

CHAPTER 6



Health & Wellness Element

OF THE COMPREHENSIVE PLAN (2016 to 2036)

HEALTH & WELLNESS ELEMENT VISION: *Mount Vernon promotes improved health, wellness and resiliency for its residents and Skagit County as a whole. A healthy community is one in which everything works well and in which all citizens enjoy a good quality of life. This means that the health of the community is affected by the social factors of health and progress – the factors that influence individual and community health and development...(full vision statement contained within this Element).*

Adopted September 14, 2016 with Ordinance 3690

TABLE OF CONTENTS

INTRODUCTION	1
SECTION 1.0 – COMMUNITY HEALTH PROFILE	
1.0: Community Health Profile.....	2
SECTION 2.0 – PARTNERSHIPS	
2.0 Partnerships.....	6
SECTION 3.0 – COMPONENTS TO STUDY	
3.0: Components to Study.....	8
GOALS, OBJECTIVES AND POLICIES	
TABLES:	
1.0: Health Ranking and Data Compared	2
2.0: Mount Vernon/Skagit County Data Compared	5
APPENDIX A - Community Health Assessment Summary Report (2015) Population Health Trust Advisory Committee	
APPENDIX B - Sea Mar Community Health Centers, Skagit Reach Project	
APPENDIX C - APA’s Healthy Plan Making	
APPENDIX D - APA’s Health in the Development Review Process	
APPENDIX E - Designed to Move Active Cities—A Guide for City Leaders	



ACKNOWLEDGEMENTS

Thank you to the City Councils, Planning Commissions and Citizens from 1960 to the present that have contributed to comprehensive planning efforts of the City. This Health & Wellness Element is built upon the foundation of these original plans.

2016 MAYOR & CITY COUNCIL:

Jill Boudreau, Mayor

Joe Lindquist, Ward 1

Ken Quam, Ward 1

Mark Hulst, Ward 2

Gary Molenaar, Ward 2

Bob Fielder, Ward 3

Mary Hudson, Ward 3

Dale Ragan, At-Large

2016 PLANNING COMMISSION:

Shelley Acero

Christopher Bollinger

Fred Clark

Al Lyon

Adair Orr

Thomas Waller

STAFF AUTHOR:

Rebecca Lowell, City Planner

HEALTH & WELLNESS ELEMENT VISION STATEMENT:

Mount Vernon promotes improved health, wellness and resiliency for its residents and Skagit County as a whole. A healthy community is one in which everything works well and in which all citizens enjoy a good quality of life. This means that the health of the community is affected by the social factors of health and progress – the factors that influence individual and community health and development.

A healthy community is usually borne out of a struggle to achieve the best for its citizens with the goal to be where visitors and citizens alike want to live or visit here because the environment promotes long term health which impacts our socio-economic status as well as the resources that we surround ourselves with.

The City of Mount Vernon desires to improve the health of the City as well as the stakeholders by providing services (along with some assistance from local partners, and social service workers) which interface with creating better living conditions, better nutrition and a safe setting to enjoy the bounty that Mount Vernon offers. Mount Vernon is a place where you have clean air, open spaces and attractive parks offering a variety of recreational opportunities. The Skagit River is the backdrop to our City which provides even more opportunities for a person to fish, boat and simply relax and take in the beauty surrounding us.

We encourage the citizens and visitors alike to partake in the healthy urban life that is so easy to come by here in Mount Vernon.



INTRODUCTION



This element of the City's Comprehensive Plan is not required by the Growth Management Act (GMA); even so, the City feels strongly that planning for the health and wellness of the community is just as important as planning for other Elements of the Comprehensive Plan.

Long-term health, social, economic, and environmental consequences are impacted by land uses, housing, transportation and capital facility planning.

Years of epidemiological research has confirmed that

mortality and morbidity from chronic and infectious diseases are reduced with improved nutrition and living conditions¹.

Individual behaviors, physical activity patterns and access to resources are influenced by the built environment. For example, obstacles to healthy living can be created by places built exclusively for automobile travel, places lacking parks, open space and trails, or housing that is located near pollution sources. In fact, the World Health Organization in 2006 estimated that 25% of all deaths and disease were attributable to environmental factors².

This evidence reinforces the City's efforts to improve health outcome by addressing strategies aimed at the built environment.

This 2016 Element is intended to be a starting point for Health and Wellness planning efforts for the City of Mount Vernon. The City does not have a Health Department, or other staff, that are specifically tasked with implementing health and wellness planning or other initiatives. Nonetheless, the City can start with small steps and build on this effort.

¹ Willett WC, Koplan JP, Nugent R, et al. Prevention of Chronic Disease by Means of Diet and Lifestyle Changes. In: Jamison DT, Breman JG, Measham AR, et al., editors. *Disease Control Priorities in Developing Countries*. 2nd edition. Washington (DC): The International Bank for Reconstruction and Development / The World Bank; 2006. Chapter 44. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK11795/> Co-published by Oxford University Press, New York.

² Prüss-Üstün, Annette.

Preventing disease through healthy environments. Towards an estimate of the environmental burden of disease. / Prüss-Üstün A, Corvalán C. 1. Environmental monitoring. 2. Cost of illness. 3. Risk factors. I. Corvalán, Carlos F. II. World Health Organization

1.0 COMMUNITY HEALTH PROFILE



The Population Health Institute at the University of Wisconsin, supported by the Robert Wood Johnson Foundation, has created and published a majority of the health measures data found in Table 1.0. This Table compares health data from Skagit County, Snohomish County, Whatcom County and the State of Washington.

Mount Vernon specific data is not available from the health measures data pool listed in Table 1.0. However, Table 2.0 contains Mount Vernon specific data and compares it to Skagit County.

TABLE 1.0: HEALTH RANKING AND DATA COMPARED¹

HEALTH MEASURES	DESCRIPTION OF MEASURE	SKAGIT COUNTY	SNOHOMISH COUNTY	WHATCOM COUNTY	STATE OF WA
LENGTH OF LIFE					
PREMATURE AGE-ADJUSTED MORTALITY	Number of deaths among residents under age 75 per 100,000 population (age-adjusted). Data is from the CDC 2011 - 2013	280	260	280	290
CHILD MORTALITY	Number of deaths among children under age 18 per 100,000 population. Data is from the CDC 2011 - 2013	40	40	30	50
INFANT MORTALITY	Measures the number of deaths among children less than one year of age per 1,000 live births. Data from the Health Indicators Warehouse 2006-2012	5	5	4	5
QUALITY OF LIFE					
FREQUENT PHYSICAL DISTRESS	Is the percentage of adults who reported that more than 14 days in response to the question, "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?" Data from the Behavioral Risk Factor Surveillance System in 2014.	12%	11%	10%	11%

HEALTH MEASURES	DESCRIPTION OF MEASURE	SKAGIT COUNTY	SNOHOMISH COUNTY	WHATCOM COUNTY	STATE OF WA
FREQUENT MENTAL DISTRESS	Is the percentage of adults who reported more than 14 days in response to the question, "Now, thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?". Data from the Behavioral Risk Factor Surveillance System in 2014.	11%	11%	10%	11%
DIABETES PREVALENCE	Prevalence of diagnosed diabetes. Data from the CDC Diabetes Interactive Atlas in 2012.	9%	8%	8%	10%
HIV PREVALENCE	A measure of the number of diagnosed cases of HIV in a county per 100,000 population. Data from the National HIV Surveillance System in 2012	94	79	113	59
HEALTH BEHAVIORS					
FOOD INSECURITY	Percentage of the population who did not have access to a reliable source of food during the past year. Data from the Map the Meal Gap in 2013.	15%	15%	12%	13%
LIMITED ACCESS TO HEALTHY FOODS	Percentage of the population who are low income and do not live close to a grocery store – in a rural location this means living less than 10 miles from a grocery store. Data from the USDA Food Environment Atlas in 2010.	5%	6%	3%	7%
DRUG OVERDOSE DEATHS	Number of deaths due to drug poisoning per 100,000 population. Data from the CDV 2012 to 2014.	14	8	18	18
MOTOR VEHICLE CRASH DEATHS	Number of deaths due to traffic accidents involving a motor vehicle per 100,000 population. Data from the CDC WONDER mortality data from 2007 to 2013	8	8	7	8
INSUFFICIENT SLEEP	Percentage of adults who reported sleeping less than seven hours per night. Data from the Behavioral Risk Factor Surveillance System in 2014.	32%	24%	33%	32%

HEALTH MEASURES	DESCRIPTION OF MEASURE	SKAGIT COUNTY	SNOHOMISH COUNTY	WHATCOM COUNTY	STATE OF WA
CLINICAL CARE					
UNINSURED ADULTS	Percentage of the population ages 18 to 65 that has no health insurance coverage. Data from the US Census Bureau's Small Area Health Insurance Estimates in 2013.	20%	22%	18%	23%
UNINSURED CHILDREN	Percentage of the population under age 19 that has no health insurance coverage. Data from the US Census Bureau's Small Area Health Insurance Estimates in 2013.	6%	8%	6%	8%
HEALTH CARE COSTS	Price-adjusted Medicare reimbursements (Parts A and B) per enrollee. Data from the Dartmouth Atlas of Health Care in 2013.	\$7,863	\$7,201	\$7,883	\$8,118
OTHER PRIMARY CARE PROVIDERS	Number of other primary care providers per the population of a county including NPs, PAs and clinical nurse specialists. Data from the CMS, National Provider Identification in 2015.	1,369:1	1,447:1	2,254:1	1,254:1
SOCIAL AND ECONOMIC FACTORS					
MEDIAN HOUSEHOLD INCOME	Income at which half the households earn more and half earn less. Data from the US Census in 2014.	\$61,400	\$53,700	\$71,900	\$51,400
CHILDREN ELIGIBLE FOR FREE LUNCH	Percentage of children enrolled in public schools eligible for free lunch. Data from the National Center for Education Statistics in 2012-2013.	38%	34%	31%	48%
HOMICIDES	Number of deaths due to homicide per 100,000 population. Data from the CDC WONDER mortality data in 2007 to 2013	3	2	2	3

¹ Robert Wood Johnson Foundation Program, County Health Rankings & Roadmaps, accessed on June 10, 2016 from www.countyhealthrankings.org

In Table 1.0 we see that Skagit County has higher rates of frequent physical distress, higher incidences of diabetes, more children eligible for free lunch, and a higher rate of homicides than either Snohomish or Whatcom Counties.

