Module 3: Identifying Health Problems

Winston Liaw, MD, MPH

This work is supported by NACHC's Cooperative agreement from the Health Resources and Services Administration, Bureau of Primary Health Care (HRSA/BPHC).
Disclosures for Continuing Medical Education (CME)

The Robert Graham Center and Virginia Commonwealth University adhere to the conflict-of-interest policy of the American Academy of Family Physicians as well as to the guidelines of the Accreditation Council for Continuing Medical Education and the American Medical Association.

Current guidelines state that participants of continuing medical education (CME) activities should be made aware of any affiliation or financial interest that may affect an author’s article. Disclosures do not suggest bias but provide readers with information relevant to the evaluation of the contents of these recommendations.

**Winston Liaw, MD, MPH** has reported no conflicts of interest relative to this program.

**Jennifer Rankin, PhD, MPH, MS, MHA** has reported no conflicts of interest relative to this program.

**Andrew Bazemore, MD, MPH** has reported no conflicts of interest relative to this program.
Agenda

• Gathering quantitative data
• Gathering qualitative data
• Social determinants of health
• Prioritizing health problems
Objectives

• List the steps involved with gathering quantitative data about a community
• List the steps involved with gathering qualitative data about a community
• Define social determinants of health
• List the steps involved with prioritizing health problems
“Winston – aka Winnie”
Age: 7 years
Weight: 70 pounds (95%)
Body Mass Index: 20 (> 95%)
Refining community = Ward 8
Refining community = Census Tract 007407
<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>DC</th>
<th>Ward 8</th>
<th>Ward 3</th>
<th>Combined Census Tracts*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>272,690,813</td>
<td>523,124</td>
<td>60,485</td>
<td>68,093</td>
<td>51,696</td>
</tr>
<tr>
<td>% of city</td>
<td></td>
<td>100%</td>
<td>11.56%</td>
<td>13.02%</td>
<td>9.88%</td>
</tr>
<tr>
<td>% Population&lt;18</td>
<td>25.80%</td>
<td>18.40%</td>
<td>33.50%</td>
<td>18.60%</td>
<td>33.7%</td>
</tr>
<tr>
<td>% Population Black</td>
<td>12.80%</td>
<td>61.90%</td>
<td>89.60%</td>
<td>4.20%</td>
<td>95.20%</td>
</tr>
<tr>
<td>% Population White</td>
<td>82.40%</td>
<td>34.60%</td>
<td>8.30%</td>
<td>89.50%</td>
<td>2.8%</td>
</tr>
<tr>
<td>% Population Hispanic</td>
<td>11.50%</td>
<td>7.60%</td>
<td>2.30%</td>
<td>13.00%</td>
<td>0.80%</td>
</tr>
</tbody>
</table>

**Number, age, gender, race**

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>DC</th>
<th>Ward 8</th>
<th>Ward 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live Births</td>
<td>3,959,417</td>
<td>7513</td>
<td>1237</td>
<td>854</td>
</tr>
<tr>
<td>Rate (per 1000 population)</td>
<td>14.5</td>
<td>14.5</td>
<td>20.40</td>
<td>12.5</td>
</tr>
<tr>
<td>Infant Mortality (per 1000)</td>
<td>7.1</td>
<td>15</td>
<td>27.5</td>
<td>5.9</td>
</tr>
<tr>
<td>% of infant deaths in city</td>
<td>100%</td>
<td></td>
<td>30.1%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Deaths (all ages- per 100,000)</td>
<td>877</td>
<td>1162</td>
<td>952.1</td>
<td>925.2</td>
</tr>
<tr>
<td># of deaths to children (1-19yo)</td>
<td>Not Avail</td>
<td>81</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>% of child deaths in city</td>
<td>100%</td>
<td></td>
<td>21%</td>
<td>2.50%</td>
</tr>
</tbody>
</table>

