Right Care Initiative

Clinical Quality Improvement Leadership Collaborative

Los Angeles CVD HOT SPOT: Heart Disease and Stroke

“Spreading Evidence-based Strategies to Reduce Premature Disability and Death from Heart Disease and Strokes”

Hattie Rees Hanley, MPP
Director, Right Care Initiative
UCB School of Public Health

Susan L. Ivey, MD, MHSA
Professor, School of Public Health
University of California, Berkeley

Summer 2017
### Demographics of California and Los Angeles County

<table>
<thead>
<tr>
<th>Race/Ethnic Population</th>
<th>California</th>
<th>Los Angeles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>39.20</td>
<td>27.00</td>
</tr>
<tr>
<td>African American</td>
<td>5.80</td>
<td>8.00</td>
</tr>
<tr>
<td>Hispanic</td>
<td>38.70</td>
<td>49.00</td>
</tr>
<tr>
<td>Asian and Pacific Islander</td>
<td>13.30</td>
<td>13.80</td>
</tr>
<tr>
<td>American Indian and Alaskan Native</td>
<td>0.40</td>
<td>0.20</td>
</tr>
<tr>
<td>Multi-Race</td>
<td>2.60</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Higher Rates of Stroke and Heart Attack among Los Angeles County Residents

**Stroke Hospitalizations (w/ TIA) per 100,000 population in 2014**

- Los Angeles County*: 221
- California: 209

**Heart Attack Hospitalizations per 100,000 population in 2014**

- Los Angeles County*: 141
- California: 132

*Statistically Significant

Source: Office of Statewide Health Planning and Development, 2014
Higher Rates of Stroke (w/ TIA) among Los Angeles County Residents – by Race/Ethnicity

Stroke Hospitalizations (w/ TIA) per 100,000 population by race/ethnicity

- **All**: Los Angeles County - 221, California - 209
- **Native American**: Los Angeles County - 145, California - 109
- **Asian/PI**: Los Angeles County - 160, California - 161
- **Hispanic**: Los Angeles County - 209, California - 204
- **Black**: Los Angeles County - 382, California - 355
- **White**: Los Angeles County - 201, California - 198

Source: Office of Statewide Health Planning and Development, 2014
Higher Rates of Heart Attack among Los Angeles County Residents – by Race/Ethnicity

Heart Attack Hospitalizations per 100,000 population by race/ethnicity

- **All**: Los Angeles County 141, California 132
- **Native American**: Los Angeles County 64, California 92
- **Asian/PI**: Los Angeles County 92, California 98
- **Hispanic**: Los Angeles County 133, California 124
- **Black**: Los Angeles County 191, California 180
- **White**: Los Angeles County 147, California 133

Source: Office of Statewide Health Planning and Development, 2014
# Self-Reported Cardiovascular Risk Factors – Los Angeles County compared to California, 2011-14

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>California</th>
<th>Los Angeles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>27.60</td>
<td>27.20</td>
</tr>
<tr>
<td>Obese (BMI &gt; 30)</td>
<td>25.30</td>
<td>25.40</td>
</tr>
<tr>
<td>Smoking</td>
<td>12.90</td>
<td>12.80</td>
</tr>
<tr>
<td>Diabetes (type I and II)</td>
<td>8.60</td>
<td>9.50</td>
</tr>
<tr>
<td>Diabetes (type II)</td>
<td>7.25</td>
<td>7.99</td>
</tr>
</tbody>
</table>

Source: California Health Interview Survey 2011-2014
Self-Reported Cardiovascular Risk Factors in Los Angeles County by Race/Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>Hypertension</th>
<th>Obesity (BMI&gt;30)</th>
<th>Smoking</th>
<th>Diabetes (type I and II)</th>
<th>Diabetes (type II)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American Only, non-Hispanic</td>
<td>42.60</td>
<td>40.10</td>
<td>16.80</td>
<td>12.80</td>
<td>9.72</td>
</tr>
<tr>
<td>Asian only</td>
<td>24.10</td>
<td>9.30</td>
<td>10.90</td>
<td>8.80</td>
<td>7.87</td>
</tr>
<tr>
<td>Hispanic</td>
<td>24.10</td>
<td>31.80</td>
<td>11.80</td>
<td>10.70</td>
<td>8.69</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>29.30</td>
<td>20.10</td>
<td>14.20</td>
<td>7.30</td>
<td>6.61</td>
</tr>
</tbody>
</table>

