Health and the Built Environment: 
Collaborating Across Sectors to Improve Health

Presenters:
Patricia L. Cummings, MPH, PhD, Program Manager
Ellen Schwaller, MUEP, Community Health & Design Coordinator
Built Environment & Health Impact Assessment Unit 
Environmental Public Health Division
Presentation Roadmap

• How does the built environment impact health?
• How can local governments partner across sectors to improve health?
• What funding sources are available?
• What are some current built environment initiatives?
• What are some tips/strategies that other communities can use for this type of work?
Approaching Same Problem Differently

• Population Approach

• Individual Approach
# Public Health AND Healthcare

<table>
<thead>
<tr>
<th></th>
<th>Public Health</th>
<th>Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focuses on</td>
<td>populations</td>
<td>focuses on the individual</td>
</tr>
<tr>
<td>Emphasizes prevention</td>
<td>prevention and health promotion for the whole community</td>
<td>Emphasizes diagnosis, treatment and care for the whole patient</td>
</tr>
<tr>
<td>and health promotion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for the whole community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employs interventions</td>
<td>employs interventions aimed at the environment, human behavior, lifestyle and</td>
<td>employs provision of medical care</td>
</tr>
<tr>
<td>aimed at the</td>
<td>medical care</td>
<td></td>
</tr>
<tr>
<td>environment, human</td>
<td></td>
<td></td>
</tr>
<tr>
<td>behavior, lifestyle and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>medical care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stimulated by</td>
<td>stimulated by threats to the health of populations</td>
<td>stimulated by needs of patients</td>
</tr>
</tbody>
</table>

"Public Health vs. Medicine," Harvey Fineburg, MD, PhD, Harvard University School of Public Health, 1999
Root Causes of Health
Health Outcomes

Pedestrian/Cyclist Injury/Fatality

- Speeding Cars
- Biking in Traffic
- J-Walking
- Drunk/Distracted Drivers

Environments Contexts

- Lack of Traffic Calming
- 12 Foot Lanes
- No safe crossings
- No bike lanes
- No sidewalks

Policy Contexts

- Complete Streets
- Zero Fatality Goal
- Ordinance Updates
- Funding Priorities
## Top 10 Causes of Death in Harris County and Texas, 2013

<table>
<thead>
<tr>
<th>Harris County</th>
<th>Overall Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Heart disease</td>
<td>166.3</td>
</tr>
<tr>
<td>2 Cancer</td>
<td>159.9</td>
</tr>
<tr>
<td>3 Stroke</td>
<td>40.6</td>
</tr>
<tr>
<td>4 Accidents</td>
<td>36.8</td>
</tr>
<tr>
<td>5 Chronic lower respiratory diseases</td>
<td>32.0</td>
</tr>
<tr>
<td>6 Septicemia</td>
<td>24.0</td>
</tr>
<tr>
<td>7 Diabetes</td>
<td>20.0</td>
</tr>
<tr>
<td>8 Kidney disease</td>
<td>17.0</td>
</tr>
<tr>
<td>9 Flu/pneumonia</td>
<td>15.2</td>
</tr>
<tr>
<td>10 Alzheimer's</td>
<td>14.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Texas</th>
<th>Overall Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Heart disease</td>
<td>170.7</td>
</tr>
<tr>
<td>2 Cancer</td>
<td>156.1</td>
</tr>
<tr>
<td>3 Chronic lower respiratory diseases</td>
<td>42.3</td>
</tr>
<tr>
<td>4 Stroke</td>
<td>40.1</td>
</tr>
<tr>
<td>5 Accidents</td>
<td>36.8</td>
</tr>
<tr>
<td>6 Alzheimer's</td>
<td>24.4</td>
</tr>
<tr>
<td>7 Diabetes</td>
<td>21.6</td>
</tr>
<tr>
<td>8 Septicemia</td>
<td>16.4</td>
</tr>
<tr>
<td>9 Kidney disease</td>
<td>15.9</td>
</tr>
<tr>
<td>10 Flu/pneumonia</td>
<td>14.4</td>
</tr>
</tbody>
</table>

*Note: Age-adjusted by U.S. Census 2000 population. Source: [http://soupfin.tdh.state.tx.us/death10.htm](http://soupfin.tdh.state.tx.us/death10.htm)*
U.S. Obesity Trends
The HCPHES Priority Public Health Issues for 2013-2018

Chronic Disease
Food Safety
Emergency Preparedness
Environmental Health
Infectious Disease
Injury
Social, Mental, and Emotional Wellbeing

TEXAS Ranks 11/51 States

Current adult obesity rate (2014) 31.9%

Rank among states (2014) 11/51

Adult obesity rate in Texas (1990-2014)

Obesity rate by age (2014)
- 18-25: 19.1%
- 26-44: 30.9%
- 45-64: 38.9%
- 65+: 30.7%

Obesity rate by race (2014)
- White: 26.7%
- Black: 40.7%
- Latino: 35.8%

Obesity rate by gender (2012)
- Men: 28.5%
- Women: 30.0%

What determines our health?
Think of the Tree!
Portion Sizes
Food Environment influences our behavior
Low income households (more than 1 mile from grocery store) 2010

Physical Inactivity = Leading Cause of Disease

- **Sedentary lifestyles** increase all causes of death, doubles the risk of cardiovascular diseases, diabetes, obesity, and increase risk of colon cancer, HBP, osteoporosis, lipid disorders, depression, and anxiety
- ~3-28% of the variance in PA participation is due to neighborhood-level differences in the built environment*

Why Transportation?