TABLE 2.0: MOUNT VERNON/SKAGIT COUNTY DATA COMPARED¹

	MOUNT VERNON	SKAGIT COUNTY
EDUCATION (2014, THOSE AGE 25 AND OLDER)		
Less than 9 th Grade	10.2%	4.2%
9 th to 12 th Grade, no diploma	9.4%	7.1%
High School Graduate or Equivalency	25%	25.7%
Associates Degree	10.1%	10.3%
Bachelor's Degree	13.1%	15.4%
Graduate or Professional Degree	7.2%	9%
POVERTY AND PUBLIC ASSISTANCE (2014)		
Individuals Below Poverty Level	21.7%	14.9%
Families Below Poverty Level	16.6%	10%
Households Using Food Stamps (SNAP)	23.6%	16.4%
OCCUPANCY, HOUSEHOLD SIZE (2014)		
% of Occupants per Room 1.51+	3.1%	1.2%
Average Household Size	2.8	2.57
COST BURDENED HOUSEHOLDS (2014)		
80% AMI and Below, Renters and Owners Spending 30% and 50% of their Income on Housing	54.4%	39%

¹ U.S. Census Bureau. (2014). tables: Educational Attainment, Poverty Status in the Past 12-Months, Selected Housing Characteristics, and Food Stamps/Supplemental Nutrition Assistance Program. Retrieved February 11, 2016, from www.factfinder.census.gov

Table 2.0 shows demonstrates all of the following:

- + Mount Vernon's educational attainment lags behind Skagit County in all of the categories listed.
- + Compared to Skagit County Mount Vernon has significantly more individuals and families below the poverty line and more households using food stamps.
- + Mount Vernon's average household size is larger and a much larger percentage of its households are over occupied.
- + Mount Vernon has 15% more families at 80% of the area median income and below that are paying more than 30% of their income on housing as compared to Skagit County.

2.0

PARTNERSHIPS

The City recognizes that planning for health and wellness will require working together with many different jurisdictions, agencies, organizations and community members to be effective. Cross-sector partnerships that bring together complementary strengths will be essential.

When determining which partnerships the City should dedicate resources to the following criteria could be used to evaluate opportunities:

1. Partnerships that focus on results that align the outcomes sought and prioritize the most pressing challenges.
2. Partnerships that have ways to measure progress and mechanisms for accountability that can be translated to the entire community.
3. Partnerships that include diverse representation across many sectors including, but not limited to, residents, policymakers, community-based organizations, and businesses.





Below are examples of three different partnerships that the City has been part of in the recent past that have (and will continue to) result in benefits to the City of Mount Vernon.

SKAGIT COUNTY POPULATION HEALTH TRUST

Skagit County has created a Population Health Trust Advisory Committee to the County Board of Health that is actively working on a community health plan. **Appendix A** contains a copy of the Community Health Assessment Summary Report released in 2015 by the Population Health Trust Advisory Committee.

SKAGIT REACH

The City was part of the community leadership Team for the Skagit Reach project lead by Sea Mar Community Health Centers. This project focused on creating opportunities for healthy living in Skagit County. **Appendix B** contains additional information about this project.

FARMERS MARKET

The City has actively supported the Farmers Market for years. In 2016 the Market is being hosted at the City's Riverwalk Park Plaza. The Farmers Market brings a variety of fresh, locally grown fruits, vegetables, meat, flowers, and much more to Mount Vernon. The Farmers Market supports local farmers and enhances access to healthy foods.

3.0

COMPONENTS TO STUDY

The American Planning Association has identified six major health topics that could be studied further as Mount Vernon continues its work on health and wellness following the adoption of this document.

These topics are listed below.

1. **ACTIVE LIVING**
 - a. Active Transport
 - b. Recreation
 - c. Injury
2. **EMERGENCY PREPAREDNESS**
 - a. Climate Change
 - b. Natural and Human-caused Disasters
 - c. Infectious Disease
3. **ENVIRONMENTAL HEALTH**
 - a. Air Quality
 - b. Water Quality
 - c. Brownfields
4. **FOOD & NUTRITION**
 - a. Access to Food and Healthy Food Options
 - b. Water
 - c. Land Use
5. **HEALTH AND HUMAN SERVICES**
 - a. Accessibility to Health and Human Services
 - b. Aging
6. **SOCIAL COHESION AND MENTAL HEALTH**
 - a. Housing Quality
 - b. Green and Open Space
 - c. Noise
 - d. Public Safety/Security

Appendix C contains a copy of the APA's Healthy Plan Making that could be used as a resource for policymakers should they decide to prioritize the study of the health topics listed above.

Appendix D contains a copy of the APA's Health in the Development Review Process that could be used as a resource for policymakers should they decide to evaluate how health related measures could be adopted into different development regulations.

Appendix E contains a publication titled, "Designed to Move Active Cities – A Guide for City Leaders" that contains information aimed at City leaders from designedtomove.org that is appended because it contains a great deal of data on why cities should embrace health and wellness initiatives.

4.0

GOALS, OBJECTIVES & POLICIES

The City has created Goals, Objectives & Policies specific to the Health and Wellness Element. These are intended to be a starting point in a conversation with the Mount Vernon community and it is expected that this list will grow and change with public input.

HEALTH & WELLNESS GOAL 1: SUPPORT COMMUNITY HEALTH PRACTICES TARGETED AT IMPROVING THE HEALTH OF MOUNT VERNON RESIDENTS.

- Policy 1.1: Continue promoting and educating the public about the importance of health and wellness.
- Policy 1.2: Continue fostering partnerships with others such as Skagit County Regional Health, Skagit County Public Health and the Mount Vernon Farmers Market to participate in efforts to promote healthy lifestyles and positive health outcomes.

HEALTH & WELLNESS GOAL 2: IMPROVE THE SAFETY OF NEIGHBORHOODS AND PUBLIC SPACES.

- Policy 2.1: Study ways to improve neighborhood involvement in crime prevention, neighborhood beautification, and the reduction of blight throughout the City.
- Policy 2.2: Use Crime Prevention Through Environmental Design (CPTED) principles to make places like abandoned buildings, vacant lots and homes, and underpasses safer for the community.
- Policy 2.3: Strive to enhance resident involvement in neighborhood improvement efforts such as the landscaping of public spaces and community garden projects.
- Policy 2.4: Adopt development regulations that facilitate natural surveillance in public spaces through design, allowed uses and programming.

HEALTH & WELLNESS GOAL 3: PROVIDE ACCESS TO A RANGE OF GOODS AND SERVICES, RECREATIONAL AMENITIES, AND SCHOOLS WITHIN COMFORTABLE WALKING DISTANCE OF HIGHER DENSITY RESIDENTIAL AREAS.

- Policy 3.1: Ensure that high density residential areas are planned and developed in areas where residents can safely and conveniently walk to parks, trails, open spaces, schools, restaurants and grocery stores.
- Policy 3.2: Encourage areas of smaller scale retail uses within walking distance (one-quarter mile) of higher density residential areas.

HEALTH & WELLNESS GOAL 4: PRIORITIZE THE BEAUTIFICATION OF THE CITY.

- Policy 4.1: Consider the adoption of development regulations that endeavor to eliminate concentrations of poverty within residential neighborhoods.
- Policy 4.2: Make streets, trails and other public spaces more visually appealing and comfortable for the public by ensuring that street trees are planted, landscaping is maintained and regularly inspecting and cleaning these areas.
- Policy 4.3: Encourage the placement of public art throughout the City.

HEALTH & WELLNESS GOAL 5: GIVE PRECEDENCE TO THE MAINTENANCE AND CREATION OF A PEDESTRIAN NETWORK WITH THE GOAL OF FACILITATING RESIDENTS SAFELY AND COMFORTABLY WALKING TO THEIR DESTINATIONS.

- Policy 5.1: Prioritize the mitigation of locations with sidewalk deficiencies to improve pedestrian safety and to increase walking. Where sidewalk deficiencies are identified prioritize improvements in areas closest to schools and parks.



City of
**MOUNT
VERNON**

Appendix A

COMMUNITY HEALTH ASSESSMENT SUMMARY (2015)
BY THE POPULATION HEALTH TRUST ADVISORY COMMITTEE

2015 SKAGIT COUNTY
COMMUNITY
HEALTH ASSESSMENT
SUMMARY REPORT



POPULATION HEALTH TRUST ADVISORY COMMITTEE

Acknowledgements

This report is part of a Community Health Assessment process supported by the Skagit County Population Health Trust Advisory Committee. These community volunteers are committed to improving health for all Skagit people. Members represent diverse community sectors and perspectives. For more information about The Population Health Trust Advisory Committee see links on the reference page. Members who contributed to the work behind this report were:

Behavioral Health for All Ages (Substance Use Disorders, Mental Health, Development Disabilities)

- Margaret Rojas, Contracts Manager, North Sound Mental Health Administration

Medical Sector

- Michael Sharp, Director of Laboratory Services, Island Hospital
- Chris Johnston, Pharm D, Peace Health United General Medical Center
- Connie Davis, Chief Medical Officer, Skagit Regional Health

Health Promotion, Prevention Services

- Diane Smith, Regional Food and Nutrition Specialist, WSU Extension
- Carol Hawk, Director, United General District #304

Social Services and Housing (Community Action, YMCA, United Way, etc)

- Bill Henkel, Executive Director, Community Action

Education (College, Schools)

- Karen Wanek, Associate Dean of Nursing, Skagit Valley College

Government (County, City, Departments, Commissioners, employees, Public Health)

- Lisa Janicki, Skagit County Commissioner
- Jennifer Johnson, Director, Skagit County Public Health

Latino Representation

- Colleen Pacheco, Program Manager Promotores & Homeless Healthcare Skagit/Whatcom Counties, Sea Mar
- Doug Spingelt, Vice President of Operations, Sea Mar

Employers (Business, Chamber of Commerce, Economic Development)

- Terry Belcoe, CEO, North Coast Credit Union

Long Term Care (Seniors, Skilled Nursing Facilities, Any senior service)

- Tina Willett, Director of Nursing, Mira Vista Care Center

Environment (Parks, Streets, Food, Nutrition, Air, Water, Sanitation)

- Liz McNett Crowl, Outreach and Development, Skagit Regional Health

Criminal Justice (Judge, Attorney, Sheriff, Probation, Jail)

- Charlie Wend, Chief of Corrections, Skagit County Jail

Tribal Representation

- John Miller, Council Member, Samish Indian Nation

Health Plans

- Brian Burch, Regional Manager for Provider Relations, Group Health Cooperative

Information Services (Electronic Health Records, Internet, Web Specialist)

- Duncan West, Director of Business Development, Medical Information Network North Sound

Foundations (Philanthropy)

- Debra Lancaster, CEO, United Way

County Area Representatives

- Andrea Doll, community representative, West County
- Stephanie Morgareidge, East Skagit County Resource Center Coordinator, Community Action of Skagit County

Pharmacy

- Randy Elde, Pharmacist/Manager, Hilltop Pharmacy

Communications

- Kari Ranten, Director of Planning and Marketing, Skagit Regional Health

Emergency Medical Services

- Mark Raaka, Director, Emergency Medical Services

Public / Environmental Health

- Corinne Story, Environmental Public Health Manager, Skagit County Environmental Public Health

Public / Community Health

- Howard Leibrand, Medical Officer, Skagit County Public Health
- Jennifer Sass-Walton, Child & Family Health Manager

Skagit County Population Health Trust

2015 Skagit County Community Health Assessment Summary Report

Table of Contents

Executive Summary

- 1. Background..... 1
- 2. Community Assessment Process 3
- 3. Highlights from Data Review 5
 - Population Summary..... 5
 - Quality of Life Survey 6
 - Community Health Indicators Data Carousel 7
 - Forces of Change 8
- 4. Community Listening Sessions 10
- 5. Community Strengths 13
- 6. The Way Forward 14
- References..... 15

For more information:

David Jefferson, MSW
Community Health Analyst
Skagit County Public Health
Office: 360.416.1545
Mobile: 360.708.8837
Davidj@co.skagit.wa.us
Skagit County Population Health Trust
<http://www.skagitcounty.net/Departments/PHTAC>

2015 Skagit County Community Health Assessment

Executive Summary

Skagit County has a history of strong community partnerships to improve health. In February 2015 a 23-member *Population Health Trust Advisory Committee* was convened, and a dedicated Community Health Analyst position created by the Skagit County Board of Health, for the purpose of developing a Community Health Improvement Plan.

