

Community Health Network of Connecticut Presentation

Gestational Diabetes Surveillance In Connecticut

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Gestational Diabetes Surveillance Project

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Basic Terms

“Epidemiologic surveillance is the ongoing and systematic collection, analysis, and interpretation of health data in the process of describing and monitoring a health event.”

Source: <http://wonder.cdc.gov/wonder/prevguid/p0000112/p0000112.asp>

“Chronic disease epidemiologists collect, analyze and interpret science-based data to assess the burden of chronic disease, provide information on the distribution and risk factors of chronic diseases necessary for public health program planning and implementation, and assist in evaluating the success of public health programs.”

Source: **Essential Functions of Chronic Disease Epidemiology In State Health Departments**

<http://www.cste.org/dnn/LinkClick.aspx?fileticket=p3mU49iaDvc%3D&tabid=175&mid=716>

Basic Terms

- **Diabetes**

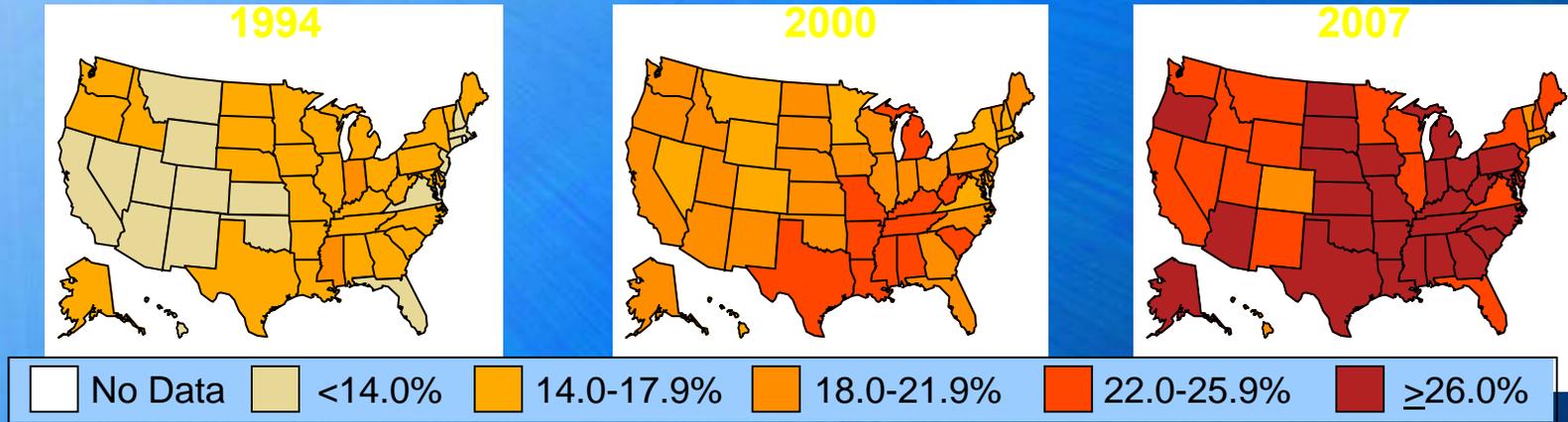
- **Type 1 diabetes**, formerly called juvenile diabetes or insulin-dependent diabetes
- **Type 2 diabetes**, formerly called adult-onset or noninsulin-dependent diabetes, is the most common form of diabetes.
- **Gestational diabetes** is caused by the hormones of pregnancy or a shortage of insulin. A woman who has had gestational diabetes is more likely to develop type 2 diabetes later in life

- **Pre-diabetes** – when blood glucose is higher than normal but lower than the diabetes range. At risk for getting type 2 diabetes and heart disease

