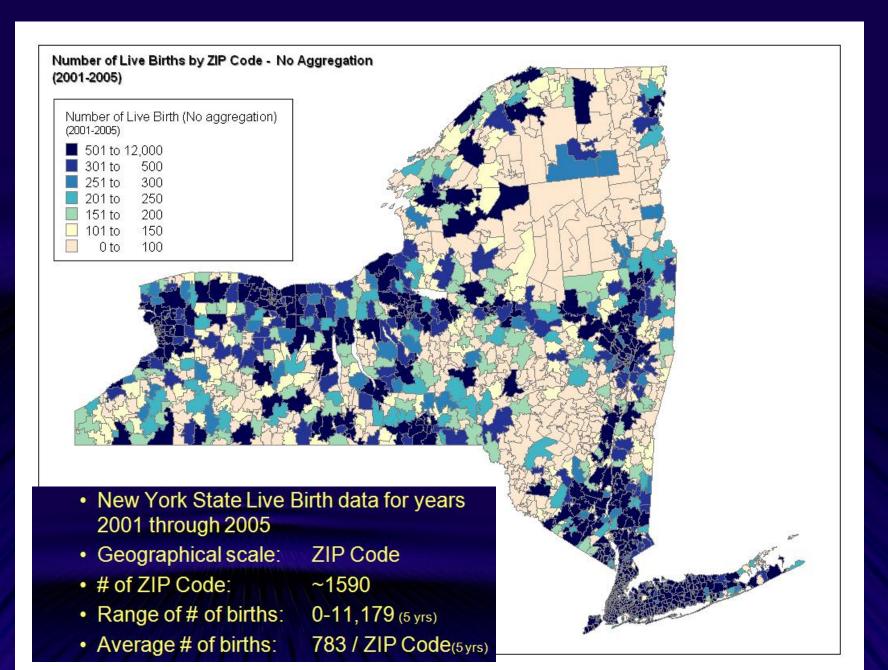


Tables, charts & maps can be displayed

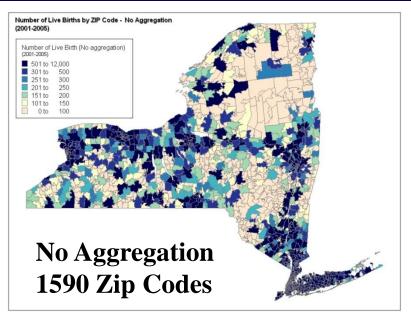


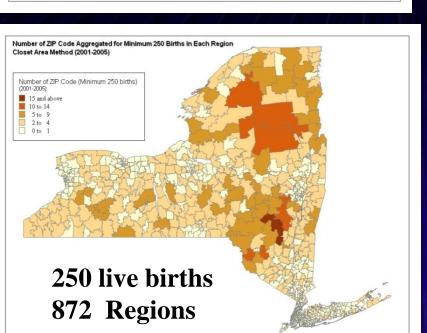
Blue bar represents county prevalence and black line represents state prevalence for selected birth defect

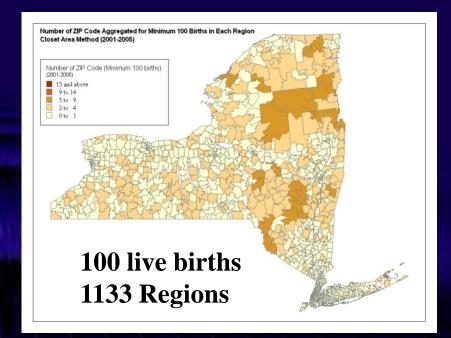
Displaying Birth Defects Prevalence By Zip Codes

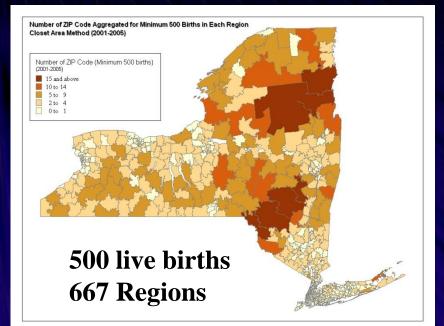


Aggregate Zip Codes to Protect Confidentiality









Aggregation Tool

Original Block Data †

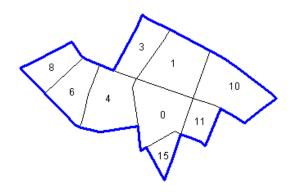
Block	Cases
122300/2004	10
122300/2005	11
014500/3005	3
014500/3007	4
014500/3008	0
014500/3009	1
014500/3010	15
103202/2001	8
103202/2002	6



