Asthma in Detroit

Where is Why

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Executive Director & Health Officer
Detroit Health Department

@AbdulElSayed
What is public health?
“Public health is what we, as a society, do collectively to assure the conditions for people to be healthy.”

“Public health is what we, as a society, do collectively to assure the conditions for people to be healthy”

*Public health is about context*
“Public health is what we, as a society, do collectively to assure the conditions for **people** to be healthy”

*Public health is about populations*
“Public health is what we, as a society, do collectively to assure the conditions for people to be healthy.”

Public health is about health promotion vs disease cure
Some are “high risk”

Low risk  High risk
Both “high risk” and others have disease
Medicine.
Identify those who are high risk
Identify those who are high risk

Risk factor

Prevalence

High Risk

Then decrease their risk...
Then decrease their risk...
Then decrease their risk...

![Graph showing the prevalence of a risk factor with an arrow pointing to the unaddressed underlying risk area.]
The individual strategy sees this...
...but misses all of this
Public health.
The collective strategy
Shift the entire risk distribution

The collective strategy...
The collective strategy...
The collective strategy...

Low risk

High risk

Low risk with disease

High risk with disease
“Public health is what we, as a society, do collectively to assure the conditions for people to be healthy.”

*Public health is about context*

Context in Detroit.
Comparing Detroit to three other major cities

SAN FRANCISCO
Population: 751,682
Square-mile area: 46.69

BOSTON
Population: 581,616
Square-mile area: 48.43

MANHATTAN
Population: 1,537,195
Square-mile area: 22.96

Boston, Manhattan, San Francisco
TOTALS
Population: 2,870,493
Square-mile area: 118.08

Source: University of Detroit Mercy
Detroit's population

From 2000 to 2010, Detroit saw its population drop by 25 percent, its largest percentage drop ever. At the neighborhood level, though, there are vast differences, with some areas seeing far greater declines as some areas enjoyed stability and growth. As the city plans its future, it can use the latest numbers to help find areas of opportunity — and challenges.

**KEY**

**Gains**
- More than 50% growth
- Up to 50% growth

**Declines**
- Less than 10% loss
- 10% to 25% loss
- 25% to 50% loss
- More than 50% loss

Source: U.S. Census

The Detroit News
Density and Detroit.
The Rich Live Longer Everywhere. For the Poor, Geography Matters.

By NEIL IRWIN and QUOCTRUNG BUI  APRIL 11, 2016
### Where the Poor Live the Longest

<table>
<thead>
<tr>
<th>MEN</th>
<th>WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>84.0</td>
</tr>
<tr>
<td>San Jose, Calif.</td>
<td>84.2</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>84.0</td>
</tr>
<tr>
<td>Santa Rosa</td>
<td>83.7</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>83.4</td>
</tr>
<tr>
<td>San Francisco</td>
<td>83.3</td>
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<tr>
<td>San Diego</td>
<td>83.2</td>
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<tr>
<td>Miami</td>
<td>83.2</td>
</tr>
<tr>
<td>Newark</td>
<td>83.1</td>
</tr>
<tr>
<td>Providence, R.I.</td>
<td>83.1</td>
</tr>
</tbody>
</table>

### Where the Poor Live the Shortest

<table>
<thead>
<tr>
<th>MEN</th>
<th>WOMEN</th>
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</thead>
<tbody>
<tr>
<td>Gary, Ind.</td>
<td>74.2</td>
</tr>
<tr>
<td>Indianapolis</td>
<td>74.6</td>
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<tr>
<td>Detroit</td>
<td>74.8</td>
</tr>
<tr>
<td>Louisville, Ky.</td>
<td>74.9</td>
</tr>
<tr>
<td>Tulsa, Okla.</td>
<td>74.9</td>
</tr>
<tr>
<td>Toledo, Ohio</td>
<td>74.9</td>
</tr>
<tr>
<td>Oklahoma City</td>
<td>75.0</td>
</tr>
<tr>
<td>Dayton, Ohio</td>
<td>75.1</td>
</tr>
<tr>
<td>Knoxville, Tenn.</td>
<td>75.1</td>
</tr>
<tr>
<td>Las Vegas</td>
<td>75.1</td>
</tr>
</tbody>
</table>

Among the 100 largest metro areas in the U.S.
Geography Matters More for the Poor

Men

- New York area
- Detroit area

Women

- New York area
- Detroit area
Detroit vs the Bronx.

- % Minority
- % Owner occupied housing
- % Bachelors
- % In labor force
- % poverty

Detroit vs Bronx
The Bronx.
The Bronx.
Detroit.
Detroit.
Density buys...
Medically Underserved Areas in Detroit with Population Density

Population Density (per square mile)

0  2,138  3,278  4,593  15,125

Medically Underserved Areas

Source: US Census Bureau, Decennial Census 2010
Health Resources & Services Administration 2014

Detroit Health Department
Sulfur Dioxide Attainment Designation Status

All Michigan Counties except an area in Wayne County meet the 2010 Sulfur Dioxide National Ambient Air Quality Standards.

99th percentile of 1-hour daily maximum averaged over three years \( \leq 75 \text{ ppb} \)
Asthma in Detroit
Prevalence of Persistent Asthma Among Children <18 on Medicaid in 2013

Prevalence Rate by Zipcode (482xx)

- 0
- 6.1
- 6.8
- 7.3
- 9.4

Unreliable or No Data

Source: Michigan Inpatient Database
MDHHS Data Warehouse

Detroit Health Department
Rate of Asthma Emergency Department Visits Among Children <18 on Medicaid in 2013

Emergency Visit Rate by Zipcode (482xx)

Source: Michigan Inpatient Database MDHHS Data Warehouse
Where is why
DETOUR BUILDING AGE

- PRE 1900
- 1900 - 1950
- 1950 - 1980
- 1980 - PRESENT

Source: City of Detroit Assessor

DETROITOGRAPHY.COM I @DETROITOGRAPHY
WAYNE COUNTY
Sulfur Dioxide Emissions

POLLUTION RANKINGS
BAD
WORST
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