### TABLE 3-16.--TOTAL DEATHS AND INFANT DEATHS BY CENSUS TRACT:
**DISTRICT OF COLUMBIA, 2005**

<table>
<thead>
<tr>
<th>Census Tract</th>
<th>All Ages</th>
<th>Under 1 Year of Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>5,454</td>
<td>108</td>
</tr>
<tr>
<td>000</td>
<td>99</td>
<td>-</td>
</tr>
<tr>
<td>010</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td>011/b</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>020</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>021</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>022</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>030</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>031/b</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>040</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>__</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Table 1. Understanding Overweight and Obesity in the District</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Overweight</td>
<td>Ward 1</td>
<td>Ward 2</td>
</tr>
<tr>
<td>---------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>% Obese</td>
<td>39%</td>
<td>35%</td>
</tr>
<tr>
<td>% Obese a</td>
<td>19%</td>
<td>13%</td>
</tr>
<tr>
<td>% African American b</td>
<td>43%</td>
<td>30%</td>
</tr>
<tr>
<td>% Hispanic b</td>
<td>23%</td>
<td>9%</td>
</tr>
<tr>
<td>% Caucasian b</td>
<td>35%</td>
<td>56%</td>
</tr>
<tr>
<td>Average household income $</td>
<td>$63,000</td>
<td>$98,000</td>
</tr>
<tr>
<td>% consuming five servings of fruits and vegetables a</td>
<td>37</td>
<td>33</td>
</tr>
<tr>
<td>Number of grocery stores d</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Food Access Score e</td>
<td>C-</td>
<td>C+</td>
</tr>
<tr>
<td>Percentage getting recommended levels of moderate or vigorous physical activity a</td>
<td>70</td>
<td>81.4</td>
</tr>
<tr>
<td>Average distance to park f</td>
<td>132 m</td>
<td>135 m</td>
</tr>
<tr>
<td>Violent Crimes g</td>
<td>1341</td>
<td>906</td>
</tr>
</tbody>
</table>

* U.S. Census Bureau, 2000.
* D.C. Hunger Solutions, Healthy Food, Healthy Communities, 2006.
* D.C. Metropolitan Police Department Geocoded Information Management System Preliminary Data (Violent Crime = Homicide, Sex Abuse, Robbery, Assault with a Deadly Weapon)
This thematic map identifies locations of the population younger than age 18 in the United States in 2010. The age classification is based on the age of the person in complete years. This map identifies areas where there are concentrations of children. For more information on this layer go to http://www.arcgis.com/home/item.html?id=22bfe056044a37ae033fe7b3e803b
This thematic map identifies locations of the population younger than age 18 in the United States in 2010, the person in complete years. This map identifies areas where there are concentrations of children. For more information, see the webpage at http://www.arcgis.com/home/item.html?id=22bfec05fc044a37ae033a783e8f03b.
Ward 8
To determine a person's poverty status, one compares the person's total family income in the for that person's family size and composition. If the total income of that person's family is less person is considered "below the poverty level," together with every member of his or her family are obtained by multiplying the official thresholds by specific factor. For more information about

Ward 8
Ward 8
Limited Supermarket Access (LSA) status, as of 2011.

Ward 8
WASHINGTON, DC - PERSONS LIVING WITH AN HIV OR AIDS DIAGNOSIS, 2009

2009 Rate of adults/adolescents living with an HIV or AIDS diagnosis per 100,000 population.

- 0 to 253
- 254 to 439
- 440 to 670
- 671 to 953
- 954 to 1,275
- 1,276 to 1,660
- 1,651 to 2,073
- 2,074 to 2,508
- 2,589 to 3,300
- 3,301+

Overall / Race / Age / Sex

HIV TESTING, PREVENTION, AND TREATMENT SITES

Where do these data come from?

* Data are not shown to protect privacy because of a small number of cases and/or a small population size. See Data Methods.

NOTE: Data represent persons living with an HIV or AIDS diagnosis in Washington, DC at the end of 2009 and who were reported as of 12/31/11.
Identifying Health Problems

• Qualitative
  – Key informant interviews
    • Social worker who works in Ward 8
    • Employee, nearby homeless shelter
    • Staffer, city council person
    • Director, local Boys and Girls Club chapter
    • Outreach specialist, local clergy partnership
    • Owner, local day care center
    • School nurse, nearby elementary school
  – Focus groups
    • Patients
    • Clinic staff

Identifying Health Problems

• Sample questions:
  – What are the strengths of the community?
  – What areas could be improved in the community?
  – What are the barriers to improvement?
  – What are the most pressing health concerns in the community?
  – What are the causes of these health problems?
  – What are the specific barriers to addressing these health problems?
  – Who do the people call in the community when they need help or advice?
  – Do you feel safe in the community? Why or why not?
Identifying Health Problems

