Location. Location. Location! How Los Angeles is using spatial analysis to understand & combat place-based health inequities

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New Orleans, LA

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Presenter Disclosures

Beth Altshuler

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose.
Some Neighborhoods Need a Boost

Giving everyone the same thing only works if everyone starts from the same place.

Equity means all people have access to same opportunities. We need equity before we can reach equality.
Health Equity

Efforts to ensure that all people have full & equal access to opportunities that enable them to lead healthy lives
Raimi + Associates
Matthew Raimi
Eric Yurkovich
Beth Altshuler
Elizabeth Carvajal
Lys Mendez

L.A. County Public Health Dept.
Jean Armbruster
(and many others)

Community Advisory Committee
40+ Organizations

L.A. Dept. of City Planning
Ken Bernstein
Claire Bowin
(and many others)

Technical Advisory Committee
30+ Departments and Agencies

Expert Panel
15 visionaries, movers, and shakers
And the contributions of over 1,000 residents
The Plan for a Healthy Los Angeles elevates health as a priority in the City’s future growth and development, establishing a policy framework to make Los Angeles a healthier place to live, work and play.

- Creates a “Health and Wellness Element” for the City’s General Plan (comprehensive plan)

- Officially began in Fall 2012
Project Components

- Health Atlas
- Interactive website www.healthyplan.la
- “Health in All Policies” Technical Committee
- Community Advisory Committee
- Robust public participation program
- Health Element – goals, policies and programs
- TA to City to implement programs
Health Atlas & Interactive Website: 
An Examination of Health Conditions in the City of Los Angeles
Health Atlas Purpose

- Point in time spatial analysis snapshot by neighborhood
- Identify locational disparities and inequities in over 100 mapped indicators:
  - Health problems
  - Environmental conditions
  - Socio-economics
- Point us to targeted outreach and policy development
- Sets baseline measures for Plan’s objectives
Health Atlas Topics – Single Topic + Indices

- Demographic & Social Characteristics
- Economic Conditions
- Education
- Health Conditions
- Land Use and Employment
- Transportation
- Food Systems
- Crime
- Housing
- Environmental Health

COMMUNITY HEALTH & EQUITY INDEX
## Community Health and Equity Index

<table>
<thead>
<tr>
<th>Index</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardship Index</td>
<td>Standardized Index Score for Overcrowding, Poverty, Employment Status, Educational Attainment, Age Dependency, and Income</td>
<td>35</td>
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<tr>
<td>Life Expectancy at Birth</td>
<td></td>
<td>15</td>
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<tr>
<td>Health Outcomes</td>
<td>Respiratory Disease, Heart Disease, Heart Attacks, Asthma, Low Birth Weight</td>
<td>10</td>
</tr>
<tr>
<td>Walkability Index</td>
<td>Standardized Index Score for Housing Density, Retail Density, Street Connectivity, and Land Use Mix</td>
<td>5</td>
</tr>
<tr>
<td>Complete Communities Index</td>
<td>Index Score of the Diversity of Amenities and Establishments</td>
<td>2.5</td>
</tr>
<tr>
<td>Multi-Modal Transportation Index</td>
<td>Walk &amp; Bike Commuting, Transit Ridership, Street Connectivity, Bicycle Facilities, High-Frequency Transit Service, Collisions with Bicyclists and Pedestrians</td>
<td>7.5</td>
</tr>
<tr>
<td>Modified Retail Food Environment Index</td>
<td>Index Score of the Ratio of Healthy to Unhealthy Food Retailers</td>
<td>10</td>
</tr>
<tr>
<td>Crime Rate Index</td>
<td>Rate of Violent and Property Crime per 10,000 Residents</td>
<td>7.5</td>
</tr>
<tr>
<td>Pollution Burden Index</td>
<td>Index Score for Pollution Exposure and Environmental Effects</td>
<td>7.5</td>
</tr>
</tbody>
</table>
Community Health and Equity Index – Top Quintile

