Health through Community Design

Healthy Homes and Communities Statewide Convening

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June 28, 2012
Presentation Overview

Connecting health + built environment

Integrating health into community decision-making

Health impact assessment tools
Health + Built Environment

The way we design communities + housing can have significant impacts on health

How do we know?
What determines how healthy we are?

Genetics 5%
Health care 10%
Behavior 30%
Social conditions 55%

Source: World Health Organization

### Table 1. Population Health Determinants!

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<th>Fixed Individual Health Conditions and Disabilities!</th>
<th>Individual Health Behaviors!</th>
<th>Public Service and Infrastructures!</th>
<th>Environmental Conditions!</th>
<th>Social, Economic, and Political!</th>
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<td>Economic development</td>
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Health + Built Environment

How do we know?

Growing body of evidence of connections between health + built environment

- Kids living near high traffic roads have lower lung capacity (Gauderman et al. 2007)
- 7-9 dwelling units needed per acre to support transit (Frank & Pivo 1994, Pushkarev & Zupan 1977)
- The closer a non-motorized facility is, the more likely residents will use it for cycling (Giles-Corti et al. 2005, Krizek et al. 2007)
- People more likely to walk for transportation in higher-density and mixed-use areas (Ewing & Cervero 2001, Handy et al. 2006)
- People have reduced stress when they can see natural environments (Moore 1981, Parsons et al. 1988)

Poor people + people of color less likely to have access to stores selling healthier food (Zenk et al. 2005), in part due to fewer transportation options (Kaufman 1999)

Source: Design for Health Key Questions Research Summaries http://designforhealth.net/resources/researchsummaries/
Health + Built Environment

Evidence links the built environment to many health impacts

Accessibility
Air quality
Food access
Healthcare access
Mental health
Noise
Physical activity
Safety
Social capital
Water quality...

Source: Design for Health
Health + Built Environment

How can we maximize positive + minimize negative impacts of our housing and communities?

Communities addressing health through plans, policies, programs...
Case 1  |  Eden Prairie Comprehensive Plan

Plan addresses
Air quality
Water quality
Pathways + accessibility
Open space locations
Destinations + land use mix
Physical safety + mobility

Active Community Planning Goal
Promote planning and design that improves physical and mental health in the community

Source: City of Eden Prairie, Metropolitan Council

LAND USE GUIDE PLAN MAP 2030
COMPREHENSIVE PLAN UPDATE 2008
October 20, 2009
Case 1  |  Eden Prairie Comprehensive Plan

Example – Air Quality Policies

Continue development of a **trail and sidewalk system** that provides a viable transportation alternative

Support **regional transit initiatives** such as High Speed Busways, Light Rail Transit, and Commuter Rail

Continue to enforce **tree preservation and landscape ordinances** and promote the planting of trees adjacent to streets

Continue to require **land use buffers** next to major roads
Case 1  |  Eden Prairie Comprehensive Plan

City also has Active Community Planning: Site Planning Guide

Air quality
Water quality
Pathways + accessibility
Open space locations
Destinations + land use mix
Physical safety + mobility
### Guidelines:
- Sites within ¼ mile to a current or future transit station should provide direct pathway connections.
- Proposed residential areas within ½ mile to a current or future transit station should have at least 4-7 units per acre to support transit.
- Sites within ¼ mile to the nearest park or open space should provide direct pathway connections.
- Site within ¼ mile to community activity centers, such as the Eden Prairie Center, libraries, schools, parks, etc. should provide direct pathway connections.
- Projects should complement the adjacent mix of uses.

### Checklist
- Are there clear paths to prominent buildings, public areas, and other likely destinations?
- How does the project enhance surrounding land use diversity?
- Does the plan enhance the street connectivity?
- Does the site design enhance or frame focal points and view corridors?
- Does the plan include mixed uses?

### Example:
**Proximity to Destinations, Land Use Mix, & Site Design**

- Plazas enhance main entryways
- Pedestrian connection are provided to break up longer blocks
- Sidewalks are provided along the street
- Trees provide shade and shelter along sidewalks
- Buildings front side
- Parking is to the rear of buildings
- Residential uses above retail creates an opportunity to reduce daily car trips
- High visibility into ground floor
- Outdoor dining provided next to restaurant
Case 2 | North St. Paul Living Streets Plan

Developed in coordination with Ramsey – Washington Metro Watershed District

Integrates complete streets and green streets concepts

Living street “...where people are active and nature is accommodated”
City motivated by old infrastructure + watershed impacts

Less expensive to build + multiple benefits

Safer for pedestrians
Slows traffic
Provides neighborhood cohesiveness
Adds aesthetic value
Reduces stormwater pollution – improves water quality

Streets are major source of water pollutants. As rainwater washes down the streets, it collects everything in its path—grease, oil, and phosphorus from grass clippings, leaves and fertilizer. The water enters storm drains and then, for the most part, ends up in Kohlman Lake.