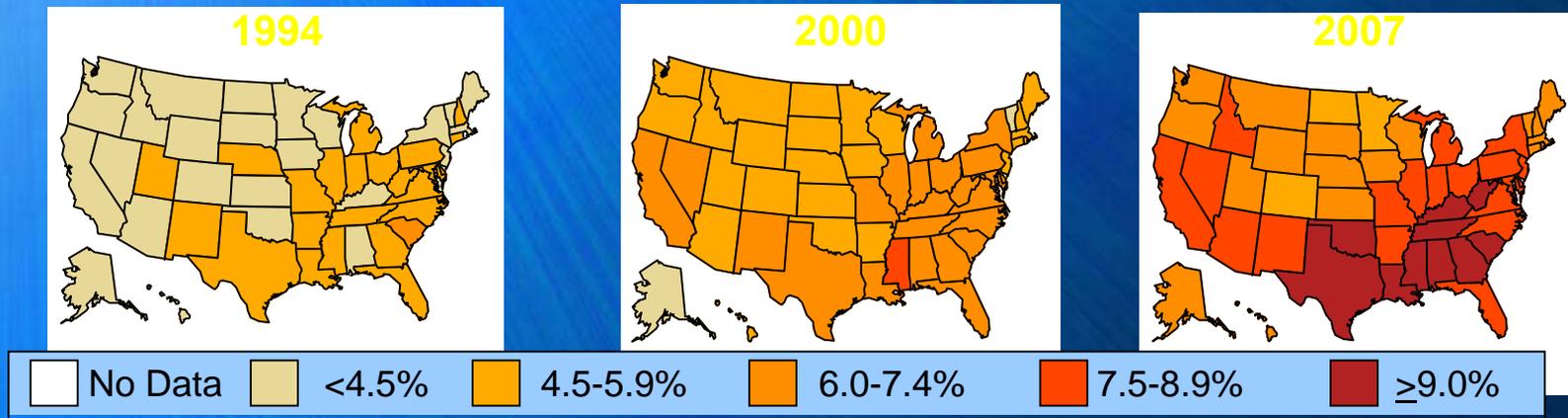
Source: <http://diabetes.niddk.nih.gov/dm/pubs/riskfortype2/index.htm>

Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

Obesity (BMI ≥ 30 kg/m²)

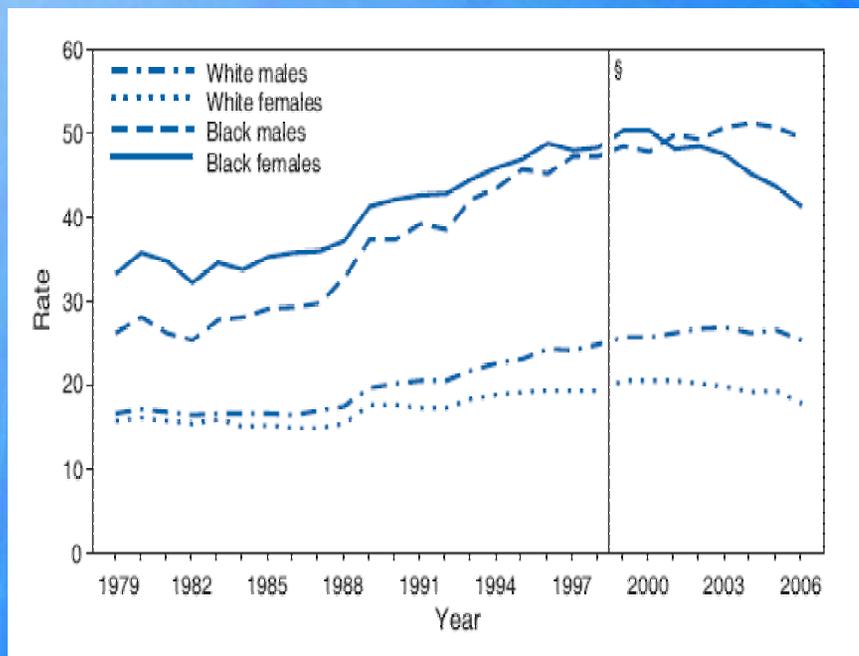


Diabetes



CDC's Division of Diabetes Translation. National Diabetes Surveillance System available at <http://www.cdc.gov/diabetes/statistics>

National Burden of Diabetes



Age-Adjusted Death Rates* for Diabetes, by Race and Sex --- United States, 1979--2006[†]

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5731a5.htm?s_cid=mm5731a5_e (8/2008)

Age-Adjusted Prevalence of Adult Diabetes

United States

- Overall population 8.0%
- White non-Hispanic population 6.6%
- Black non-Hispanic population 11.8%
- Hispanic population 10.4%