Source: California Health Interview Survey 2011-2014
Poor Air Quality as a Cardiovascular Risk Factor

• Statewide, over 35 million Californians (91%) live in counties affected by unhealthy air during the year, compared to national rate of 38.9%

• Ozone Pollution Poses Serious Health Threats including:
  • Respiratory harm (asthma, chronic obstructive pulmonary disease, bronchitis)
  • Cardiovascular harm (heart failure, stroke, heart disease)
    • Ozone Air Pollution Is Associated With Acute Myocardial Infarction*
  • Reproductive and developmental harm

• Vulnerable populations:
  • People with cardiovascular disease
  • People with existing lung diseases
  • Anyone 65 and older, children and teens

Los Angeles’ Poor Air Quality

• While the United States, including Los Angeles, has seen continued improvement in air quality,

• Los Angeles is currently
  • Ranked as the #1 worst in the nation for ozone pollution out of 228 metropolitan areas (rank 1 in all but one of the 18 reports).
  • Ranked as the 5th worst in the nation for annual particle pollution out of 184 metropolitan areas

Comments on the Effects of Air Pollution on Public Health – Harvard Magazine

• “Data showed that people living in cities with the dirtiest air died on average two years earlier than residents of cities with the cleanest air”

• “People were losing lung function, but what was killing them were cardiovascular events[…] it was fine particles from power plants and other combustion sources such as automobiles and home heating that showed the strongest associations with these deaths”

• “A study of several hundred people in Boston with implanted heart defibrillators to see how often they fired. The researchers found that even in Boston, which is relatively clean, when they plotted PM2.5 against the probability of firing, they got a straight line: the higher the fine-particle pollution, the more often the devices would fire"

Source: Clearing the Air. Harvard Magazine, May-June issue, 2005
Higher Mortality Rates for Coronary Heart Disease and Slightly better Mortality Rates for Stroke in Los Angeles County (2013-2015 data)

![Bar chart showing mortality rates for Coronary Heart Disease (CHD) and Stroke in California and Los Angeles.]

- **Coronary Heart Disease (CHD)**
  - California: 93.2 deaths per 100,000 population
  - Los Angeles: 109.7 deaths per 100,000 population

- **Stroke**
  - California: 34.7 deaths per 100,000 population
  - Los Angeles: 33.1 deaths per 100,000 population

*Source: California Department of Public Health. County Health Status Profiles 2017*
How are medical groups performing on hypertension and diabetes in Los Angeles County?

The following yellow bar charts are the publicly reported performance data collected statewide voluntarily from each medical group that contracts with managed health care plans. The data is published annually on the State of California Health and Human Services Office of the Patient Advocate’s Website. Note: Independent Practice Association and other medical groups that continue to rely on paper records rather than robust electronic records may indicate lower performance than actual due to data collection issues.
Gold Bar Performance - Los Angeles Area Medical Groups Controlling High Blood Pressure at < 140/90 mmHg

Top 8 Los Angeles Medical Groups Controlling High Blood Pressure

<table>
<thead>
<tr>
<th>Medical Group</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaiser, Southern CA</td>
<td>79%</td>
</tr>
<tr>
<td>PIH Health Physicians - Group Division</td>
<td>69%</td>
</tr>
<tr>
<td>HealthCare Partners Medical Group</td>
<td>67%</td>
</tr>
<tr>
<td>MemorialCare Medical Group</td>
<td>67%</td>
</tr>
<tr>
<td>UCLA Medical Group</td>
<td>65%</td>
</tr>
<tr>
<td>Family Care Specialists IPA</td>
<td>57%</td>
</tr>
<tr>
<td>Physician Associates of the Greater San Gabriel Valley</td>
<td>53%</td>
</tr>
<tr>
<td>Greater Newport Physicians</td>
<td>52%</td>
</tr>
</tbody>
</table>

*51 Medical Groups total in LA County. Range: 0% - 81%; avg: 37%

Source: Performance data for managed care patients, CA Office of the Patient Advocate Report, 2016
Gold Bar Performance - Los Angeles Area Medical Groups Controlling High Blood Pressure for People with Diabetes