Community Health and Equity Index

- 48.91 to 49.77
- 49.77 to 50.68
- 50.68 to 51.867
- 51.867 to 52.62
- 52.62 to 53.83
- 53.83 to 55.62
- 55.62 to 57.74
- 57.74 to 70.91
Hardship Index

Indicators:
- Overcrowding
- Poverty
- Employment Status
- Education
- Age
- Income

Southeast LA has the greatest level of hardship
Life Expectancy at Birth

Range
- 72.8 years (Watts)
- 84.7 years (Bel-Air Brentwood- Pacific Palisades)
Prevalence of Childhood Obesity in Brentwood was 11%

Prevalence of Childhood Obesity at 30% or greater:
- Boyle Heights
- Harbor Gateway
- South Los Angeles
- Southeast Los Angeles
Walkability Index

- Central City CPA had the highest composite Walkability score, followed by Westlake, Venice, Wilshire, and West Los Angeles.
- Bel Air-Beverly Crest and Sunland-Tujunga had the lowest scores.
Transit Access

- ¾ of residents live within ½ mile of a high frequency Metro line
- Many areas had greater than 90% of population within ½ mile
Pedestrians and Bicycles Crashes

- **Pedestrian Collisions:** Highest rates of in Central City (36.3) followed by Central City North (10.3) and Hollywood (10.4)

- **Bicycle Collisions:** highest in Central City (17.6) and Venice (10)
Crime Rate

- Lowest crime rates in:
  - Brentwood
  - Bel Air-Beverly Hills
- Highest crime rates in:
  - Central City North
  - Sherman Oaks-Studio City
  - West Adams-Baldwin Hills-Leimert
  - Southeast LA
  - Hollywood
  - San Pedro
  - South LA
  - Venice
  - Central City (more than double the average City rate)
Plan for a Healthy Los Angeles website

http://healthyplan.la/
Plan for a Healthy Los Angeles website
http://healthyplan.la/

**South Los Angeles**

- **Total Population**: 270,554 people
- **7% of Los Angeles
- **Population Density**: 17,497 per sq mile
- **Economically**: Under 5: 20,437, Under 16: 73,101, Over 65: 22,683
- **Race & Ethnicity**: Non-white: 96%, Linguistically Isolated: 20%

**Economic Conditions**

- **Per Capita Income**: $13,243
- **Average**: $10,029
- **High**: $15,207

**Unemployment and Poverty**

- 38% Unemployed workers age 15 and over
- 20% Population below federal poverty line
- 62% Population below 200% below poverty line
- 15% Population living in extreme poverty neighborhoods

**Brentwood - Pacific Palisades**

- **Total Population**: 57,049 people
- **1% of Los Angeles
- **Population Density**: 1,508 per sq mile
- **Population Age**: Under 5: 2,771, Under 16: 10,955, Over 65: 10,672
- **Race & Ethnicity**: Non-white: 17%, Linguistically Isolated: 4%

**Economic Conditions**

- **Per Capita Income**: $95,032
- **Average**: $10,029
- **High**: $125,161

**Unemployment and Poverty**

- 6% Unemployed workers age 15 and over
- 7% Population below federal poverty line
- 12% Population below 200% below poverty line
- 15% Population living in extreme poverty neighborhoods
Each map in the Atlas includes sources and methods.

Data guide pdf on [website](#)

Obtained data from:
- Public databases,
- State and County Health Departments,
- Cleaned / created our own data layers,
- City GIS data

HiAP and Community Advisory Committees modified indicators and ground-truthed results before public release
Plan for a Healthy Los Angeles

Policy Document and Implementation Programs
Vision of health for Los Angeles

- Los Angeles, a Leader in Health and Equity
- A City Built for Health
- Bountiful Parks and Open Space
- Food that Nourishes the Body, Soul, and Environment
- An Environment Where Life Thrives
- Lifelong Opportunities for Learning and Prosperity
- Safe and Just Neighborhoods
# Implementation Programs

## Initial programs
- Parks fee ordinance
- Continuing regular Health-in-all-Policies meetings
- Community Plan Strategic Plan
- Healthy Building and Design Guidelines