During 2015 this diverse group conducted a Skagit County Community Health Assessment as a first step toward identifying and selecting health improvement priorities. The assessment process included review of multiple data sources, and engagement of diverse community partners through multiple channels to process information. Key assessment activities included:

- A Forces of Change assessment, to identify important factors driving the work of partner organizations in the community working to improve health;
- A Quality of Life Community Survey, conducted among more than 1,500 Skagit County residents to gather detailed information from diverse community members about their perceptions of factors influencing health;
- An extensive review of existing Community Health Indicators (such as existing health behavior surveys of adults and youth, vital statistics records, economic data), and a “Data Carousel” process engaging 90 community leaders to select a subset of priorities; and
- Five Community Listening Sessions, with nearly 200 participants, to present initial findings from the assessment, validate and gather feedback about the identified priorities, and to determine whether anything is missing.

Health issues that were identified during this process as important priorities for action included:

- Childhood immunization
- Prenatal care and routine preventive medical care
- Adult obesity and overweight
- Fruit and vegetable consumption
- Marijuana (among youth) and opioid use
- Chlamydia
- Youth violence (among youth peer and by adults)
- Youth depression and suicide
- Affordable housing
- Living wage jobs

This careful, comprehensive review of data to describe and prioritize the health issues of Skagit County’s people provides the foundation for selecting and taking action to address the most important health issues in the community. The action plan will be completed in 2016.

1. Background

Skagit County: A History of Partnerships for Health

Skagit County community partners have been working to strengthen collaboration among different organizations in support of better outcomes for clients seeking services in Skagit County. One recent effort, dating back to 2011, was *One Community-One Voice* where community leaders had a series of meetings to identify how to strengthen partnerships, increase collaborations, and develop strategies that would improve the health of people living in Skagit County.

Later the *Skagit County Alliance for Health Care Access (SCAHA)* was created to continue the work begun in *One Community-One Voice*. A significant achievement of this group was to enroll people in the new health insurance plans available as part of the Affordable Care Act. This group actively pooled funds to hire a central coordinator for the effort. The Health Insurance drive was remarkably successful, resulting in many thousands of people getting health insurance and decreasing the percent of Skagit County's population who are uninsured from 16% in 2012 to 9% in 2015.

Both these efforts struggled with moving from processing and planning into action. Many members believed that a stronger infrastructure was needed to support implementation and make their work sustainable and successful in the long-term. To provide this support, Skagit County created a Community Health Analyst position to support this work, and in August 2014 David Jefferson was hired for the position to lead the Population Health Trust. In the fall of 2014, the SCAHA board began a transition to form what was to become the Population Health Trust or "The Trust."

Skagit County Population Health Trust

On Feb 27, 2015, the Skagit County Board of Health delivered a proclamation announcing the unveiling of the *Population Health Trust Advisory Committee*. On this same date, a second proclamation was read announcing the initial 23 members of the board. The Population Health Trust is charged with developing a Community Health Improvement Plan that will unite a wide range of organizations and community partners to improve the health of people who live in Skagit County. The work is driven by a variety of changes in the healthcare landscape (such as the Affordable Care Act), statewide policies, and continually shrinking funding sources.

Together, the Community Health Analyst and the Population Health Trust began to address three tasks:

1. *Deciding how to approach the work of creating a Community Health Improvement Plan.* The Trust members wanted to use an established community health assessment and planning model. Members chose the Robert Wood Johnson "County Health Ranking Model" to serve as their guide for the upcoming work. This model was appealing because of its clear documentation and available tools (see Appendix).
2. *Engaging representatives from multi-service sectors.* The intention was to provide diverse perspectives that would contribute to the process and advocate for the needs of different populations.

3. *Planning a community health assessment.* After reviewing existing community health related plans for Skagit County (e.g., plans by Community Action, Skagit Regional Health, Island Hospital, Peace Health, United Way, Skagit Valley College) the Board members chose to implement a comprehensive, county-wide health assessment model, using a variety of existing data and complemented with new data.

This report describes the process and findings of the Community Health Assessment completed by the Population Health Trust and the Skagit County community as a first step in developing a Community Health Improvement Plan. The results of this assessment provide a strong foundation for future selection of Skagit County's health improvement priorities and goals.

2. Community Assessment Process

On February 5, 2015, the Population Health Trust held their first meeting. Their plan was to complete the community health assessment in 2015, and transition to action planning for community health in 2016. The Trust members met for 3 hours each month in 2015 to guide the community health assessment.

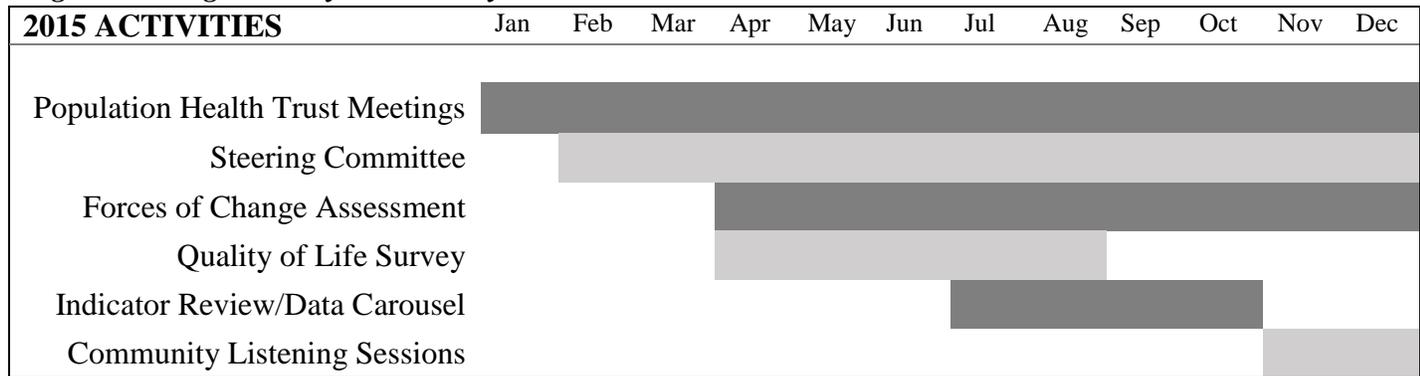
After careful review of the Robert Wood Johnson county health ranking model, the Population Health Trust members decided on three important assessments that would be part of the overall process. The three assessments were:

- A Forces of Change assessment, to identify important factors driving the work of partner organizations;
- A Quality of Life Community Survey, to gather detailed information from community members about their perceptions of factors influencing health; and
- A detailed review of existing Community Health Indicators through a stakeholder Data Carousel.

These assessments were implemented in 2015 (see Figure 1). Methods for each are briefly summarized in the remainder of this section. The next section of this report (section 3) summarizes key findings from each of the assessments.

Findings were reviewed by the community through a series of Community Listening Sessions: facilitated discussions of the findings from the assessments. The findings from this process are described in section 4.

Figure 1: Skagit County Community Health Assessment Timeline



Forces of Change

Every community partner participating on the board and the organization they represent are being influenced by significant “forces of change.” The Trust believed that it would be important for partners to understand the policy, fiscal, workforce development, and goals of other participating organizations so that people would have a better understanding of the direction and goals of the different service sectors. The Trust members established a standard list of questions for each member to answer about their organization. Results were presented and discussed during monthly meetings. Over the course of the year, twelve Forces of Change presentations were completed.

Quality of Life Survey

Another important assessment activity was to gather the opinions of the people who live in Skagit County. The Population Health Trust collaborated with Spokane County, Snohomish Health District, Whatcom County, Island County, and Kitsap County to identify Quality of Life Surveys that had been used in Washington State, as well as to get technical assistance about what might be the best questions and methodology for collecting responses in Skagit County. A survey sub-committee developed a Skagit County-specific Quality of Life survey.

The final survey included 40 questions designed to gather input about living in Skagit County. The Trust determined that a “convenience sample” survey would provide good information, and avoid the cost and time required for a scientifically sampled survey. The survey was available electronically and printed in both English and Spanish. Population Health Trust members distributed the electronic link to their community partners, and asked their community partners to further distribute it to their networks and stakeholders. The paper version was used by community partners to reach those that did not have access to computers. The Upper Skagit Tribe and the Samish Nation made an effort to distribute the survey electronically and provide paper copies at their medical clinics. Skagit County contracted with Community Action and Sea Mar Community Health Centers and their *promotores* (community health workers in the Spanish-speaking community) who took paper copies of the survey into the Latino and Migrant Worker communities. To encourage participation, the first three hundred people who answered the survey online received a \$5 incentive card, and the first one hundred people that completed the paper copy received a \$5 incentive card. We collected more than 1,500 surveys, exceeding our goal of 750.

Health Data Indicator Review and Data Carousel

Skagit County subcontracted with Snohomish Health District’s assessment staff to provide the Trust with a comprehensive list of health indicators that are commonly used to evaluate the health status of populations in Washington State. This robust list included over 150 health indicators, with trends as well as state and national comparisons when available. The Population Health Trust members divided into 4 workgroups, which met 1-2 times over a period of six weeks to review the indicators. These workgroups participated in a data weighting process, to select highest-priority indicators, reducing the final list to 70 indicators.

Skagit County also started a Business Advisory Committee consisting of business leaders with the goal of eliciting their input about what indicators are important to them, and finding ways to engage them in our assessment process. Ms. Anneliese Vance-Sherman from the Washington Economic Services Division of Employment Security provided an extensive list of economic indicators. The Business Advisory Committee members met several times to review economic data and were able to vote on what they thought were the primary data indicators to consider.

