Public Health Working Group

January 21, 2016

Rye Baerg
Active Transportation &
Special Programs

Agenda

- 2016 RTP/SCS Public Health Appendix
- Social Determinants of Health for Planners
- Active Transportation Health and Economic Impact Study Update
Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

- Integrated Land-Use and Transportation Plan
- Developed through “bottoms-up” process that respects city control
- Aims to meet state-adopted GHG reduction targets for 2020, 2035
- First RTP/SCS adopted April 2012
- Draft 2016 RTP/SCS available for public comment until February 1, 2016.
Public Health and the 2016 RTP

Plan Goal
- Protect the environment and health of our residents by improving air quality and encouraging active transportation

Policy Direction
- Provide robust data to inform regional policy
- Incorporate expanded public health analysis in 2016-2040 RTP/SCS, as feasible
- Support public health stakeholder participation
How did we get here?

- Public Health Subcommittee Recommendations
- 2014-15 Public Health Work Program
- 2016 RTP/SCS Public Health Analysis Framework
- DRAFT 2016 RTP/SCS Public Health Strategies and Actions

Outreach

- Public Health Subcommittee
- Technical Working Group
- Public Health Working Group
- Policy Committees
  - Regional Council
  - Energy and Environment Committee
- RTP/SCS Workshops
Social Determinants of Health

Health In All Policies

FIGURE 1 Social Determinants of Health

- Neighborhood and Built Environment
- Education
- Economic Stability
- Health and Health Care
- Social and Community Context

Public Health

.transportation

GOODS MOVEMENT
HOUSING
AIR QUALITY

SCS/LAND USE
FUNDING
LONG TERM GROWTH FORECAST
WATER
Benefits to the Region

- Readiness for State and Federal Grants
- Improved Interagency Coordination
- Informed Policy Decisions
- Reduced Health Care Costs/Regional Competitiveness

2016 RTP/SCS: Public Health Plan Analysis Focus Areas

- Physical Activity
- Affordable Housing
- Transportation Safety
- Economic Opportunity
- Air Quality
- Climate Adaptation
- Access

Public Health Appendix
Plan Goals

<table>
<thead>
<tr>
<th>Exhibit 1: Policy and Implementation Assessment Matrix</th>
<th>Access to Essential Health Care</th>
<th>Affordable Housing</th>
<th>Air Quality</th>
<th>Ethical Standards</th>
<th>Economic Development</th>
<th>Physical Activity</th>
<th>Transportation Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain health and accessibility for all people and places in the region.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Improve &amp; maintain pedestrian &amp; cycling infrastructure in the region.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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</tr>
<tr>
<td>Increase access to public transportation services.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Increase the overall use of public transportation.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Reduce &amp; maintain a variety of non-motorized travel options for residents, visitors, and workers.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Increase the use of non-motorized travel options for everyday activities, including daily commuting.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Enhance the accessibility of the regional transportation system through improved service &amp; facility connections.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Maintain the security of the regional transportation system through improved surveillance &amp; monitoring.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

Current Trends

![Graphs showing current trends in physical activity and obesity](image-url)
Focus Areas and Plan Performance Measures

<table>
<thead>
<tr>
<th>Balanced Performance Measures</th>
<th>Public Health Focus Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>Data Source</td>
</tr>
<tr>
<td>Additional job supporting transportation capabilities</td>
<td>Regional Economic Health</td>
</tr>
<tr>
<td>Additional job supporting transportation investments</td>
<td>Regional Economic Health</td>
</tr>
<tr>
<td>Safe pedestrian &amp; bike access Regional Facility</td>
<td>Regional Economic Health</td>
</tr>
<tr>
<td>Caltrans project or greenhouse gas emissions</td>
<td>Regional Economic Health</td>
</tr>
<tr>
<td>Internal planning &amp; high-quality transit improvements</td>
<td>Regional Economic Health</td>
</tr>
<tr>
<td>Average distance to work in or near 300</td>
<td>Regional Economic Health</td>
</tr>
<tr>
<td>Percent of non-vehicle trips</td>
<td>Regional Economic Health</td>
</tr>
<tr>
<td>Work trip length reduction</td>
<td>Regional Economic Health</td>
</tr>
<tr>
<td>Women's transportation</td>
<td>Regional Economic Health</td>
</tr>
</tbody>
</table>