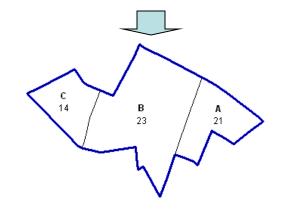


Regions

Block	Cases	Region
122300/2004	10	Α
122300/2005	11	Α
014500/3005	3	В
014500/3007	4	В
014500/3008	0	В
014500/3009	1	В
014500/3010	15	В
103202/2001	8	С
103202/2002	6	С

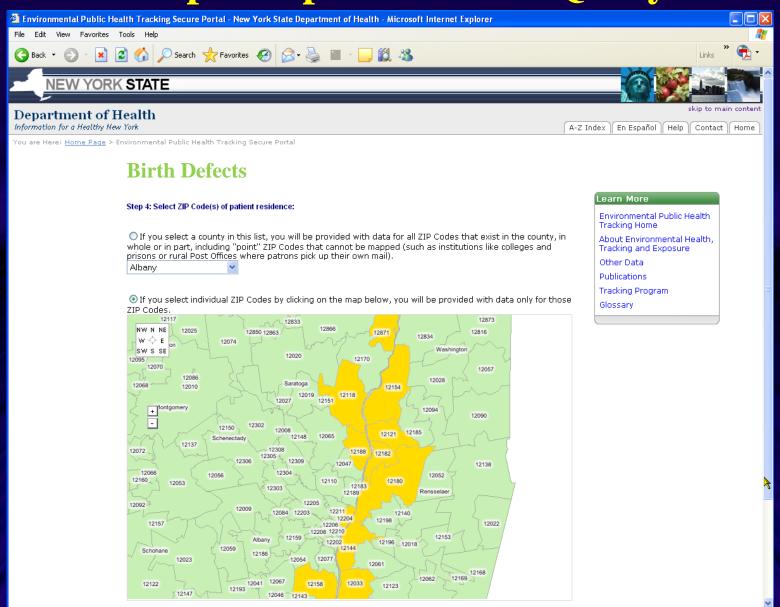


Cases	Region
21	Α
23	В
14	С





NYS DOH EPHT Secure Portal Example Zip Code Level Query



Local intranet

Done

Example Output – Zip Code Level Query



		Female		Male		Sex Unknown		Total		
Aggregated Region	Year	Birth Defect	No. of birth Defects	Live Births	No. of birth Defects	Live Births	No. of birth Defects	Live Births	No. of birth Defects	Live Births
12009nm	All	Genitourinary(BPA=752.x-753.x)			1771	7		14		
		Musculoskeletal(BPA=754.x-756.x)								
12203nm	All	Genitourinary(BPA=752.x-753.x)	10.00							
		Musculoskeletal(BPA=754.x-756.x)				1 N				

Notes:

selected 5 ZIP Code (12009, 12085, 12107, 12203, 12246), in fing point ZIP Code, from birth defect data

This ZIP Code crosses county boundaries. The values provided are for the entire ZIP Code, not just the portion in this county.

Live births for enclosed ZIP Codes is counted with live births in the enclosing ZIP Code.

Birth defects data source: Congenital Malformation Registry (CMR), NYSDOH.

Zip Code population data source: The Nielson Company, Claritas Solutions, Ithaca NY.

Download as Spreadsheet

- List of ZIP Code included in query results.
- List included user selected ZIP Code along with additional ZIP Code in selected region

^{**} Some valid ZIP Codes are enclosed within other ZIP Codes (such as buildings, institutions, or rural Post Offices).

There are 0 or less birth defects in the sub-group for indicated Zip Code.

NYS EPHT Secure Portal

BEOE - EPHT

ISHSG - BHNSM

Syni-An Hwang

Linh Le

Tom Talbot

Kathryn Schmit

Sanjaya Kumar

Xiaohang Wang

Neil Muscatiello

Joseph Pianella

Melissa Frisbie

BEOE – Congenital Malformations Registry

Charlotte Druschel

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