Transport that is sustainable in terms of social, environmental, and health impacts

Transportation

- Physical Activity
- Air Quality
- Injury
- Access to Healthy Destinations

- Obesity
- Cardiovascular Health
- Respiratory Health
- Cardiovascular Health
- Mental Health

Chronic Disease
Food Safety
Emergency Preparedness
Environmental Health
Infectious Disease
Injury
Social, Mental, and Emotional Wellbeing
Active Transportation Trends

The Role of Transportation in Promoting Physical Activity

Traffic Calming: Medians, speed bumps and other traffic-calming efforts can reduce the number of automobile crashes with pedestrian injuries by up to 15%.

Sidewalks: People who live in neighborhoods with sidewalks on most streets are 47% more likely to be active at least 30 minutes a day.

Bike Facilities: In Portland, Ore., bicycle commuters ride 49% of their miles on roads with bike facilities, even though these are only 8% of road miles.

Public Transportation: Public transit users take 30% more steps per day than people who rely on cars.

Sustainable Transportation & Equity

Transport that is sustainable in the senses of social, environmental, and health impacts, and is available/accessible to persons of all abilities and incomes.
How Much Do Determinants Matter in Texas?

Social and physical determinants are causing the gap in rankings between health outcomes (#50 in Texas) and health factors (#94 in Texas). (County Health Rankings, 2015 UWPHI)
The HCPHES Priority Public Health Issues for 2013-2018

Root Causes of Health

- Health Outcomes
- Behaviors/Exposures
- Environmental Contexts
- Policy Contexts
Presentation Roadmap

• How does the built environment impact health?
• How can local governments partner across sectors to improve health?
• What funding sources are available?
• What are some current built environment initiatives?
• What are some tips/strategies that other communities can use for this type of work?
Partnering

• With whom?
  • Across disciplines
  • Across boundaries
  • Within jurisdictions

• On what?
  • Surveillance & data sharing
  • Community outreach

• Who is doing it?
  • HCPHES, CDC, APHA/APA, ULI

• How do we do it?
• National
  • CDC’s Chronic Disease Prevention and Health Promotion
    [link]
  • CDC in partnership with APA
    [link]

• Local
  • EHF [link] (Healthy planning, collective impact, capacity)
  • [link] (Public notices/RFPs)
  • Texas CDBG [link]
Presentation Roadmap

• How does the built environment impact health?
• How can local governments partner across sectors to improve health?
• What funding sources are available?

• What are some current built environment initiatives?
• What are some tips/strategies that other communities can use for this type of work?
Overall 30% population growth in Harris County since 2000:

- **City of Houston** – 11%
- **Non-COH (34) cities** – 9%
- **Unincorporated HC** – 74%

Built Environment & HIA Unit

• Health Impact Assessment Demonstration Project
  • Grant from Health Impact Project, with funding from Episcopal Health Foundation in Texas
  • East Aldine Management District
    • HIA will inform EAD decision-makers on town center development plans
  • City of Pasadena
    • HIA will inform specific city ordinance revisions and potentially development of a comprehensive city plan

• Institutionalization of HIA: Comparative Analysis
  • Examine differences between county-city-district decision-making processes and identify how health/HIA/review can be integrated
The HCPHES Priority Public Health Issues for 2013-2018

- Chronic Disease
- Food Safety
- Emergency Preparedness
- Environmental Health
- Infectious Disease
- Injury
- Social, Mental, and Emotional Wellbeing

Completed and Ongoing Engagement

• Key informant interviews
• Focus groups
• Interactive Workshops
• Qualitative Mapping
• Community Survey
• Photovoice
Presentation Roadmap

• How does the built environment impact health?
• How can local governments partner across sectors to improve health?
• What funding sources are available?
• What are some current built environment initiatives?
• What are some tips/strategies that other communities can use for this type of work?
Tips & Recommendations

• Take a more active role in promoting healthy and safe environments
  • Where you live, learn, work, worship, and play

• Develop org. structures that promote internal culture change
  • Promote PA (e.g., walking meetings); healthy food procurement policies

• Implement several targeted initiatives that may feasibly produce results over a 2-3 year time frame

• Good collaboration = Good Science (and good health!)