Access to Essential Destinations

<table>
<thead>
<tr>
<th>TABLE 4</th>
<th>Plan Performance – Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric</td>
<td>Result of Plan</td>
</tr>
<tr>
<td>2040 Baseline</td>
<td>2040 Plan</td>
</tr>
<tr>
<td>Share of growth in High Quality Transit Areas (HQTA) from Base Year 3% of Households in HQTA</td>
<td>30%</td>
</tr>
<tr>
<td>Jobs/Housing Balance in HQTAs</td>
<td>36% Housing 44% Employment</td>
</tr>
<tr>
<td>Average distance for work trips (mixed)</td>
<td>15.1</td>
</tr>
<tr>
<td>Average distance for non-work trips (mixed)</td>
<td>7.8</td>
</tr>
<tr>
<td>Percent of work trips less than 3 miles</td>
<td>19.6%</td>
</tr>
<tr>
<td>Percent of non-work trips less than 3 miles</td>
<td>40.7%</td>
</tr>
<tr>
<td>Work Trip Length Duration</td>
<td>28.4 min</td>
</tr>
<tr>
<td>Percentage of PM Peak Imitate trips +45 min</td>
<td>22%</td>
</tr>
<tr>
<td>Percentage of PM Peak HGV Imitate trips +45 min</td>
<td>7.3%</td>
</tr>
<tr>
<td>Percentage of PM Peak SDV Imitate trips +45 min</td>
<td>62%</td>
</tr>
</tbody>
</table>
2016 RTP/SCS Public Health Work Program

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership and Collaboration</td>
<td>Increase regional engagement and collaboration</td>
</tr>
<tr>
<td></td>
<td>Facilitate information exchange</td>
</tr>
<tr>
<td></td>
<td>Develop and sustain partnerships</td>
</tr>
<tr>
<td></td>
<td>Support Policy Adoption</td>
</tr>
<tr>
<td>Policy and Analysis</td>
<td>Integrate public health in SCAG’s activities</td>
</tr>
<tr>
<td></td>
<td>Develop information on a broad spectrum of health issues</td>
</tr>
<tr>
<td>Regional Support</td>
<td>Provide technical assistance to local agencies</td>
</tr>
<tr>
<td></td>
<td>Develop informational resources</td>
</tr>
<tr>
<td></td>
<td>Seek funding to support demonstration programs</td>
</tr>
</tbody>
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Submitting Public Comments

- Public Comment Cards
- Website: [http://scagrtpscs.net/Pages/Draft2016RTPSCS.aspx](http://scagrtpscs.net/Pages/Draft2016RTPSCS.aspx)
More Information:

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Rye Baerg, baerg@scag.ca.gov

www.scag.ca.gov

http://scagrtpscs.net/Pages/Draft2016RTPSCS.aspx

The Social Determinants of Health for Planners: Live, Work, Play, Learn!

Miguel A. Vazquez, AICP
Healthy Communities Urban/Regional Planner

Southern California Association of Government
PUBLIC HEALTH
WORKING GROUP
Paper’s Background

• The California Planning Roundtable
  – Healthy Communities Work Group
    • Healthy Communities Definition
    • The Social Determinants of Health for Planners paper

"We have traditionally thought about health in a very narrow context. Health is far more broad than what hospitals and doctors and nurses do. So how do we improve health across America? We need to go into the communities and think about the factors that drive health."

Vice Admiral (VADM) Vivek H. Murthy, M.D., M.B.A
United States Surgeon General
Quote from the 2015 Aspen Ideas Festival
Source: http://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health

Source: Canadian Institute for Advanced Research, Health Canada, Population and Public Health Branch AB/NWT 2002
Upstream-Downstream? A Tale of Two Terms

Video Link
A white child from the Oakland Hills can expect to live to 85 years old, whereas an African American child living in West Oakland—just a few miles away—can only expect to live to 70.

Source: Alameda County Public Health Department, 2008, 2012

Source: Bay Area Regional Health Inequalities Initiative

Graphics extracted from Portrait of Promise: The California Statewide Plan to Promote Health and Mental Health Equity
EXECUTIVE SUMMARY
CHALLENGES WE FACE
MAJOR THEMES IN THE 2016 RTP/SCS
WHAT WE WILL ACCOMPLISH
BENEFITS BEYOND CLEANER AIR
Social Determinants of Health

• Includes the circumstances in which people are born, grow up, live, work, play and age. Economic opportunities, government policies and the built environment all play a role in shaping these circumstances and influencing public health outcomes.