Population Health Trust Board members thought it was imperative to involve the public in the analysis of the data indicators. To that end, the Board hired Dr. Maureen Pettitt to facilitate a process called a “Data Carousel” where key community members participate in a “public data analysis process” to select highest-priority indicators. On October 20, 2015, almost ninety people joined a 5-hour event where community members analyzed the data and voted on their priorities. This effort resulted in a final 12 priority indicators.

3. Highlights from Data Review

Population Summary

A demographic summary provided a sense of the Skagit County population in terms of numbers, age, race and ethnicity, economic status, educational attainment and location.

What did the data show?

Skagit County has about 120,000 residents.¹

- 6,000 pre-school age children (5 and under)
- 21,000 school-age children (ages 5-17)
- 71,000 workforce-aged adults (ages 18-64)
- 23,000 seniors (ages 65+)

About 71,000 people (59%) live in city areas, and 49,000 (41%) live in unincorporated areas. The west side of the county is relatively more populated, and the east side is more rural (see Figure 2). Four Tribal communities are included in the county area: Upper Skagit Tribe, Swinomish Indian Tribal Community, Samish Indian Nation and Sauk-Suiattle Indian Tribe.

Figure 2: Map of Skagit County



What did we learn?

The County's population has distinct subgroups, who will each warrant attention in health planning. For example, efforts to improve health will need to support people living in both urban and rural community settings. Many people live in multi-unit housing (about 9,000 of a total 52,000 housing units in the county); thus, any health improvement strategies relating to home environment must relate to both single- and multi-unit housing settings.

¹ April 2015 estimates from the Washington State Office of Financial Management (OFM) <http://www.ofm.wa.gov/pop/april1/default.asp>

Poverty is not uncommon. About 16,000 people (5,000 children) are living below the federal poverty level. Efforts to address health problems must consider poverty as a contributing factor to their health.

Hispanic and indigenous Mexican immigrant communities are important to include, with an estimated 21,000 people in Skagit County. About 6,000 Skagit County residents speak English less than “very well,” thus efforts to understand health risk factors and to address them will need to be inclusive of other languages.

Quality of Life Survey

The Skagit County Quality of Life Survey provided details about factors influencing health in the community, and more information from some community groups who might be excluded or unidentifiable within other data sources. Results were organized by the Robert Wood Johnson County Health Ranking Model categories: Socio Economic & Environment, Physical Environment, Health Care Access & Quality, and Health Behaviors. Results were examined by specific groups that the Trust thought would be significant and relevant for Skagit County: by each Commissioner District, the “working well” (people who are employed, have some college education, have medical insurance, and annual household income of \$50,000 or more) and “struggling families” (adults with school-aged children in the home, who are below the 100% federal poverty threshold, and who said they were unable to access essentials like food, clothes or medications during the past year), young adults (ages 18-29), elders (ages 60 or better), American Indian/Alaska Native, Hispanic and indigenous Mexican communities.

What did the data show?

When asked about their “top 3” changes to improve health and well-being in Skagit County, most groups identified affordable housing, more/better jobs and better access to affordable healthcare as top issues. When asked about their 5 biggest personal day-to-day health challenges, the most commonly identified were:

- Stress (49%)
- Time (44%)
- Income (42%)
- Physical activity (36%)
- Healthy food and employment (22% each)

What did we learn?

Our community groups reported different experiences with common life challenges that can affect health. Although some groups (like the “working well”) were less likely than average to experience challenges, they represent a relatively large portion of the total population, and so are still important to consider in community planning.

- Struggling families and young adults reported more health risk factors than average.
- People living in Skagit County Districts 2 and 3 reported more overall health risk concerns than people in District 1.
- People who identified as indigenous Mexican expressed a number of significant challenges that were different from patterns reported by other groups, especially related

to poverty and to access to healthcare, but were less likely to report others such as current substance abuse and concerns about mental health.

Motivations for healthy behaviors were different among groups. For example, when asked what would help to increase daily fruit and vegetable consumption, the “working well” group said that more time to prepare was an important factor; elders said that more places to buy them was important; and “struggling families,” young adults and indigenous Mexican adults said making them less expensive was important. This suggests that different interventions may be required to effectively reach specific groups of people.

Community Health Indicators Data Carousel

What did the data show?

Multiple data points were reviewed across four domains: Healthcare Access; Health Behaviors; Safety and Support; and Socio-Economic and Physical Environment.

Twelve top indicators of health concerns were chosen from among the different health domains (see Figure 3). These indicators were prioritized based on criteria that included: observation that Skagit County was lagging behind the state, trends were moving in a negative direction, or because large numbers of people were affected.

Notably, many of these health concerns have common root causes – income inequality or poverty, personal education, limited numbers of programs and providers, policies and personal choices. All these were identified as contributors to health concerns.

Figure 3: Skagit County Top 12 Health Issues and Indicators of Community Concern

Top 12 Health Indicators	Skagit County	WA
1. Skagit County has a low rate of complete childhood immunizations. (indicator: % with complete immunizations among children ages 19-35 months)	36%	53%
2. Some women in Skagit County are not receiving sufficient prenatal care during the first trimester of pregnancy. (indicator: % women receiving prenatal care in first trimester)	75%	80%
3. Some Skagit County children and adults are not getting routine and preventive medical care. (indicator: % adults who visited a doctor for routine care in the past year)	58%	60%
4. Many Skagit County adults are either obese or overweight. (indicator: % of adults who are obese or overweight, based on self-reported height and weight)	64%	62%
5. Some Skagit County adults and children do not consume enough fruits and vegetable. (indicator: % adults with very low fruit intake [fewer than 1 fruit per day])	41%	37%
6. Marijuana use is increasing among youth in Skagit County. (indicator: any use of marijuana in the past 30 days among 10 th graders)	21%	18%

7. The rate of Chlamydia among Skagit County’s young women is increasing. (indicator: rate of Chlamydia [sexually transmitted infection] cases per 1,000 women ages 15-24)	3.0	2.7
8. There is too much youth violence in Skagit County. (indicator: % of 8 th graders who were bullied in past month)	31%	28%
9. Too many Skagit County children and youth are depressed or have thought about suicide. (indicator: % of 10 th graders who considered suicide in past year)	21%	21%
10. Too many Skagit County youth have been hurt by an adult in their lifetime. (indicator: % of 10 th graders who say they have ever been hurt on purpose by an adult)	30%	26%
11. Skagit County housing is unaffordable and unavailable for too many Skagit County residents. (indicator: % of households spending 30% or more of their income on housing)	39%	37%
12. Skagit County lacks an adequate number of living wage jobs. (indicator: % of people living in poverty, based on federal poverty guidelines)	16%	14%

What did we learn?

It is difficult to prioritize among multiple important topics. Understanding the root causes, and commonalities among different health concerns, will assist with identifying effective strategies to address the problems.

Forces of Change

The Forces of Change Assessment was designed to help Trust members understand what is occurring or might occur that influences their goals, direction and organizational choices driven by changing internal and external factors. Another purpose was to cross-educate all members about each other’s “book of business” and explore what opportunities and threats exist to collaboratively improving population health.

These assessments were completed by twelve Trust partner organizations during the 2015 year. Six organizations were healthcare service providers, and six were from other diverse sectors serving the public.

What did the data show?

Multiple healthcare agencies mentioned increasing use of electronic medical records, and changing federal laws around healthcare (including the Affordable Care Act) as major current influences on their work. Multiple organizations said other (non-ACA) changes in federal or state laws or performance standards, decreasing resources or increasing costs impact their work.

Some organizations described people as the primary factor shaping their services. Changing community demographics and numbers, and expectations for how people are engaging in their own healthcare are influencing the work of these organizations. Other organizations described guidelines, models or performance measures as shaping their services. Some said they were starting new efforts to prioritize or redesign their work.

The top organizational goals and objectives articulated by different Trust members were aligned with both missions and the sector (e.g., healthcare services vs. public service sector). Many included goals to improve efficiency, and reduce costs. Notably, some organizations framed their goals in terms of the outcome for the community (e.g., “Food Access” or “Keeping people well”) while others framed their goals around the organization’s work, which would contribute to the health outcomes for the community (e.g., “data-driven decision-making” or “increase level of service in the jail by medical professionals”).

What did we learn?

These partners committed to community health include many organizations working in healthcare, but also diverse partners from other sectors that recognize the relationship and the importance of community health to their work. The organizations have largely different affiliations and perceptions of trends in their fields and factors shaping their services.

More community-based goals (e.g., “Keep people well”) may lend themselves better to collaborations, while more detailed and organization-specific goals (e.g., “fair and consistent enforcement of public health laws”) may *contribute* to community-based goals, but do not lend themselves as well to specific collaborations.

In developing a strategic plan for the community, the Board may work together to articulate common community-based goals, and then apply their organization-specific goals alongside others to identify opportunities for partnerships, collaboration or sharing of resources.

4. Community Listening Sessions

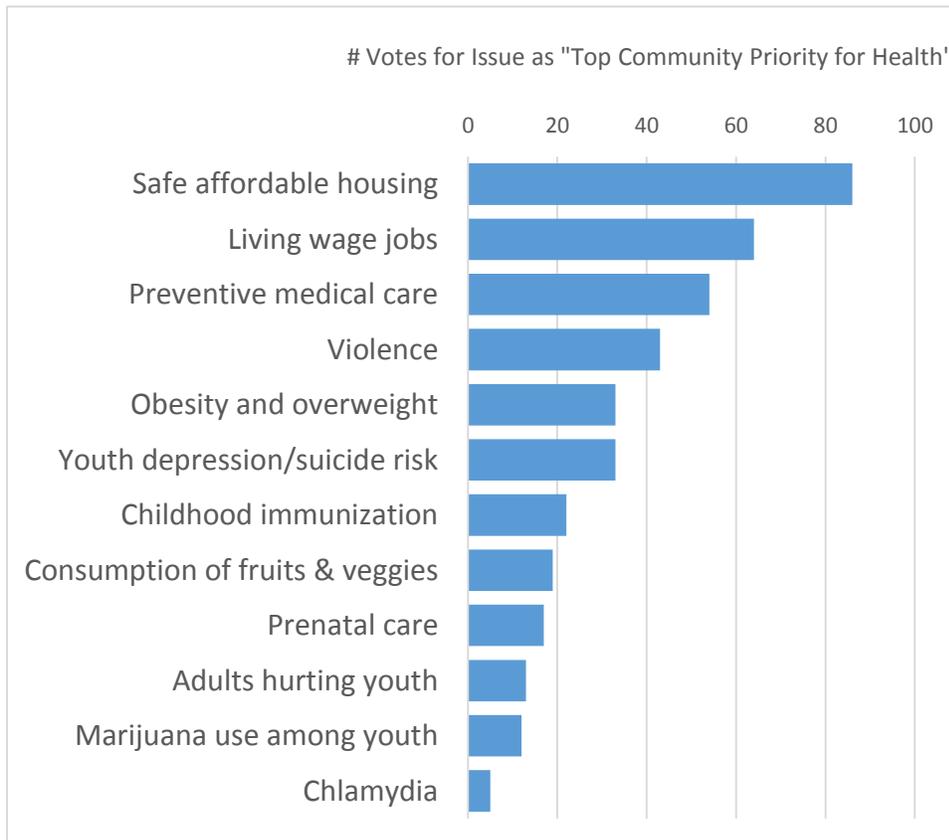
To validate the findings from the prioritization that occurred during the Data Carousel, and to identify any gaps or missed topics, the Trust conducted five “community listening session” forums in Skagit County. During these forums a report summarizing the results of the Quality of Life Survey and the Data Indicators was presented to the community. The summary report was available in both English and Spanish, and also online.

