Welcome!
Collect and Use Data to Identify and Reduce Cancer Health Inequities

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Director, Centre of Excellence in Cancer Prevention

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Ingham County Health Department

Webinar Objectives
1. Understand why good demographic data collection is important
2. Understand how to collect demographic data and use it to identify and address health inequities

This webinar is sponsored by the Michigan Cancer Consortium

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Sociodemographic Data:
Why Collecting Them and Using Them Is Essential to Reduce Cancer Disparities
Why does it matter?

- Health outcomes are not distributed equally in our population
- Half of the population spends little or nothing on health care, while 5 percent of the population spends almost half of the total amount (AHRQ).
- Used data from:
  - US Census: age, sex, race, ethnicity by county
  - National Center for Health Statistics: county mortality data
  - CDC: Behavioral Risk Factor Surveillance System for health care insurance status and utilization, risk factors
Life expectancy at birth by race, sex, and region

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Observations

- Asian-American women in Bergen County, New Jersey, live to an average age of 91 (3 years longer than women in Japan (the country with the highest national female life expectancy)) but Native American men in South Dakota live 58 years on average, similar to that of men in Azerbaijan.

- Young and middle-aged blacks in high-risk urban areas have mortality risks closer to those in the Russian Federation or parts of sub-Saharan Africa than to those in neighboring white suburbs.
# The 8 Americas

<table>
<thead>
<tr>
<th>America</th>
<th>Description</th>
<th>Population (millions)</th>
<th>Per Capita Income</th>
<th>% Completing High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Asian</td>
<td>10.4</td>
<td>$21,566</td>
<td>80%</td>
</tr>
<tr>
<td>2</td>
<td>Northland low-income</td>
<td>3.6</td>
<td>$17,758</td>
<td>83</td>
</tr>
<tr>
<td>3</td>
<td>Middle America</td>
<td>214.0</td>
<td>$24,640</td>
<td>84</td>
</tr>
<tr>
<td>4</td>
<td>Low-income whites - Appalachia &amp; Mississippi Valley</td>
<td>16.6</td>
<td>$16,390</td>
<td>72</td>
</tr>
<tr>
<td>5</td>
<td>Western Native American</td>
<td>1.0</td>
<td>$10,029</td>
<td>69</td>
</tr>
<tr>
<td>6</td>
<td>Black Middle America</td>
<td>23.4</td>
<td>$15,412</td>
<td>75</td>
</tr>
<tr>
<td>7</td>
<td>Southern low-income rural black</td>
<td>5.8</td>
<td>$10,463</td>
<td>61</td>
</tr>
<tr>
<td>8</td>
<td>High-risk urban black</td>
<td>7.5</td>
<td>$14,800</td>
<td>72</td>
</tr>
</tbody>
</table>
Figure 3. Life Expectancy at Birth in the Eight Americas (1982–2001)

http://journals.plos.org/plosmedicine/article?id=info:doi/10.1371/journal.pmed.0030260

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Health coverage and utilization (% yearly checkup) by sex and America category

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Figure 7. Burden of Disease Attributable to the Ten Leading Risk Factors in the very-low-mortality countries of the Region of Americas

doi:10.1371/journal.pmed.0030260
http://journals.plos.org/plosmedicine/article?id=info:doi/10.1371/journal.pmed.0030260

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Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2014

*Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.

*These slides are the property of the presenter, do not duplicate without written consent.
5.6 million children alive today will die prematurely from smoking if current smoking rates persist

Projected number of persons, 0–17 years of age, who will become smokers and die prematurely as adults because of a smoking-related illness, by state—United States, 2012

These slides are the property of the presenter, do not duplicate without written consent.
2013: Percent of adults who report consuming vegetables less than one time daily †
2011: Percent of census tracts that have at least one healthier food retailer located within the tract or within 1/2-mile of tract boundaries †
What contributions can sociodemographic data make to reducing health disparities?

- Understand your community
  - Identify needs and resources
What contributions can sociodemographic data make to reducing health disparities?