## Plan for a Healthy Los Angeles Implementation Programs

<table>
<thead>
<tr>
<th>ACTION DESCRIPTION</th>
<th>Goal</th>
<th>Time Frame</th>
<th>Responsible Department(s)</th>
<th>Key Partner(s)</th>
<th>Relevant Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>P65 Los Angeles River: Actively pursue grant funding to build out the bicycle and greenway trail system identified in the 2007 LA City Council adopted Los Angeles River Revitalization Master Plan (LARRMP) and support campaigns, such as Greenway 2020, that pledge to help fund and raise awareness for this effort which will increase opportunities for access to nature, multi-generational community gathering spaces, physical activity, and psychological respite.</td>
<td>Parks</td>
<td>Immediate</td>
<td>Bureau of Public Works, Department of City Planning, Department of Recreation and Parks</td>
<td>Parks and Recreation, Department of Parks and Recreation</td>
<td>3.3 Los Angeles River</td>
</tr>
<tr>
<td>P66 Recreation for individuals with disabilities and special needs: Continue to evaluate available internal and external resources and partnership opportunities to increase the number of Recreation and Parks staff that can assist and enable increase the number of individuals with disabilities and special needs to engage in City recreational activities.</td>
<td>Parks</td>
<td>Immediate</td>
<td>Department of Recreation and Parks</td>
<td>Department of Disability</td>
<td>3.4 Park and Quality Amid Recreation Programs</td>
</tr>
<tr>
<td>P67 Existing parks: Build off of the Recreation and Parks 2009 Citywide Community Needs Assessment. To develop a strategic plan with an implementation timeline that identifies opportunities to refurbish existing parks with amenities and programming that facilitate physical activity and recreation with considerations for individuals of all ages and abilities. Prioritize refurbishment in the communities most underserved (opportunities for physical activity and recreation and ensure that parks, open spaces, and recreational facilities include restrooms and drinking fountains.</td>
<td>Parks</td>
<td>Mid-term</td>
<td>Department of Recreation and Parks</td>
<td>Department of Planning and Development</td>
<td>3.4 Park and Quality Amid Recreation Programs, 3.3 Park Safety</td>
</tr>
<tr>
<td>P68 Los Angeles River Improvement Overlay: Implement the Los Angeles River Improvement Overlay (LA-RIEO) district and develop similar ordinances along all waterways within the City to encourage the build-out of healthy, multipurpose trail systems connected to natural open spaces and safer streets.</td>
<td>Parks</td>
<td>Long-term</td>
<td>Department of City Planning and Board of Public Works</td>
<td>Department of City Planning and Board of Public Works</td>
<td>3.2 Los Angeles River</td>
</tr>
<tr>
<td>P69 China Shipping Community Aesthetics Mitigation Trust Fund: Continue to implement the China Shipping Community Aesthetics Mitigation Trust Fund to landscape and create new open space for the port communities.</td>
<td>Parks</td>
<td>Immediate</td>
<td>Port of Los Angeles</td>
<td>Port of Los Angeles</td>
<td>3.2 Expanded Parks</td>
</tr>
<tr>
<td>P70 50 Parks Initiative: Continue the 50 Parks Initiative in the communities identified in the 2009 Citywide Community Needs Assessment.</td>
<td>Parks</td>
<td>Immediate</td>
<td>Department of Recreation and Parks</td>
<td>Department of Recreation and Parks</td>
<td>3.2 Expanded Parks</td>
</tr>
<tr>
<td>P71 Recreation programming: Continue, and as funding permits, expand the provision of free or low-cost recreational programs in the City’s most underserved neighborhoods for Angelenos of all ages and abilities.</td>
<td>Parks</td>
<td>Immediate</td>
<td>Department of Recreation and Parks</td>
<td>Department of Recreation and Parks</td>
<td>3.4 Park and Quality Amid Recreation Programs, 3.5 Local Partnerships</td>
</tr>
<tr>
<td>P72 Local partnerships: Continue to create volunteer opportunities for Angelenos, businesses, and community-based organizations to improve park safety, maintain park spaces, develop and implement recreational programs, and similar strategies.</td>
<td>Parks</td>
<td>Immediate</td>
<td>Department of Recreation and Parks</td>
<td>Department of Recreation and Parks</td>
<td>3.4 Park and Quality Amid Recreation Programs, 3.5 Local Partnerships</td>
</tr>
<tr>
<td>P73 Transit to parks and beaches: Develop a Transit to Parks and Beaches system to improve transit access to regional, state, and federal parks and beaches for underserved communities. Identify and implement strategies to improve existing transit connections (bus, shuttle, and rail) or create new service. Develop and implement a robust marketing campaign to advertise the availability of transit and shuttle services.</td>
<td>Parks</td>
<td>Short-term</td>
<td>Department of Transportation, Department of Recreation and Parks</td>
<td>Metro</td>
<td>3.7 Water Recreation</td>
</tr>
</tbody>
</table>