Forums were promoted by all Trust Board members reaching out to their constituents, radio announcements, and web site postings. Nearly 200 people participated in these forums, which took place over a three-week period and took place in Anacortes, Sedro-Woolley, Concrete, and Mount Vernon. In addition, the Skagit County Child and Family Consortium participated in the pilot forum and provided feedback on the results, as well as feedback on the content of the community forum presentations.

During the forums, participants provided feedback during large and small group discussions, and also written comments. Participants

- indicated whether they felt the assessment was thorough,
- offered their perspectives on the health priorities including whether additional data should be considered,
- gave their endorsement for moving forward from assessment to planning phases, and
- voted on their top priorities.

Figure 4: Skagit County Community Listening Sessions – Top Priority Votes



The community participants nearly unanimously endorsed going forward to the planning stage. Among the topics identified in the process, community members chose three topics they identified as “top priority.” Figure 4 shows that the issues of housing and living wage jobs were the highest priorities.

Participants identified several topics they wanted to have taken into consideration, which were not included in previous public review processes. These topics were taken by the Board and matched to findings considered in the Community Assessment, to assure that they were considered in any action planning. The most commonly noted topics, and related information from the Community Assessment data review, included:

- Dental Care
 - Health Indicators Report: Skagit County 10th graders were less likely than 10th graders statewide to say they saw a dentist in the past year (73% vs. 79%).
 - Quality of Life Survey: Struggling families, young adults, indigenous Mexican adults, and people in District 2 were relatively more likely to report barriers to getting dental services they needed (such as services being too expensive, not having insurance, or not having a dental provider).
- Data about Seniors.
 - Health Indicators: Skagit County seniors (ages 65 and older) were similar to seniors statewide for receiving pneumonia vaccinations (73%) and more likely than seniors statewide to have received flu vaccinations (67%).
 - Quality of Life Survey: All results were examined among seniors specifically (ages 60+, 20% of all respondents), and contrast with the general population and people ages 18-59. Seniors identified their biggest challenges as living on a fixed income, social isolation, managing health problems, costs of needed care, and support to live independently. Seniors said that their biggest personal day-to-day health challenges included stress, time, income, physical activity, and health problems.
- Mental Health.
 - Health Indicators: Skagit County has historically had fewer mental health providers per population than statewide, but in recent years this ratio is similar to the state (about 386:1 people:provider ratio). The percentage of Skagit County adults with self-assessed poor mental health (15%), and unmet need for emotional support (23%), were similar to adults statewide. Skagit County youth mental health was also similar to the state, but was identified as a priority in the Community Assessment process.
 - Quality of Life Survey: “Better access to affordable mental health care” was identified as a top recommended change to improve health in Skagit County by the “working well” group and people from District 1. Struggling families were more likely than other groups to report being “extremely stressed” on most days. Adults in Districts 2 and 3 were more likely to report extreme stress than adults in District 1. American Indian/Alaska Native adults were more likely than other groups to report concern about mental health struggles for themselves and their families. Latino and “struggling families” were less likely to say they had social and emotional support in their communities.
- Opiates (prescription pain medication and heroin).
 - Five percent of 10th graders in Skagit County said they had used a painkiller to “get high” in the past month, which is similar to state rates. The percent of 10th graders

- who said they had ever used heroin in their lifetime was slightly higher in Skagit County in comparison to the state (4.5% vs. 3.4%).
- The Board staff investigated additional state and local data sources to better understand the opioid issues in Skagit County. In 2015, 530 Skagit County residents received substance use disorder treatment with heroin dependence listed as their primary concern upon admission.² This was 35% of all dependence treatment in the County, although heroin treatment makes up only 26% of treatment statewide.
 - Healthy Activities
 - Health Indicators: More than half (56%) of Skagit County 10th graders were meeting physical activity recommendations of exercising for an hour at least 5 days per week, vs. 52% of youth statewide.
 - Quality of Life Survey: There were not many differences in satisfaction with community physical activity opportunities, except that people living in District 3 were more likely than people living in other districts to be dissatisfied with all community-based physical activity opportunities.
 - Environment.
 - Health Indicators: Skagit County has better or similar healthy air days, drinking water quality, and rates of enteric diseases compared to the rest of the state.
 - Quality of Life Survey: Struggling families, women, and people living in Districts 2 and 3 were less likely to say they were satisfied with the safety of their parks and of walking alone at night. Young adults and people living in Districts 2 and 3 were more likely to say they were exposed to secondhand smoke in at least one location (public spaces where they are active, work, or their homes).
 - Adverse Childhood Experiences (ACES).
 - Health Indicators: 30% of Skagit County 10th graders (vs. 26% statewide) reported they had ever been hurt on purpose by an adult. There were 952 domestic violence offenses in Skagit County in 2013, and the rate of 8 offenses per 1,000 people is higher than the state rate of 6 per 1,000. This was identified as a high priority during the Community Assessment.
 - Quality of Life Survey: About 31% of Skagit County parents with school-aged children said that “unhealthy or unstable home life” was a top health challenge for high school youth.
 - Transportation.
 - Health Indicators: Thousands of adults leave Skagit County to work outside the area (23,344) and others commute into Skagit County for work (16,993) – meaning more than 40,000 people are regularly moving in and out of the county for work.
 - Quality of Life Survey: About 10% of Skagit County adults said that “more public transportation options” are a needed change for health in the community.

² Washington State Department of Social and Health Services, Division of Behavioral Health and Recovery, System for Communicating Outcomes, Performance and Evaluation (SCOPE-WA).

5. Community Strengths

Based on the multiple sources of data reviewed for this Community Health Assessment, as well as the process, Skagit County demonstrates multiple strengths:

- **Leadership.** The formation of the Population Health Trust, and dedication of resources (time and money) to this process demonstrates the commitment from community leaders to long-term improvements in community health.
- **Committed Partners.** Volunteer Population Health Trust Board member who represents a wide range of Skagit County services sectors pledged to a common set goals and values and committed to accomplishing the work of the Trust.
- **Availability of Data.** The community has multiple existing sources of data to describe health among people of different ages, in different domains, and for a spectrum of health from prevention-related factors and social determinants of health to serious illnesses.
- **Proactive Decision-making vs. Crisis Management.** In reviewing multiple data sources, Skagit County primarily falls “in the middle” – that is, generally not among the best or worst counties in the state. Skagit County has an emerging affordable housing shortage and a rise in opiate use disorders which is a trend being seen in many Washington counties. Both of these items are receiving local and statewide attention and are still in the “emerging action phase.” Otherwise, Skagit County has a relative stable health status which allows partners to focus thoughtfully on where the best opportunities for action exist. It is also an opportunity to address these emerging health concerns or target another priority that is not getting sufficient attention.
- **Positive Directions.** Data suggest that Skagit County people fare better in some health factors, and these may provide insight for health promotion efforts. Indicators where Skagit County is doing “better than average” or moving in a positive direction include:
 - *Improving access to healthcare.* About 9% of the population is uninsured in 2015 vs. 16% in 2012. This may be associated with the implementation of the Affordable Care Act.
 - *Declining unemployment rate.* Like the state, following a sharp increase in unemployment following the recession of the late 2000s, Skagit County’s unemployment rate has fallen, dropping from 13% unemployment in January 2010 to 9% in January 2015.
 - *Better than state average for infant mortality.* Skagit County’s infant mortality rate is 2.1 per 1,000 live births, while Washington State’s is 4.5 per 1,000.
 - *Good air and water quality.* Skagit County had 100% of days with healthy air quality (measured by low particulate matter) in 2013, and 100% of Group A drinking water systems met standards for acceptable levels of nitrates.
 - *Preventive care for seniors.* 67% of Skagit County seniors (ages 65+) received flu shots, compared to 61% statewide.

- *Lower cigarette smoking rates.* Both Skagit County youth and adults are less likely than people statewide to smoke cigarettes (7% vs. 8% among youth, 15% vs. 17% among adults).
- *More active youth.* 56% of Skagit County 10th graders are meeting exercise recommendations of 60+ minutes per day, vs. 52% of youth statewide.
- *Less risky alcohol use among adults.* 13% of Skagit County adults reported recent “binge drinking” (five or more drinks on one occasion), vs. 17% of adults statewide.

6. The Way Forward

After this process of careful, comprehensive review of data to describe the health and health-related factors of Skagit County’s people, the next phase of work is to develop a Community Health Improvement Plan (CHIP). The CHIP is an action plan to address health priorities identified during the assessment. The plan should be completed during 2016.

Strategies for action will be created by a diverse group of community partners, and include shared measures to monitor performance, track progress, and learn what is working well and what is not working.

References

Skagit County Population Health Trust Advisory Committee

<http://www.skagitcounty.net/Departments/PHTAC>

Reports available on the Skagit County Community Health Assessment Reports Tab:

<http://www.skagitcounty.net/Departments/PHTAC/reportsmain.htm>

Skagit County Community Assessment Health Priorities: Report for Community Response. December 2015.

Skagit County Population Demographics Summary, revised March 25, 2016

Population Health Trust Data Indicator Charts – Summary Set with Sub Population Information. Revised April 5, 2016

Population Health Trust Data Indicator Charts – Full Set. Revised April 5, 2016

Skagit County Quality of Life Survey Report, published September 28, 2015

Robert Wood Johnson Foundation.