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mvazquez@rivcocha.org
Active Transportation Health and Economic Impact Study
Contract No. 15-018-C1

Prepared for SCAG Public Health & Active Transportation Working Groups

Dr. Nicole Iroz-Elardo, Project Manager & Data Analyst
Urban Design 4 Health
January 21, 2016

Goal

Goal: Estimate current annual public health, transportation and economic costs and benefits of bicycling and walking on the SCAG region’s economy

Key Elements:
• Build from evidence and best practices
• Use local data when available
• Identify appropriate non-local data when needed
• Develop a study process for use by local partners
• Monetize previously modeled health benefits of RTP/SCS

Timeline: Summer 2015 – April 2016
Why?  
**Physical Activity & Health Benefits**

- Health care expenditures comprise approximately 17.4 percent of GDP and outpace inflation. *(Centers for Medicare and Medicaid Services, 2015).*
- Small changes to disease patterns could result in significant savings.
  - Diabetes
  - Cardiovascular and hypertension
  - Obesity

**Why?  
Annual Diabetes Prevalence & Cost of Illness in 2012**

- 6.4% (~2.5 million cases) in CA
- Each costs (in CA):
  - Direct: $7,774
  - Indirect: $3,311.
- It adds up when tallied for all diabetics!

<table>
<thead>
<tr>
<th>Total Annual Costs in 2012 (billions, 2011$)</th>
</tr>
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<tbody>
<tr>
<td>Direct</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>U.S.</td>
</tr>
<tr>
<td>CA</td>
</tr>
<tr>
<td>SCAG</td>
</tr>
</tbody>
</table>

SCAG is based on 48% of CA's population residing within SCAG & assumes similar prevalence and cost of medical expenses throughout CA.

http://care.diabetesjournals.org/content/early/2013/03/05/dc12-2625.full.pdf+html
### Why? Transportation & Real Estate Benefits

- SGA Complete Streets Project saved **$18.1 million in collision and injury costs** within one year.
- Replacing 20% of auto trips (<8km) with walking or cycling trips saves an estimated **$86M in health care costs due to reductions in PM2.5 and $3.4M from reductions in ozone**.
- Bicycle-pedestrian tourism, infrastructure, and businesses resulted in **$82.7M in output and over 1,400 jobs** in Vermont in 2009.
- Multi-use paths were associated with increased residential property values ranging from **$0.35 to $6.95 for each additional foot closer to the access point**.

### Status

- **Task 1**: Project Management
- **Task 2**: Public Outreach
- **Task 3**: Data Collection Approach
  - *Literature & Data Identification – nearly complete*
- **Task 4**: Transportation Cost Analysis
  - *in process*
- **Task 5**: Health Benefits
  - 5a: *Monetizing Active Transportation infrastructure – in process*
  - 5b: *Draft RTP/SCS – in process*
- **Task 6**: Economic Impact
- **Task 7**: Final Report
Conceptual Model

**CHARACTERIZE**
- Infrastructure
  - Sidewalks
  - Crosswalks
  - Bike Facilities
  - Trails

**MODEL & MONETIZE**
- Consumer Behavior
  - Recreational Equipment
  - Local Bike Shops
  - Spending in Mixed Use Small Businesses
  - Tourism
  - Special Events (CicLAvia)
  - Housing Prices
  - Avoided Vehicle Ownership Costs

**REMIXing Models**
- REMI (Input-Output) to understand the Active Transportation System's contribution to the regional economy

**PUBLIC HEALTH BENEFITS**
- Physical Activity
- Better Air Quality

**Task 5a: Methods**

**UD4H recommended method:**

- use physical activity estimates (# of walking and bicycling trips, and average trip distance by mode) from a recent Active Transportation Analysis for SCAG

- as inputs to the California Public Health Assessment Model created for UrbanFootprint, and used in SCAG’s RTP process, and

- apply the cost-of illness information
Task 5a: Proposed Approach

1. **Active Transportation Analysis**
   - Infrastructure, placetypes, etc
   - CHIS Models
   - Built environment and demographics
   - CHTS Models

2. **California Public Health Assessment Model (C-PHAM)**
   - Characterize infrastructure
   - Model physical activity
   - Model public health

3. **Monetize Public Health**
   - CHIS Models
   - Disease at baseline and scenario
   - Apply COI

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**Urban Design 4 Health**
- National firm specializing in interactions between land use, built environment, transportation, air quality, behavior and public health.
- Leader in the translation of evidence on built environment and health relationships into decision support tools
- [www.ud4h.com](http://www.ud4h.com)

**AECOM Technical Services**
- Extensive experience modeling transportation investments, economic development, real estate, tourism and culture, and sustainable development.
- [www.aecom.com](http://www.aecom.com)
Contact Information

- Dr. Nicole Iroz-Elardo: nirozelardo@ud4h.com