U.S. 90th Percentile Performance for controlling high blood pressure for people with diabetes < 140/90

Top 8 Los Angeles Medical Groups Controlling High BP for Diabetes Patients

- Kaiser, Southern CA: 83%
- MemorialCare Medical Group: 75%
- HealthCare Partners Medical Group: 73%
- Greater Newport Physicians: 72%
- PIH Health Physicians - Group Division: 71%
- Family Care Specialists IPA: 70%
- UCLA Medical Group: 70%
- Physician Associates of the Greater San Gabriel Valley: 67%

*51 Medical Groups total in LA County.
Range: 0% - 85%; avg: 44%

Source: Performance data for managed care patients, CA Office of the Patient Advocate Report, 2016
Gold Bar Performance - Los Angeles Area Medical Groups Controlling Blood Sugar for Diabetes Patients

Top 8 Los Angeles Medical Groups Controlling Blood Sugar for Diabetes Patients

<table>
<thead>
<tr>
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<tr>
<td>Greater Newport Physicians</td>
<td>71%</td>
</tr>
<tr>
<td>HealthCare Partners Medical Group</td>
<td>68%</td>
</tr>
<tr>
<td>MemorialCare Medical Group</td>
<td>67%</td>
</tr>
<tr>
<td>Alamitos, IPA</td>
<td>64%</td>
</tr>
<tr>
<td>Physician Associates of the Greater San Gabriel Valley</td>
<td>64%</td>
</tr>
<tr>
<td>PIH Health Physicians - Group Division</td>
<td>64%</td>
</tr>
<tr>
<td>Prospect Northwest Orange County Medical Group</td>
<td>64%</td>
</tr>
<tr>
<td>Kaiser, Southern CA</td>
<td>62%</td>
</tr>
</tbody>
</table>

U.S. 90th Percentile Performance for controlling blood sugar for diabetes patients (A1c level of less than 8%)

*51 Medical Groups total in LA County. Range: 9% - 71%; avg: 53%

Source: Performance data for managed care patients, CA Office of the Patient Advocate Report, 2016
How are other California counties doing compared to Los Angeles?

Do the other counties of focus in the Right Care Initiative offer relevant lessons for helping Los Angeles to improve?
Hospitalization Rate – Myocardial Infarction

Comparing Counties – Myocardial Infarction Hospitalization Rate

Source: 2010-2014 Data from Office of Statewide Health Planning and Development
Hospitalization Rate – Stroke with TIA

Comparing Counties - Stroke with TIA Hospitalization Rate

Source: 2010-2014 Data from Office of Statewide Health Planning and Development
Hospitalization Rate - Stroke without TIA

Comparing Counties - Stroke without TIA Hospitalization Rate

Source: 2010-2014 Data from Office of Statewide Health Planning and Development
Before and After Right Care Initiative initiated
San Diego University of Best Practices

San Diego Medical Group Cholesterol Control for People with Heart Disease

73% = 90th Percentile HMO/POS Performance for Heart Disease Patient Cholesterol Control in 2012

Right Care Initiative Intervention Triangle

**Patient Activation**
- Stress reduction, medication adherence, healthy sleep, nutrition & physical activity, smoking cessation
  - Evidence-based patient education (e.g., Project DULCE; Stanford Patient Self-Management)
  - Motivational interviewing and evidence-based media messaging

**Clinical Pharmacists on Care Team**
- HRSA.gov/patientsafety

**Patient Centered Practice Redesign**
- Medical Home
- Team-Based
- Un-blinded Performance Feedback
- Web Supported
- High-Tech Enabled
- Timely Continuous Care—Not Episodic
- Optimized Clinical Connectivity For Rapid Treatment

**Intensive Ambulatory Care**

**Proactive Outreach**

**Home Blood Pressure Monitoring**

**Medication Protocols**
- Nationally Endorsed Guidelines (JNC, ADA)
- European Union Guidelines
- ALL/PHASE (Kaiser)
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Thanks to...
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Bryan.Vuong@Berkeley.edu
Brendan Darsie, MPH
Elizabeth Dingbaum, MPH
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Professor Susan L. Ivey, MD, MHSA
Sivey@Berkeley.edu
Hattie Rees Hanley, MPP
HattieHanley@Berkeley.edu