2015 County Health Rankings Key Findings Report. Published March 25, 2015.

Available at: <http://www.rwjf.org/en/library/research/2015/03/2015-county-health-rankings-key-findings-report.html>

Specific information about the Ranking System and domains for health are available at

<http://www.countyhealthrankings.org/our-approach>

<http://www.countyhealthrankings.org/ranking-methods/ranking-system>



City of
**MOUNT
VERNON**

Appendix B

SEA MAR COMMUNITY HEALTH CENTERS, SKAGIT REACH PROJECT



CAP Update

Skagit REACH Sabrosura Latina

Creating Opportunities for Healthy Living in Skagit County
Creando oportunidades para una vida saludable en Skagit

Created by Sea Mar Skagit REACH Program September
2014



Agenda

- ▶ Status on CAP
 - ▶ Review of goals & objectives
 - ▶ Status update on activities
- ▶ Challenges
- ▶ Key benefits/Lessons learned
- ▶ Sustainability elements
- ▶ The future



Update: CAP status

- ▶ We met all grant deliverables
- ▶ Some activities have achieved elements of sustainability
- ▶ While foundation laid in all activities, some could be further worked on



Our PPO's

▶ Increasing access to healthy food

➤ Increase the number of Latino adults and children in Mount Vernon, Burlington and surrounding agricultural housing sites, with healthy food options that are affordable and easily accessed from 7,000 to 8,000 by September 2014.

▶ Increasing access to physical activity

➤ Increase the number of Latino adults and children in Mount Vernon, Burlington and surrounding agricultural housing with physical activity options from 3,000 to 5,000 by September 2014.



➤ Success

- Removed transportation as barrier for many Latino families in high density Latino neighborhoods
- Rancho Grande increased its sales by 18% over 6 months after initiating produce line

“My experience with the REACH program has been pretty helpfulI got to experience the real necessity for organic fresh produce for the Hispanic community. ... and I got an inside look at the daily activities of a fresh produce wholesaler. The skills that I learned will be transferred to my work place and hopefully help my community stays healthy.....”

Yours truly

Heriberto Esparza



➤ Additional Success

- ▶ Recruited 2nd interested Latino store
- ▶ Trained store owner in product display, inventory and equipment needed in preparation
- ▶ Viva Farms trained store owner on produce preservation and display for maximizing profits. Also shared sourcing contacts.
- ▶ Created step-by-step implementation plan for new stores



Access to Healthy Food

- ▶ AMO 2- Increase # of farmers markets providing access for low-income Latinos from 0 to 2



Activities

- ▶ Work with farmers markets to make more inclusive (for vendors and attendance).
- ▶ Create Latino Day event celebration.
- ▶ Communication plan regarding economic benefits.



DIANGUIS

Arte y Cultura

DIA LATINO EN TU FARMERS MARKET EN MOUNT VERNON



Goals: To attract Latinos to the farmers market by creating a familiar atmosphere similar to street fairs in their homeland. To introduce those on EBT to the economic benefits of shopping with Double-Up Bucks.



Booths



Booths



Artists



Dance Performances



Skagit REACH Staff & Partners



Latin American Crafts Exhibit





“There were ABSOLUTELY more Latinos at market on Saturday. Way more than on a regular market day. I think the event served to introduce a lot of people to the market...”

Farmers Market Coordinator

Additional Quotes

“ farmers markets more than other places, except schools, are places where different ethnic groups and different incomes can come together...and this was pronounced at the Tianguis...”

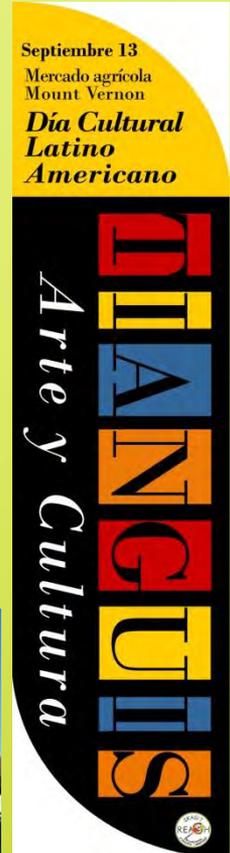
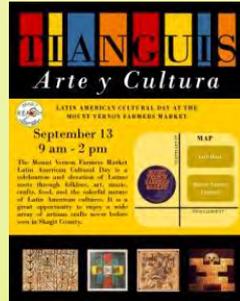
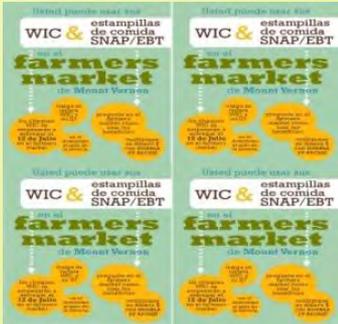
Vendor

“..some regular vendors have said it reminded them of home...”

“..The event was like lightning came and struck the farmer’s market. The culture was like “Wow – in your face.” No way to avoid it...it was a slap in the face for regular customers and it opened the door to new ones... The energy in the air, and the total change in crowd demographics... the event served to introduce a lot of new people to the market.... “

Farmers Market Coordinator

➤ Created & disseminated posters, flyers and banners



▶ Created trilingual PSA's



- ▶ **Tianguis & Double-Up Bucks 9/6-13/14**
 - ▶ 20 times during the highest listening Latino audience on Saturday and Sunday mornings, and weekday mornings.
- ▶ **Double-Up Bucks 9/14-30/14**



Access to Healthy Food

- ▶ AMO3 - Increase # of food banks with expanded access to Spanish and indigenous language-speaking Latinos from 0 to 2



Activities

- Reduce communication barriers
- Establish Latino Day to help Latinos familiarize with process



Successes

- Hayton Farms weekly donation



Barriers

- Limited success seeking donations
- Limited staff availability for berry pick-up or to receive donated goods

Access to Healthy Food

- ▶ AMO 4 - Increase # of school districts that incorporate policies and practices expanding healthy food access to Spanish & Indigenous speaking Latinos from 0 to 2



Activities

- ▶ Work with schools to identify ways to expand access for indigenous
- ▶ Explore barriers with parents
- ▶ Adopt policies regarding bilingual materials

What we did

- ▶ Created & disseminated Eng/Spanish flyer with free meal sites around MV/B
- ▶ Translated award & notification letters regarding eligibility
- ▶ Revised & translated application cover letter
 - ▶ Added language addressing parents concern
- ▶ Created bilingual 1/2 page flyer

¡Aprovecha el acceso que tienen tus hijos de obtener comida GRATIS durante el...
...No pierdas la oportunidad!



Ciudad	Lugar de entrega de la comida	Días y Horario
Burlington	Lucile Lindinger Elementary 631 S. Bangs St. Burlington WA 98233 360-331-9277	Atiende: 02/20/14 - 02/22/14 Lunes a Viernes Dejamos: 8:30 AM a 9:30 AM Atendemos: 11:30 AM a 12:15 PM
Burlington	St. Charles Catholic Church (Iglesia de San Carlos) 655 Piperton Road Burlington WA 98229 360-378-6020	Atiende: 01/16/14 - 02/20/14 Lunes a Viernes Atendemos: 12:00 PM a 12:30 PM Cena: 4:00 PM a 6:00 PM Reserva de la cena: 1:00 PM a 2:30 PM
Burlington	West View Elementary 352 W. Victoria Ave. Burlington WA 98233	Atiende: 02/20/14 - 02/22/14 Lunes a Viernes Dejamos: 8:30 AM a 9:30 AM Atendemos: 11:30 AM a 12:15 PM
Burlington	Stephany Ridge Apartments 20345 Sanchez Lane Burlington WA 98229 360-322-8999	Atiende: 01/16/14 - 02/20/14 Lunes a Viernes Atendemos: 12:00 PM a 12:30 PM Reserva de la cena: 1:00 PM a 2:30 PM
Mount Vernon	Kathleen Crane HighSchool Station (L4 Parking) 2620 Kaskhan Avenue Mount Vernon WA 98273 360-426-8140	Atiende: 01/16/14 - 01/20/14 Lunes a Viernes Atendemos: 11:30 AM a 1:00 PM
Mount Vernon	18th Mountain Elementary 1514 S. Lafayette Rd. Mount Vernon WA 98276 360-426-8140	Atiende: 1/16/14 - 1/17/14 Lunes a Jueves Dejamos: 8:30 AM a 9:30 AM Atendemos: 12:30 PM a 1:00 PM
Mount Vernon	St. Pauls Episcopal Church 415 S. 18th Street Mount Vernon WA 98276	Atiende: 1/21/14 - 1/23/14 Lunes a Viernes Dejamos: 8:30 AM a 9:30 AM Atendemos: 12:30 PM a 1:00 PM
Mount Vernon	Mount Vernon High School 234 N. 8th Street Mount Vernon WA 98273 360-426-8140	Atiende: 1/23/14 - 01/25/14 Lunes a Viernes Dejamos: 8:00 AM a 9:00 AM Atendemos: 10:30 AM a 12:30 PM

don't be afraid to fill out the application completely!



The information on this form will **ONLY** be used for your benefit, so please fill out the entire application.



¡No sienta temor de llenar completamente esta aplicación!



La información de esta aplicación será usada **ÚNICAMENTE** en su beneficio. Por favor llénala completamente.



Access to Healthy Food

▶ Successes:

- ▶ High quality translations eliminated parent confusion regarding process & eligibility.
- ▶ MV working closely with migrant/ bilingual advocates regarding flyers and cover letters.

▶ Barriers

- ▶ Long delay regarding Community Eligibility Provision decision
- ▶ No Burlington food services director
- ▶ New Burlington staff said no barriers
- ▶ Both school districts lack bilingual policies but always standard practice



Access to Physical Activity

- ▶ AMOI - Increase # of affordable, accessible, culturally appropriate PA settings for Latinos from 2 to 3



Activities

- Identify & enhance communication mediums
- Open-street event
- Neighborhood brigade pilot projects
- Meeting with PD regarding safer neighborhoods
- Meetings with camp owners and MSFW housing sites regarding appropriate spaces



Access to Physical Activity

Successes

- FG revealed ideal methods for communication (radio & face-to-face).
- Created 2 new spaces for PA (SM MSFW health fairs, Villa Santa Maria)
- Mayor and MV Parks & Recreation very interested in “ciclovia”
- Sakuma initiated soccer games and early morning work-outs.
- SM programs & staff can continue to expand PA spaces