- Brainstorming
- Nominal group technique
- Delphi
- Ringi

Identifying Health Problems

- Problems identified by the qualitative process:
  - School dropouts
  - HIV/AIDS
  - Lack of access to nutritional foods
  - Lack of access to safe areas to exercise
  - Teenage pregnancies
  - Dental caries
  - Asthma
  - Depression
  - Drug use
  - Crime
  - Job training
  - Affordable housing
  - Increasing rates of diabetes
Potential health issues to address

**Social determinants:**
- Poverty
- Education
- Income

**Medical conditions:**
- Diabetic nephropathy
- Coronary artery disease
Determinants of Health

• 1) Genes and biology
• 2) Medical care
• 3) Health behaviors
• 4) Social characteristics

Blane D, Brunner E, and Wilkinson RG. Health and Social Organization. 1996
http://www.cdc.gov/socialdeterminants/FAQ.html
Child Mortality, By Maternal Education

Social Determinants of Health - Work

Strategic Plan

Vision, Mission, Goals, Sub-goals and Guiding Principles

Vision

Healthy Communities, Healthy People

Mission

To improve health and achieve health equity through access to quality services, a skilled health workforce and innovative programs.

Goal IV: Improve health equity

Sub-goals

a. Reduce disparities in quality of care across populations and communities.
b. Monitor, identify and advance evidence-based and promising practices to achieve health equity.
c. Leverage our programs and policies to further integrate services and address the social determinants of health.
d. Partner with diverse communities to create, develop, and disseminate innovative community-based health equity solutions, with a particular focus on populations with the greatest health disparities.
<table>
<thead>
<tr>
<th>Problem</th>
<th>Magnitude</th>
<th>Severity</th>
<th>Feasibility</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Increasing rates of HIV/AIDS among women</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2  Few safe areas for children to exercise</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3  Dental caries / oral health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4  Job training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5  Lack of access to nutritional foods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6  School dropouts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Prioritization

<table>
<thead>
<tr>
<th>Problem</th>
<th>Magnitude</th>
<th>Severity</th>
<th>Feasibility</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Increasing rates of HIV/AIDS among women</td>
<td>3.2</td>
<td>4.8</td>
<td>3.7</td>
<td>11.7</td>
</tr>
<tr>
<td>2 Few safe areas for children to exercise</td>
<td>4.8</td>
<td>4.7</td>
<td>4.2</td>
<td>13.7</td>
</tr>
<tr>
<td>3 Dental caries / oral health</td>
<td>4.3</td>
<td>3.5</td>
<td>3.2</td>
<td>11</td>
</tr>
<tr>
<td>4 Job training</td>
<td>4.1</td>
<td>4.1</td>
<td>2.1</td>
<td>10.3</td>
</tr>
<tr>
<td>5 Lack of access to nutritional foods</td>
<td>4.6</td>
<td>4.5</td>
<td>4.1</td>
<td>13.2</td>
</tr>
<tr>
<td>6 School dropouts</td>
<td>3.9</td>
<td>4.8</td>
<td>4.1</td>
<td>12.8</td>
</tr>
</tbody>
</table>
Take Home Messages

• Both quantitative and qualitative data are important to characterize your community
• Online mapping tools can help you visualize and communicate health problems more effectively
• Social determinants have a significant impact on health
• Involving the community in generating, validating, and prioritizing health problems is critical
Thank you for completing the module. Please complete this evaluation survey to help us make it better!

https://www.surveymonkey.com/s/5BP3MT6

To obtain, CME credit, you must complete these two additional surveys (complete CME instructions are on the next slide):
1) Continuing Medical Education Form:
https://www.surveymonkey.com/s/53NGY5S
2) Module 3 Quiz:
https://www.surveymonkey.com/s/5GRD3TD
To Obtain CME Credit

• In order to obtain CME credit, you must complete the following tasks:
  – Complete the module(s) or case study.
  – Complete the post-activity quiz (There are quizzes for each module and case study).
    • The last question of the quiz provides a prompt to indicate your email address. If you want to receive CME credit, you must provide your email address so that we can document the score of your quiz appropriately.
  – Score at least 75% on the quiz (For quizzes with 4 questions, you must answer at least 3 questions correctly. For quizzes with 5 questions, you must answer at least 4 correctly).
  – Complete the CME certification form.
    • In order to match the CME certification form with your quiz, you must provide the same email address that you provided during the post-activity quiz.