- Understand your community
  - Identify needs and resources
- Assess time trends
Figure 1: 30 Day Prevalence of Daily Use of Cigarettes, by Grade, 1976-2014

What contributions can sociodemographic data make to reducing health disparities?

- Understand your community
  - Identify needs and resources
- Assess time trends
- Identify possible causes of disparities
### Income and prostate cancer incidence in British Columbia

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>RR (95% CIs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 (lowest)</td>
<td>.86 (.79-.82)</td>
</tr>
<tr>
<td>Q2</td>
<td>.92 (.89-.95)</td>
</tr>
<tr>
<td>Q3</td>
<td>.82 (.79-.85)</td>
</tr>
<tr>
<td>Q4</td>
<td>.83 (.80-.86)</td>
</tr>
<tr>
<td>Q5 (highest)</td>
<td>Reference</td>
</tr>
</tbody>
</table>

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What contributions can sociodemographic data make to reducing health disparities?

- Understand your community
  - Identify needs and resources
- Assess time trends
- Identify possible causes of disparities
- Set goals
The Geoffrey Rose paradigm illustrates the effect of a population-level intervention on the distribution of risk exposure. Before the intervention, the distribution of risk exposure is broad, with a mean effect indicating a certain level of exposure. After the intervention, the distribution shifts to the left, suggesting a reduction in the mean level of risk exposure. Arrows indicate the direction of this shift, showing the potential impact of the intervention on the population as a whole.
What contributions can sociodemographic data make to reducing health disparities?

- Understand your community
  - Identify needs and resources
- Assess time trends
- Identify possible causes of disparities
- Set goals
- Understand what is possible
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  - Identify needs and resources
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- Identify possible causes of disparities
- Set goals
- Understand what is possible
- Identify impact of interventions
Short-term impact of a comprehensive approach: Youth and adult smoking rates in NYC


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What contributions can sociodemographic data make to reducing health disparities?

- Understand your community
  - Identify needs and resources
- Assess time trends
- Identify possible causes of disparities
- Set goals
- Understand what is possible
- Identify impact of interventions
- **Make policy changes to reduce inequities**
  - Reduce cancer rates, improve survival, reduce costs
Some philosophical perspectives

- "A nation's greatness is measured by how it treats its weakest members." ~ Mahatma Gandhi

- “A chain is no stronger than its weakest link, and life is after all a chain.” ~William James
Questions?

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Contact me

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DEMOGRAPHIC DATA’S APPLICATION AND SOURCES: A LOCAL PERSPECTIVE

Cassandre C. Larrieux, MPH

15 December 2015
Where the rubber meets the road

At the local level is where we have the greatest contact with the public.
Using our resources

How do we deploy them strategically, where they will have the most impact? We ask this question all the time in a variety of different ways:

• Which community-based partner should we engage for a cancer prevention /survivorship intervention?
• We want to have a health fair with a major emphasis on cancer (all-forms). Where should we have it?
• Who is more likely to start smoking at an early age?
Which community-based partner should we engage for a cancer prevention/survivorship intervention?
• Any community-based partners with a focus on minorities or women are obvious considerations
• Local Komen affiliate
• Identifying others require knowing where minority women live, work, play, and pray
Where do minority women live, work, play, and pray?
www.census.gov
American Community Survey (ACS)
How to Use the ACS

A Compass for Understanding and Using American Community Survey Data
What General Data Users Need to Know

A Compass for Understanding and Using American Community Survey Data
What State and Local Governments Need to Know

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Where they live and work

Map with Estimated percent of all people who were of a race other than White between 2009-2013.

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Where they play

Other areas have successfully engaged beauty shops in health interventions. Superimposing the location of beauty shops (orange dots) on our demographic map can narrow down the number of shops we should target.
Where they pray

The same can be done with houses of worship (green dots).
We want to have a health fair with a major emphasis on cancer (all-forms). Where should we have it?
What demographic characteristic do we use?