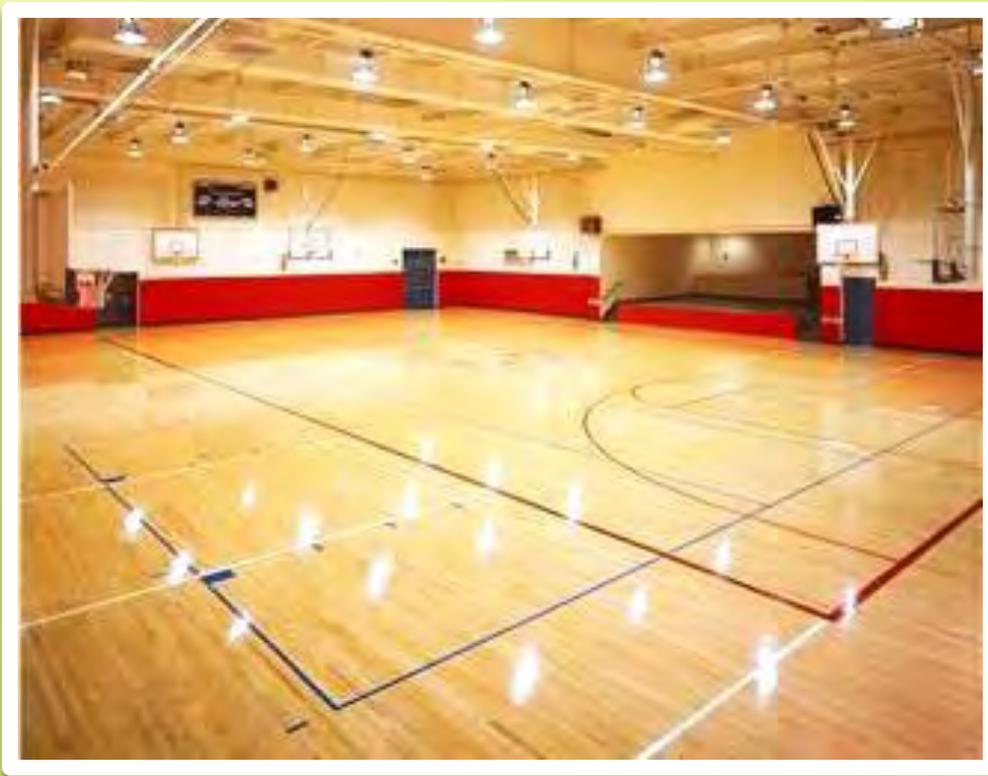
Barriers

- Not very many participants of the weekly zumba activity; but they are devoted.
- A few other PA options didn't work out because of lack of volunteers
- While crime down, perception of safety is widespread concern
- City of Burlington not engaged in project



Access to Physical Activity

- ▶ AMO 2 -Increase # of indoor recreational facilities that are accessible and safe for Latinos from 0 to 2



Activities

- ▶ Identify non-traditional and traditional locations for PA
- ▶ Meet with recreation facilities to expand access



Access to Physical Activity

Successes

- Found five non-traditional places for indoor activity & created one
- MV Parks and Recreation been working with the YMCA to expand access.

YMCA –will offer open gym twice a month and an exercise class once a month. All free and open to the public.

Buscando maneras divertidas y gratuitas o de bajo costo para mantenerte activo ?



ZUMBA!

Villa Santa Maria - 3700 E College Way Mount Vernon
Jueves 4 pm / Actividad y cuidado de niños.
GRATIS!

Iglesia Christ the King - 988 Fountain - Burlington
Lunes, Miércoles, Jueves y Viernes - 9 am y Martes - 7 am
Actividad **GRATIS!** - Cuidado de niños \$2

Cascade Mall Local 201-Burlington
Lunes, Miércoles y Viernes 9:00 am, 5:30 pm; Martes 6:00pm y Jueves 5:30 pm y 6:30 pm.
Actividad \$7 adultos, \$3 estudiantes - Cuidado de niños **GRATIS!**

Iglesia Crossroads - 351 Pease Rd. Burlington
Lunes, Miércoles y Viernes - 8:30 am
Actividad a partir de \$1 como donación - No hay cuidado de niños pero los puede llevar.

Iglesia Bautista Calvary 324 Avon Ave Burlington
Lunes a Viernes 9:30am y Sábados 9:00am.
Actividad \$5/clase o \$35/mes
Cuidado de niños \$3 y adicional \$2

VIAJES Y EXCURSIONES GRATIS!

niños jóvenes
Kulshan Youth Program - La casita azul
Actividad y comida **GRATIS!**
- Se requiere permiso de los padres.

Todos son bienvenidos!

Access to Physical Activity

- ▶ AMO3 - Increase # of parks and trails frequented by Latinos on average from two to three



Activities

- Work with MV Parks & Recreation to make surveys, evaluations more inclusive of Latinos
- Work with MV Parks & Recreation to make park-focused activities more accessible.
- Create & implement communications regarding park safety



Access to Physical Activity

Successes

- Our efforts helped MV P&R have highest participation in Comp Plan process.
- Helped foster relations between MV P&R and Latino community
- Worked with MV P&R to craft messages to encourage use of parks & trails
 - Created & disseminated new flyers and posters.
 - Trilingual PSA's (91.7FM KSVR 9/14-30/2014)



Access to Physical Activity

Successes

- MV P&R and MV Mayor have poster/flyer templates so they can modify and re-use.
- MV Mayor interested in exhibiting them on TV 26.
- Our trilingual PSA's are reaching many people previously not reached.

Barriers

- Delay in Comp Plan approval prevented us & P&R from moving other possible activities forward
- Radio station manager put a stop to free radio time



Access to Physical Activity

- ▶ Increase # of accessible and safe settings Latino children use for PA from two to three



Activities

- ▶ Non-traditional spaces for recreation
- ▶ Meetings regarding non-competitive & specialized sport activities at housing sites and farm camps



Access to Physical Activity

Successes

- Identified/fostered 2 locations in Mt Vernon for free PA
- Created several new locations (FB, SM Health Fairs, FW housing sites during summer)
- New SM staff member focused on expanding this

Barriers

- Several efforts we thought were going to work but didn't.
- MSFW families more dispersed this year so couldn't access at one camp location.



Challenges

- ▶ Latinos difficult to motivate or to engage
- ▶ Time & resources



Key Benefits/ Lessons Learned

- ▶ Gained better understanding of local population
- ▶ Trust-building takes time
- ▶ Outreach can't be too far in advance
- ▶ Communication:
 - ▶ Colorful, dynamic and striking visual communication is most effective
 - ▶ High quality translations essential
 - ▶ Social networks (ie., FB, web, twitter, instagram) work for youth; radio & TV for adults.
 - ▶ Face-to-face communications among neighbors and friends most effective for adults
- ▶ Helped Sea Mar and other agencies better serve clients



Sustainability elements

- ▶ 2nd store initiating produce & have implementation plan for any future stores.
- ▶ Some Latino vendors from Tianguis interested in continuing to sell at FM and FM may be interested in holding yearly event. FM very interested in having one or a few Latino board members.
- ▶ Templates for bilingual materials for school meals being used and staff being trained to use them.
- ▶ Various PA activities –
 - Weekly Zumba
 - Sea Mar's migrant camp health fairs
 - FB providing PA during food distribution days and during summer at FW housing sites throughout the summer.
 - Also new staff member partially focused on finding and leading PA activities for children and adults.
- ▶ MV P&R & City continue to work to find ways to expand access



The Future

▶ You decide

Community Leadership Team

- ▶ Identify community priorities
- ▶ Guide project objectives and activities
- ▶ Offer expertise
- ▶ Lead

Multi-sectoral



Promotores

Non-traditional partners

Community Leadership Team (as of 3/17/14)

Name	Organization
Debra Lancaster	United Way of Skagit County
Larry Otsu/ Mayor Jill Boudreau	Mount Vernon Parks & Recreation
Edwin Schaffer/ Leigh Newman	Vine Farms
Dave Hedlin / Kai Ottesen	Hedlin Family Farm
Barbara Guillen / Carlota Gonzalez	Inspire Development Center
Lorique Lopez	Sea Mar MSFV Promotores Program
Pyan Salama	Salama Bros Farms
Peter Browning	Browning Solutions
Hernberto Isgarza	El Rancho Grande
Gloria Lemos Mendez/ Edith Sanchez Cano	Sea Mar REACH Promotores Program
Andru Morales	Community Member
Juan Jose Munozado	One America / KSVR Community radio show host
Miguel Angel Galan	KSVR Sports radio show host
Brian Adams	Skagit County Parks and Recreation
Guillermo Ramos/ Melanie Corey	Housing Authority of Skagit County
Liz McHiett Crowl	Skagit Healthy Communities
Jose Ortiz	St.Charles Church
Bill Aslett	Burlington City Council Member
Maura Vasquez Ramirez	Sea Mar MSFV Promotores Program
Dr. Connie Davis	Skagit Regional Health



City of
**MOUNT
VERNON**

Appendix C

APA'S HEALTHY PLAN MAKING



HEALTHY PLAN MAKING

Integrating Health Into the Comprehensive Planning Process:
An analysis of seven case studies and recommendations for change

Anna Ricklin
Nick Kushner



American Planning Association

Making Great Communities Happen

The American Planning Association provides leadership in the development of vital communities by advocating excellence in community planning, promoting education and citizen empowerment, and providing the tools and support necessary to effect positive change.

Officers of APA

William Anderson, FAICP | President
Cynthia A. Bowen, AICP | Secretary/Treasurer
W. Paul Farmer, FAICP | Chief Executive Officer
Ann Simms | Chief Operating Officer

APA Research Staff

David Rouse, AICP | Director of Research
Anna Ricklin | Manager, Planning and
Community Health Research Center
Nick Kushner | Research Assistant

APA Offices

National Headquarters
1030 15th Street, NW
Suite 750 West
Washington, DC 20005-1503
Telephone 202.872.0611

Chicago Office
205 N. Michigan Avenue
Suite 1200
Chicago, IL 60601-5927
Telephone 312.431.910

*Cover image: The Riverwalk in Grand Rapids, Michigan, one of the seven case studies profiled in this report.
(Credit: City of Grand Rapids/Planning Department)*

TABLE OF CONTENTS

Acknowledgments	4	Recommendations and Action Steps	
Introduction		Champions	33
Planning and Public Health	5	Context and Timing.....	34
Role of the American Planning Association	5	Outreach	34
Project Purpose and Background		Health Priorities.....	35
Purpose	7	Data	35
Project Background	7	Collaboration	36
Methods		Funding.....	37
Plan Selection	10	Implementation	38
Map showing seven jurisdictions studied in this report.....	10	Monitoring and Evaluation.....	39
Outreach and Interviews.....	12	Public Health in Planning Process Model.....	39
Findings and Analysis		Appendices	
Introduction.....	12	Appendix 1. Community Profiles: Case Studies of the Seven	
Champions	21	Jurisdictions	40
Context and Timing.....	21	Appendix 2. The Plans.....	40
Outreach	22	Comprehensive Plans	40
Health Priorities.....	24	Sustainability Plan	40
Data.....	24	REFERENCES	40
Collaboration.....	25		
Funding.....	27		
Implementation	29		
Monitoring and Evaluation.....	30		
Conclusion: Strengths and Areas for Improvement.....	31		
Strengths.....	32		
Areas for Improvement.....	32		

ACKNOWLEDGMENTS

This report was developed under the auspices of the Planning and Community Health Research Center, one of APA's National Centers for Planning. The Center engages in research, policy, outreach, and education to advance healthy communities through planning. For more information, visit www.planning.org/nationalcenters/health. APA's National Centers for Planning conduct policy-relevant research and education involving community health, natural and man-made hazards, and green communities. For more details, visit www.planning.org/nationalcenters.