Community gardens and parks: Explore the feasibility of permitting by-right community gardens and parks that are operated by not-for-profits in residential zones by-right.
Quimby Ordinance Update (Developer Park Fee)

- Expanding upon Health Atlas Analysis to re-rewrite the City’s Developer Park Fee / Quimby Ordinance
- Need solid analysis
  - Developers will likely sue the City
- Analyze by type and by neighborhood:
  - Park level of service
  - Park access
  - Recreation and facility cost analysis
  - Existing school facilities
  - Housing unit construction
  - 11 years of Quimby Fee collection
Parks per 1,000 Residents

- Shown by Community Plan Area
Community Plan Areas with the Highest and Lowest Park Level of Service

<table>
<thead>
<tr>
<th>Community Plan Area</th>
<th>Parks per 1,000 Residents</th>
<th>Neighborhood (and Mini) Parks per 1,000 Residents</th>
<th>Community Parks per 1,000 Residents</th>
<th>Regional Parks per 1,000 Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilshire</td>
<td>0.3</td>
<td>0.1</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Westlake</td>
<td>0.4</td>
<td>0.1</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Southeast Los Angeles</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Mission Hills - Panorama City - North Hills</td>
<td>0.4</td>
<td>0.2</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>South Los Angeles</td>
<td>0.5</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Central City</td>
<td>0.6</td>
<td>0.3</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Van Nuys - North Sherman Oaks</td>
<td>0.6</td>
<td>0.2</td>
<td>0.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Boyle Heights</td>
<td>0.7</td>
<td>0.5</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Granada Hills - Knollwood</td>
<td>15.2</td>
<td>0.2</td>
<td>1.1</td>
<td>13.9</td>
</tr>
<tr>
<td>Chatsworth - Porter Ranch</td>
<td>17.4</td>
<td>0.3</td>
<td>2.2</td>
<td>14.9</td>
</tr>
<tr>
<td>Hollywood</td>
<td>27.1</td>
<td>0.2</td>
<td>0.6</td>
<td>26.2</td>
</tr>
<tr>
<td>Bel Air - Beverly Crest</td>
<td>28.6</td>
<td>0.2</td>
<td>1.6</td>
<td>26.8</td>
</tr>
<tr>
<td>Encino - Tarzana</td>
<td>45.3</td>
<td>0.2</td>
<td>1.1</td>
<td>44.0</td>
</tr>
<tr>
<td>Sunland - Tujunga - Lake View Terrace - Shadow Hills - East La Tuna Canyon</td>
<td>80.7</td>
<td>0.4</td>
<td>1.3</td>
<td>79.0</td>
</tr>
<tr>
<td>Brentwood - Pacific Palisades</td>
<td>95.9</td>
<td>0.2</td>
<td>5.4</td>
<td>90.2</td>
</tr>
</tbody>
</table>

- Darker green shows the top 15% for each metric. Lighter green shows bottom 15%. 
Community Plan Areas with the Highest and Lowest Park Level of Service

