AIR POLLUTION RISK & VULNERABILITY TO HEALTH IMPACTS:
A LOOK AT WEST OAKLAND

AB 617 Community Air Protection Program
Consultation Group Meeting

March 26, 2018

Muntu Davis, MD, MPH
Alameda County Health Officer
West Oakland experiences **high levels of air pollution** from highways, the Port, & industrial facilities close to residents.
West Oakland has a high burden of asthma emergency department and hospitalizations visits.
West Oakland has a high burden of asthma emergency department and hospitalizations visits.
Asthma hospitalization and emergency department visit rates are almost 2 times higher in West Oakland than for the County.

Source: OSHPD ED & PDD, 2013-3Q2015
Asthma hospitalizations have gone down in West Oakland, but child asthma emergency department (ED) visit rates went up.

---

**Asthma Emergency Visits (per 100,000 pop.)**

**CHILDREN (<5 YEARS OLD)**

- 2009-2011: 1796
- 2013-2015: 1917

---

**ALL AGES**

- 2009-2011: 1219
- 2013-2015: 1048

---

**Asthma Hospitalizations (per 100,000 pop.)**

**CHILDREN (<5 YEARS OLD)**

- 2009-2011: 689
- 2013-2015: 308

---

**ALL AGES**

- 2009-2011: 181

---

Source: OSHPD ED & PDD, 2013-3Q2015
Multiple factors can contribute to the declining trend in child asthma hospitalizations.

- Improvements in asthma management
- Better access to healthcare
- Built environment improvements
- Reductions in air pollution emissions
Cancer, heart disease, stroke and chronic lower respiratory disease are top 5 leading causes of death in West Oakland.

<table>
<thead>
<tr>
<th>Leading Causes of Death in West Oakland</th>
<th>Percentage of all deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>22%</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>20%</td>
</tr>
<tr>
<td>Unintentional Injuries</td>
<td>9%</td>
</tr>
<tr>
<td>Stroke</td>
<td>7%</td>
</tr>
<tr>
<td>Chronic Lower Respiratory Disease</td>
<td>5%</td>
</tr>
<tr>
<td>Homicide</td>
<td>3%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>3%</td>
</tr>
</tbody>
</table>
Those diseases are associated with air pollution, and West Oakland residents are dying from them at higher rates.

Source: OSHPD ED & PDD, 2013-3Q2015
Due to cumulative health risks and impacts, life expectancy in West Oakland is 6.6 years less than in Alameda County.

West Oakland Life Expectancy: 75.4
Alameda County Life Expectancy: 82.0
These health inequities did not happen overnight. They have deep roots in historical practices, like Racial Redlining.
Impoverished areas see long-standing disinvestment, meaning fewer resources and weaker infrastructure to support health.
Continued disinvestment in persistent, very high poverty areas continues to be a main barrier to health in West Oakland.

Source: American Community Survey, 2011-2015
Race and class demographics are changing in West Oakland, but it remains a predominantly low-income community of color.

PERCENTAGE OF POPULATION BY RACE BY YEAR, WEST OAKLAND
(Total Population increased from 24,187 to 28,163)

- **Black**:
  - 1990: 75%
  - 2000: 75%
  - 2010: 75%
  - 2017: 44%

- **People of Color**:
  - 1990: 92%
  - 2000: 92%
  - 2010: 92%
  - 2017: 84%

Source: Census, 1990-2010; CAPE with data from ESRI, 2017
African Americans are especially exposed to and impacted by cumulative health risks.

Life Expectancy (Years) at Birth by Place & Race

Source: Alameda County Vital Statistics, 2012-2016
AB 617 provides opportunities to reduce air pollution emissions and maximize health co-benefits in communities like West Oakland.
To maximize the health co-benefits of AB 617, consider these health indicators when implementing and identifying strategies.

- Air pollution exposure
- Specific health risks associated with air pollution
  - Asthma, chronic lower respiratory disease
  - Stroke, heart attacks, cancer
- Cumulative health risks and impacts
  - All-cause mortality, life expectancy
- Social & economic factors that lead to extreme health vulnerability
  - Persistent & high poverty
  - Race & racism
Thank you!
For questions or more info, please contact us.

Muntu Davis, MD, MPH
Alameda County Health Officer
muntu.davis@acgov.org

Sandi Gálvez
Director, Health Equity, Policy, & Planning
sandi.galvez@acgov.org

Anna Lee
Local Policy Coordinator, Place Matters
anna.lee@acgov.org

Tammy Lee
Community Epidemiologist
tammy.lee@acgov.org