It may not be appropriate in this case to look at race/ethnicity. What other characteristics might we consider?

- Age
- Education
- Insurance status
- Poverty
Poverty map

Map with Estimated percent of all people that are living in poverty as of 2009-2013.

Estimated percent of all people that are living in poverty as of 2009-2013.

*Legend*

- Insufficient Data
- 10.5% or less
- 10.5% - 15.5%
- 15.5% - 20.5%
- 20.5% or more

Shaded by: Census Tract 2010
Source: Census
A word about mapping

Mapping is a wonderful tool to convey information. If you don’t have the capacity to create your own maps, there are other options:

• Services (i.e. the census and Policymap)
• Local partners and colleagues.
Who is more likely to start smoking at an early age?
Two options

Michigan Youth Risk Behavior Survey

MiPHY | Michigan Profile for Healthy Youth
MiPHY Report Generator
HS Summary Report for Oakland County

Michigan Profile for Healthy Youth: 2013-2014

Oakland

MiPHY Regional Demographics Summary High School

The Michigan Profile for Healthy Youth (MiPHY) was completed by 7,9 and 11 grade students in Michigan. The results in this report reflect student survey responses from high schools that voluntarily participated in your county and may not be representative of all high schools in the county. Characteristics of the participating districts and buildings are as follows:

<table>
<thead>
<tr>
<th>Michigan Profile for Healthy Youth District Participation</th>
<th>#</th>
<th>Total</th>
<th>% Participating Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating Districts in Districts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>9</td>
<td>28</td>
<td>32.1%</td>
</tr>
<tr>
<td>Public Districts with Private School</td>
<td>8</td>
<td>22</td>
<td>35.4%</td>
</tr>
<tr>
<td>Public School Academy</td>
<td>1</td>
<td>36</td>
<td>2.8%</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>64</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Michigan Profile for Healthy Youth Building Participation</th>
<th>#</th>
<th>Total</th>
<th>% Participating Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating Buildings in County</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>19</td>
<td>141</td>
<td>13.5%</td>
</tr>
<tr>
<td>Private</td>
<td>0</td>
<td>58</td>
<td>0.0%</td>
</tr>
<tr>
<td>Public School Academy</td>
<td>1</td>
<td>16</td>
<td>6.3%</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>157</td>
<td>12.7%</td>
</tr>
</tbody>
</table>

1 A district is counted as participating if at least one building takes the survey.
2 Public districts may be represented in the "Public" and "Public District with Private School" categories, but are only counted once in the total.

Students completed an online, anonymous questionnaire. Survey procedures were designed to protect the privacy of students by allowing for anonymous and voluntary participation. Local parental notification procedures were followed before survey administration.

Reports on data results are aggregated across district. To preserve confidentiality, names and results of individual districts are not provided in this report.

The contents of this report were developed under a grant from the United States Department of Education (Safe and Supportive Schools Grant (CDA-094184Y)). However, these contents do not necessarily represent the policy of the United States Department of Education, and you should not assume endorsement by the Federal Government.

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### Age of First Tobacco Use

#### Tobacco: High School

<table>
<thead>
<tr>
<th></th>
<th>Grade</th>
<th>Gender</th>
<th>Race/Ethnicity</th>
<th>Academics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/A</td>
<td>9</td>
<td>11</td>
<td>M</td>
</tr>
<tr>
<td>Average age of first tobacco use (Note: Not a percentage)</td>
<td>N/A</td>
<td>13.1</td>
<td>12.2</td>
<td>13.7</td>
</tr>
<tr>
<td>Percentage of students who smoked cigarettes during the past 30 days</td>
<td>N/A</td>
<td>7.8%</td>
<td>5.3%</td>
<td>11.0%</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>2.4%</td>
<td>1.1%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

Given the limitation of the data, what do we do with it?
Summary

- Demographic data can help a local entity use their resources more effectively and efficiently.
- There are many sources of local information.
- Partners may be able to help with technical capacity issues.
- No source of data is perfect. Know the data’s limitations.
THANK YOU