<table>
<thead>
<tr>
<th>Community Plan Area</th>
<th>Percentage of Population that Identified as Non-White or Latino</th>
<th>Hardship Index</th>
<th>Percentage of Population with Income Less than 200 Percent of the Federal Poverty Level</th>
<th>Prevalence of Childhood Obesity</th>
<th>Percentage of Households without Access to a Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilshire</td>
<td>59%</td>
<td>48</td>
<td>44%</td>
<td>26%</td>
<td>14%</td>
</tr>
<tr>
<td>Westlake</td>
<td>69%</td>
<td>79</td>
<td>70%</td>
<td>28%</td>
<td>34%</td>
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<tr>
<td>Southeast Los Angeles</td>
<td>70%</td>
<td>85</td>
<td>72%</td>
<td>30%</td>
<td>11%</td>
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<tr>
<td>Mission Hills - Panorama City - North Hills</td>
<td>57%</td>
<td>61</td>
<td>48%</td>
<td>28%</td>
<td>5%</td>
</tr>
<tr>
<td>South Los Angeles</td>
<td>74%</td>
<td>72</td>
<td>62%</td>
<td>30%</td>
<td>11%</td>
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<tr>
<td>Central City</td>
<td>64%</td>
<td>61</td>
<td>70%</td>
<td>25%</td>
<td>22%</td>
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<tr>
<td>Van Nuys - North Sherman Oaks</td>
<td>41%</td>
<td>51</td>
<td>45%</td>
<td>22%</td>
<td>6%</td>
</tr>
<tr>
<td>Boyle Heights</td>
<td>52%</td>
<td>81</td>
<td>66%</td>
<td>32%</td>
<td>13%</td>
</tr>
<tr>
<td>Granada Hills - Knollwood</td>
<td>38%</td>
<td>38</td>
<td>21%</td>
<td>19%</td>
<td>2%</td>
</tr>
<tr>
<td>Chatsworth - Porter Ranch</td>
<td>41%</td>
<td>37</td>
<td>22%</td>
<td>19%</td>
<td>2%</td>
</tr>
<tr>
<td>Hollywood</td>
<td>35%</td>
<td>40</td>
<td>42%</td>
<td>24%</td>
<td>10%</td>
</tr>
<tr>
<td>Bel Air - Beverly Crest</td>
<td>14%</td>
<td>17</td>
<td>7%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>Encino - Tarzana</td>
<td>19%</td>
<td>35</td>
<td>22%</td>
<td>16%</td>
<td>2%</td>
</tr>
<tr>
<td>Sunland - Tujunga - Lake View Terrace - Shadow Hills - East La Tuna Canyon</td>
<td>31%</td>
<td>43</td>
<td>31%</td>
<td>24%</td>
<td>1%</td>
</tr>
<tr>
<td>Brentwood - Pacific Palisades</td>
<td>14%</td>
<td>25</td>
<td>12%</td>
<td>11%</td>
<td>1%</td>
</tr>
</tbody>
</table>

- Darker orange shows the top 15% for each metric. Lighter orange shows bottom 15%.
Scatter Plot Showing Park Level of Service and Population that Identified as Non-White or Latino by Community Plan Area
Park Access

- Areas within ½ Mile of a Park
- 50% of the City’s population is within a walking distance of a community and/or neighborhood park
In-lieu Payments for Quimby and Zone Changes

• 1,676 payments since 2003
• 35 zone change payments
• 1,641 Quimby payments
• Over $161 million collected
Health Atlas Lessons and Takeaways
Spatial Analysis Takeaways

- **Geo scale: How “low” can you go?**
  - Sacrifice small confidence intervals for neighborhood-specific data to understand trends and comparisons.

- **Sometimes the data doesn’t exist – yet!**
  - Coffee + music + hours of data cleaning & geocoding = new spatial data!
  - Community surveys

- **Choose wisely (but try everything first)**
  - Local relevancy (Urban vs. Suburban vs. Rural; Culture of the place and people, etc.)
  - **Policy relevancy**
    - Measure what you want to MOVE!
Spatial Analysis Takeaways

- Sharing is caring
  - Transparent methods and results
  - Share data freely so others can further the cause

- Present community-friendly results
  - Simple language
  - Images
  - Multi-lingual
  - Make relevant for residents – clarify the “so what?”