Measuring the Health of Chicago: Being an Epidemiologist

Nikhil Prachand
Director of Epidemiology
Chicago Department of Public Health
June 4, 2021
Becoming an Epidemiologist 1988-1993
Becoming an Epidemiologist - 1995

July 1995 Chicago Daily Temperatures

Heat-related deaths 199
300 DEATHS FROM WE
THE SHOCKING TOLL: 376

Heat disaster continues
toll hits 400
549 Victims of Summer Trag

SUMMER HEAT TOLL HIT 700

CLOSED
Due to
Heat
Living alone with little social support; neighborhood safety and miseducation about effects of extreme heat were strong predictors of death during the heat wave!
Becoming an Epidemiologist 1995 - today
Education Access and Quality

Health Care Access and Quality

Economic Stability

Social and Community Context

Neighborhood and Built Environment
Data is an epidemiologist’s most powerful tool

<p>| | | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>27.4</td>
<td>31.0</td>
<td>34.2</td>
<td>28.9</td>
<td>25.7</td>
<td>37.1</td>
<td>24.8</td>
<td>34.9</td>
<td>27.5</td>
<td>25.9</td>
<td></td>
</tr>
<tr>
<td>23.5</td>
<td>30.9</td>
<td>27.4</td>
<td>25.9</td>
<td>22.3</td>
<td>21.3</td>
<td>37.8</td>
<td>28.8</td>
<td>28.8</td>
<td>23.4</td>
<td></td>
</tr>
<tr>
<td>21.9</td>
<td>30.2</td>
<td>24.7</td>
<td>36.6</td>
<td>25.4</td>
<td>21.3</td>
<td>22.9</td>
<td>24.2</td>
<td>27.1</td>
<td>23.1</td>
<td></td>
</tr>
<tr>
<td>28.6</td>
<td>27.3</td>
<td>22.7</td>
<td>22.7</td>
<td>27.3</td>
<td>23.1</td>
<td>22.3</td>
<td>32.6</td>
<td>29.5</td>
<td>38.8</td>
<td></td>
</tr>
<tr>
<td>21.9</td>
<td>24.3</td>
<td>26.5</td>
<td>30.1</td>
<td>27.4</td>
<td>24.5</td>
<td>22.8</td>
<td>24.3</td>
<td>30.9</td>
<td>28.7</td>
<td></td>
</tr>
<tr>
<td>22.4</td>
<td>35.9</td>
<td>30.0</td>
<td>26.2</td>
<td>27.4</td>
<td>24.1</td>
<td>19.8</td>
<td>26.9</td>
<td>23.3</td>
<td>28.4</td>
<td></td>
</tr>
<tr>
<td>20.8</td>
<td>26.5</td>
<td>28.2</td>
<td>18.3</td>
<td>30.8</td>
<td>27.6</td>
<td>21.5</td>
<td>33.6</td>
<td>24.8</td>
<td>28.3</td>
<td></td>
</tr>
<tr>
<td>25.0</td>
<td>35.8</td>
<td>25.4</td>
<td>27.3</td>
<td>23.0</td>
<td>25.7</td>
<td>22.3</td>
<td>35.5</td>
<td>29.8</td>
<td>27.4</td>
<td></td>
</tr>
<tr>
<td>31.3</td>
<td>24.0</td>
<td>25.8</td>
<td>21.1</td>
<td>21.1</td>
<td>29.3</td>
<td>24.0</td>
<td>22.5</td>
<td>32.8</td>
<td>38.2</td>
<td></td>
</tr>
<tr>
<td>27.3</td>
<td>19.2</td>
<td>26.6</td>
<td>30.3</td>
<td>31.6</td>
<td>25.4</td>
<td>34.8</td>
<td>24.7</td>
<td>25.6</td>
<td>28.3</td>
<td></td>
</tr>
<tr>
<td>26.5</td>
<td>28.3</td>
<td>35.0</td>
<td>20.2</td>
<td>37.5</td>
<td>25.8</td>
<td>27.5</td>
<td>28.8</td>
<td>31.1</td>
<td>28.7</td>
<td></td>
</tr>
<tr>
<td>24.1</td>
<td>24.0</td>
<td>20.7</td>
<td>24.6</td>
<td>24.1</td>
<td>21.1</td>
<td>21.9</td>
<td>30.8</td>
<td>24.6</td>
<td>33.2</td>
<td></td>
</tr>
</tbody>
</table>


But data needs to be turned into useful information for communities
Choropleth Map - example
Obesity in Chicago: Interactive Exercise
What leads to obesity?

• Little or no physical activity
• Eating junk food frequently
• Drinking soda daily

How can your neighborhood help prevent obesity?

• Stores that sell fresh fruit and vegetables
• Walkable sidewalks and safe streets
• Accessible parks
• Feeling safe
Adult physical inactivity rate
2016-2018
% of adults
Tap and hold a community area to see more
Adult soda consumption rate

2016-2018

% of adults

Tap and hold a community area to see more
Parks are everywhere in Chicago

- Are they safe?
- Do they have activities for all ages?
How walkable is your neighborhood?
Making inferences with data
Side-by-side comparison: Safety and Obesity
Are the same neighborhoods that feel unsafe the same ones with high obesity?
Scatterplot comparison of neighborhoods:
The higher the level of physical inactivity; the higher the level of obesity
Welcome to the new Chicago Health Atlas
The Atlas has been redesigned with all-new visualizations and a more accessible interface. Finding data about your community is easier than ever before.

See what's new

Access health data for Chicago and your community

Start typing to explore the Atlas

email: Nik.Prachand@cityofchicago.org