Phosphorus entering the lake from stormwater runoff causes two water-quality problems: excessive algae and decreased transparency (clarity). Transparency determines how far sunlight can penetrate a body of water, which in turn affects the depth to which plants can grow, having a direct impact on fish habitat. When a lake is filled with sediment and excessive nutrients, its ecological value decreases.

Rainwater from the streets enters storm drains where it (and the pollutants it carries) end up in Kohlman Lake.

Late-summer algal blooms are an unfortunate reality on a number of area lakes.
What does a Living Street look like?

Each Living Street is unique. Ingredients that may be found on a complete green street include:

- sidewalks
- bike lanes (or wide paved shoulders)
- parking where needed
- comfortable and accessible transit stops
- marked crossing opportunities
- pedestrian signals
- curb extensions
- rainwater gardens
- trees
- vegetation

They are designed to balance safety and convenience for everyone using the street along with water quality protection.

The primary elements of a Living Street.

This Living Street features curb extensions, a bike lane, sidewalks, and trees.
Design Objectives:
Improve stormwater runoff quality
Reduce impervious surfaces
Calm traffic
Improve bike/pedestrian connectivity
Protect and enhance urban forest
Minimize long-term maintenance costs

Living Streets build community because they:

Help Children. Streets that provide room for safe walking and biking help children get physical activity and gain independence. More children walk to school where there are sidewalks, and children who have safe walking and bicycling routes have a more positive view of their neighborhood.

Improve Public Health. By offering easy opportunities for walking and bicycling, living streets encourage a healthy life-style for people of all ages, especially the elderly, and are an important strategy to combat obesity.

Increase Safety. Traffic-calming elements like curb extensions, bump-outs and narrowed streets improve safety by reducing traffic speeds. Streets are safer for walkers, bicyclists, children, the elderly, as well as for drivers.

Enhance Neighborhood Beauty and Strengthen a Sense of Community. By making room for the planting of trees and rainwater gardens, our neighborhoods become more beautiful and attract young families that make communities thrive.
Accounting for health impacts

Health impact assessment (HIA) is emerging as a key tool for identifying, evaluating + mitigating health impacts

Many examples of HIA in community planning + design

Many HIAs have a strong equity focus

“A combination of procedures, methods, and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population”

World Health Organization, Gothenburg Consensus Paper, 1999
Accounting for health impacts

Recent HIAs in Twin Cities

Lowry Avenue Corridor

City of Ramsey

Comprehensive Plan

City of Bloomington Xcel

Energy Corridor Trail

Twin Cities Army

Ammunition Plant

Central Corridor Transit-Oriented Development
Case 3 | Central Corridor Health Impact Assessment

Led by PolicyLink, TakeAction Minnesota + ISAIAH

Address concerns about light rail + development impacts on community

Assess impacts on community health + health inequities

Maximize positive health benefits + negative health impacts

Empower local communities to meaningfully engage in rezoning process
Case 3 | Central Corridor Health Impact Assessment

Assessed neighborhood demographics + characteristics

Recommendations

Community equity program
Codify commitment to affordable housing
Density bonus program
Relieve lack of commercial parking
First source hiring

Table 1. Community Priorities and Objectives

Healthy Economy

Objective 1: High Quality, Healthy Jobs that Increase Wealth, Income, and Equity for All Residents
How will the proposed zoning change the amount and quality of jobs that will be available to residents in the corridor neighborhoods?

Objective 2: Diverse, Local Businesses—Existing and New—are Developed and Supported
How will the zoning changes affect small, locally and minority-owned businesses that are located along the corridor?

Healthy, Affordable Housing

Objective 3: Protect Residents from the Negative Impacts of Gentrification
How will the proposed zoning affect the likelihood of neighborhood gentrification and the involuntary displacement of current residents?

Objective 4: Construct and Preserve Affordable and Diverse Housing in Proportion to Demand
How will the proposed zoning impact the cost of housing in the neighborhood and the availability of affordable housing?

Safe and Sustainable Transportation

Objective 5: Maintain and Improve Affordable and Accessible Transportation
How will the proposed zoning coordinate with, and affect, affordable and accessible public transportation in the Central Corridor?

Objective 6: Safe, Connected Walking Routes to, from, and across Transit Stops
How will the proposed zoning coordinate with, and affect, access to safe and connected routes to, from, and around rail and bus stops?
FIGURE 13. TRANSPORTATION IMPACTS ON HEALTH

Source: Adapted from Human Impact Partners, 2011.
Presentation Overview

Many great examples of communities connecting health + built environment

Variety of approaches to integrating health into community decision-making

Growing body of evidence + best practices