Source: <http://www.cdc.gov/media/pressrel/2008/r080624.htm>

Connecticut

- Overall population 5.9%
- White non-Hispanic population 5.3%
- Black non-Hispanic population 12.8%
- Hispanic population 11.4%

Source: Unpublished 2004-2006 CT BRFSS data

Connecticut Burden of Diabetes

- About 6% of the CT population have diagnosed diabetes (157,600 adults 18 years and older). An additional 63,000 are estimated to have undiagnosed diabetes
- Diabetes is the 7th leading cause of death for all Connecticut residents (but it's the 6th leading cause for the CT Latino/Hispanic residents), and a major cause of disability
- Hospitalization Costs (DPH, 2005):
 - ~ \$77 million billed with diabetes as a principal diagnosis
 - ~ \$1 billion billed for diabetes-related in 2002
- At risk: 2.0 million Connecticut adults:
 - Overweight
 - Have a sedentary lifestyle
 - **History of gestational diabetes**

Source: Connecticut Diabetes Surveillance System

http://www.ct.gov/dph/cwp/view.asp?a=3132&q=388098&dphNav_GID=1601&dphPNavCtr=|46973|#46994

National Data Related to GDM

National GDM-Related Data Sources

- Behavioral Risk Factor Surveillance System (BRFSS) 2007
 - National GDM estimate is 0.9%
 - Connecticut GDM estimate is 1.4%
- CDC Pediatric and Pregnancy Nutrition Surveillance System (PEDNESS) [40 states] 2006 (WIC programs)
 - Pre-pregnancy BMI for Connecticut: 42.9% overweight (vs. 43.8% nationally)

Source: http://www.cdc.gov/pednss/pnss_tables/pdf/national_table5.pdf

- CDC Pregnancy Risk Assessment Monitoring System (PRAMS) [37 states] 2007
 - Pre-pregnancy diabetes 1.8% (24 states) [2006]
 - GDM Validation Project (6 states) – PRAMS + Birth + Medical Discharge Data (Owens)

Source: <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5610a1.htm>

- CDC Wonder – Healthy People 2010
 - 05-08 Gestational Diabetes (no data) – deleted at Mid-course Review

Source: <http://wonder.cdc.gov/data2010/obj.htm>

Gestational Diabetes Mellitus (GDM)

- Between 2.5 percent and 4 percent of women in the United States develop gestational diabetes during pregnancy
- Source: <http://www.cdc.gov/od/oc/media/pressrel/r010509.htm>
- ~200,000 cases of GDM, average 7% of all pregnancies, are diagnosed annually
- Untreated GDM increases the risk of having a child who will be obese at age 5 – 7 years
- Adult offspring born to women with GDM had high rates of type 2 diabetes and pre-diabetes (20%)
(n = 597 offspring, 18-27 years old, Denmark 1978-1985)

Risk Factors for Developing GDM

- Increasing maternal age
- Family history of diabetes
- History of GDM in a prior pregnancy
 - Women with GDM have up to a 45 percent risk of recurrence with the next pregnancy and up to a 63 percent risk of developing type 2 diabetes later in life

Source: <http://www.cdc.gov/od/oc/media/pressrel/r010509.htm>

- Increased pre-pregnancy Body Mass Index (BMI)

Gestational Diabetes Surveillance

- Currently, there is no national GDM surveillance system in place
- Screening is risk-based and not universal
- Standards for GDM screening and management are yet to be set
- We need to better understand who is at risk for GDM so we can intervene to prevent the development of type 2 diabetes in those individuals
- 2003-2006 birth certificate data
 - 4.1% (6,890) of births were to mothers with GDM
 - Mothers with GDM were significantly more likely to deliver by C-section (43.7%) than mothers without GDM (31.2%)
 - County distribution of GDM births was similar to distribution of all Connecticut births

Gestational Diabetes Mellitus Surveillance in Connecticut Issue Brief

Available on the Connecticut Department of
Public Health Web site at:

http://www.ct.gov/dph/cwp/view.asp?a=3132&q=388098&dphNav_GID=1601&dphPNavCtr=|46973|#46994

Connecticut Diabetes Surveillance System Webpage

http://www.ct.gov/dph/cwp/view.asp?a=3132&q=388098&dphNav_GID=1601&dphPNavCtr=|46973|#46994

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