Funding for this report was provided by the Centers for Disease Control and Prevention.

This report was designed and authored by Anna Ricklin, manager of APA's Planning and Community Health Research Center. She also served as the project manager. Nick Kushner, research assistant, assisted with the crafting of the report.

Development of the Healthy Planning report involved numerous individuals, including advisory committee members and faculty and students of Cornell University's City and Regional Planning Program. All of their efforts are greatly appreciated.

Advisory Committee

At the start of this phase of the project, PCH convened an advisory committee to guide the development of criteria, the interview protocol, and general research process. A representative group of experts in the fields of urban planning, public health policy, community development, and qualitative research methods were consulted and involved during each step of the project. The advisory committee provided feedback through routine conference calls and e-mail correspondence.

Ann Forsyth | Harvard University

Jane Henrici | Institute for Women's Policy Research and
George Washington University

Daniel A. Rodriguez, AICP | University of North Carolina at
Chapel Hill

Dee Merriam | Centers for Disease Control and Prevention

*Meadowood Regional Park, Baltimore County, Maryland. The path pictured has been marked with a one-mile route to help visitors gauge distance traveled.
(Credit: Baltimore County Department of Planning)*



INTRODUCTION

Planning and Public Health

Planning in the United States originated with a public health purpose. Planning was rooted in the need to reduce congestion, improve public health, and support social reform in housing and sanitation. Rapid urbanization resulted in overcrowded and often poorly constructed housing, noxious industrial and manufacturing uses, new levels of human and animal waste, and intensified outbreaks of infectious diseases. The planning and public health professions were joined by a shared focus on urban reform and a common goal to prevent outbreaks of infectious disease. To assist in addressing the issues that resulted from rapid urbanization, the federal government created a series of policies related to zoning, housing, and transportation. These policies have had lasting impacts on the ways in which we develop the built environment.

Over time, however, the professions began to diverge. Rather than overtly addressing issues related to health and safety, government planners' attention focused more on land use and transportation. In contrast, public health professionals took the lead on addressing health and safety concerns (ARHF 2006).

After the turn of the 20th century, American cities began to see the need for local development and growth plans. The first comprehensive city plan, the Plan of Chicago, was completed in 1909. Since this time, the comprehensive plan has commonly served as the guiding document for decision making about the built and natural environment. It has the legal authority to act as the vehicle for guiding community development, the scope to cover the necessary functions and facilities, and the history of practice to inspire public acceptance of its policies. It has the advantage of being able to integrate long- and short-range perspectives and to coordinate other policies, plans, and programs into a single accessible document (Godschalk and Anderson 2012).

The issues facing cities and counties, and their neighborhoods and communities, continue to change and become more complex and, at the same time, bring the planning profession back to its roots in promoting public health. As planning has shifted toward sustainability, public health has been identified as a core element of communities that thrive, so cities have begun to integrate health into their comprehensive plans. In addition, the sustainability plan, a new cast of plan that takes a holistic view of natural systems and the human activities affecting them, seems well suited to focus on public health as key component of its policies.



A woman at a community garden in Philadelphia. (Credit: City of Philadelphia/ Mayor's Office of Sustainability)

Today, as public health concerns increasingly center on chronic disease and safety, specialists and city planners realize they cannot afford to operate in isolation any longer. Decisions that leaders have made regarding land use, urban design, and transportation have impacted local air quality, water quality and supply, traffic safety, physical activity, and exposure to contaminated industrial sites (i.e., brownfields). These decisions are linked to some of the most intractable public health problems, including adult and childhood obesity, inactivity, cancer, respiratory problems, and environmental justice.

Role of the American Planning Association

As the premier nonprofit education and research education organization devoted to urban, suburban, regional, and rural planning, the American Planning Association (APA) reaches frontline professionals and key decision makers through serial publications, research monographs, online resources, and distance and face-to-face training. With around 40,000 members and established productive relationships with numerous academic, nonprofit, and public institutions, APA is connected to the innovative thinking and practical realities of the planning profession. Within APA, the Planning and Community Health Research Center (PCH) is dedicated to helping planners, health professionals, and citizens create healthier communities and shape better places for future generations.

Working with an extensive network of practitioners, researchers, and partner institutions in the planning and health fields, the mission of PCH is to advance a program of research, outreach, education, and policy for integrating community health issues into local and regional planning practices. Improving the built environment in ways that promote active living, healthy eating, social and mental health, and safe environmental conditions, among others, benefits the health of an entire community. Planning is the first step toward reaching such benefits.

Given such a leading role in the field of planning, APA has taken responsibility to further the reunification of planning with public health. In addition to PCH, APA created a Sustaining Places Task Force in 2010. This task force identified eight best-practice principles for sustaining places, three of which directly relate to health: a Livable Built Environment, Interwoven Equity, and a Healthy Community. The Best Practice Principles for Sustaining Places outline the ways in which these tenets can be upheld through the comprehensive planning process (Godschalk and Anderson 2012). It is APA's hope that such guidelines inform the making of plans moving forward, and that health and planning professionals continue to build collaborative relationships. As planners have a stronger understanding of their role in shaping public health outcomes—along with health officials, political leaders, nongovernmental organizations, as well as individuals—they can contribute to creating built environments that support healthy living throughout the lifetime.

PROJECT PURPOSE AND BACKGROUND

Purpose

Considering the impact of comprehensive planning, including the new generation of sustainability plans, on social, economic and environmental conditions, there is a need to explore the ways in which jurisdictions are beginning to include public health goals and objectives as part of the comprehensive planning process. The purpose of this multiphase study is to set a framework and identify tools and strategies for integrating public health-related goals and policies into the plan-making process and identify successful mechanisms for implementing those goals. To date, some research has been done that evaluates the extent to which public health has been addressed in comprehensive plans (ChangeLab 2009), but there has been little work to assess if such policies were supported by implementation mechanisms, indicators, other benchmarks for success such as timelines or funding. This current report offers an in-depth, qualitative analysis of seven jurisdictions that have incorporated public health goals, objectives, and

policies into their comprehensive or sustainability plan in order to understand both how those goals entered the plan and how some of them have been implemented since plan adoption. Through such analysis, APA seeks to identify local planning responses to important health issues and how comprehensive and sustainability planning strategies can promote long-term community health.

This study is the first to provide an in-depth, qualitative case study analysis of how public health became a part of the planning process. Prior studies evaluated plans based on the policy language included in them, but did not conduct the qualitative research necessary to provide context and background on what led to collaboration, strong policy making, and successful implementation.

Snowball sampling, where one person leads you to another, was used to arrange interviews. This led to a different compilation of department representatives interviewed in each jurisdiction. Initial conversations were always held with the planning department, but subsequent interviews differed based on the recommendations of these initial respondents. While this study attempted to provide a range of jurisdiction sizes and types, every jurisdiction has a unique historical background and context for health and planning to come together. Thus all recommendations offered may not be feasible for every jurisdiction. Instead, the recommendations offer a menu of potential strategies. However, since this study relied on personal interviews, the potential bias of respondents should be kept in mind. In cases discussing health priorities, for example, respondents could have mentioned elements that came to mind quickly, or where implementation has been successful. By doing so, they could have omitted additional elements that were original priorities but have been difficult to implement.

Project Background

APA's PCH has been conducting a multiphase research study to identify, evaluate, and analyze the plan-making processes and health goals, objectives, and policies of local comprehensive and sustainability plans developed and adopted by cities and counties across the United States.

In the first phase of the project, APA developed a national, web-based survey targeting planning directors and other local planning department staff engaged in long-range planning at the local government level. Below is a brief summary of findings from a total of nearly 900 complete surveys received in 2010 from local governments, large and small, across the United States:

- Approximately 31 percent of 845 respondents reported that their

jurisdiction's officially adopted comprehensive plan explicitly addresses public health, while approximately 36 percent of 140 respondents reported that their jurisdiction's officially adopted sustainability plan explicitly addresses public health.

- The top 10 most cited public health topics in the identified comprehensive plans include: recreation, public safety, clean water, active transportation, clean air, emergency preparedness, active living, physical activity, environmental health, and aging.
- The top 10 most cited public health topics in the identified sustainability plans include: active transportation, clean air, clean water, climate change, active living, physical activity, recreation, environmental health, food access, and public safety.
- Of the plans that did include health, there was variation in how it was incorporated: some local governments included a standalone, voluntary health element in the comprehensive plan, while others incorporated health-related goals and policies into existing mandatory elements.

In the second phase of research, PCH consulted existing model checklists or standards of health to identify common elements and developed a detailed evaluation tool that was used to evaluate 19 comprehensive and three sustainability plans from cities and counties across the United States. Health topics and subareas were derived from current literature and the expert opinion of PCH staff and the Advisory Committee. Plans were assessed on the extent to which they included goals, policies, implementation mechanisms, data, and terminology related to health. The strength of goals, policies, and implementation mechanisms was determined by evaluating whether timelines, specific metrics, and necessary sources of funding had been identified as well as whether clear roles and responsibilities had been defined. The report, published in 2012, also presented examples of policies that promote public health from the 22 evaluated plans. Below is a summary of topics included in the evaluation tool, and some of the main findings.

Plan Strengths

The majority of the 22 evaluated plans included goals and language to promote sustainability and improve conditions that could lead to public health benefits. The inclusion of such goals indicated an intention and awareness of the connections among planning, the built environment, and public health impacts.

1. Active Living was strongest across all the plans and covered in one or more of the following elements: Parks & Open Space, Transportation/Circulation, Urban Design, or Health/Healthy Communities.

TABLE 1. SUMMARY OF HEALTH TOPICS	
1. ACTIVE LIVING	
• Active Transport	
• Recreation	
• Injury	
2. EMERGENCY PREPAREDNESS	
• Climate Change	
• Natural and Human-caused Disasters	
• Infectious Disease	
3. ENVIRONMENTAL HEALTH	
• Air Quality	
• Water Quality	
• Brownfields	
4. FOOD & NUTRITION	
• Access to Food and Healthy Food Options	
• Water	
• Land Use	
5. HEALTH & HUMAN SERVICES	
• Accessibility to Health & Human Services	
• Aging	
6. SOCIAL COHESION & MENTAL HEALTH	
• Housing Quality	
• Green & Open Space	
• Noise	
• Public Safety / Security	
BROAD ISSUES	
• Substantive Issues: Vision Statement, Guiding Principles, and Background data	
• Procedural Issues	

2. Environmental Health was the second most covered topic, particularly in response to questions about water and tree planting.
 3. When Emergency Preparedness policies were included, they tended to be strong and specific, with implementation mechanisms, as in the case of North Miami's plans for hurricane response and recovery.
 4. Likewise, when plans did address food issues, they did so relatively comprehensively and with attention to equity and access for vulnerable populations.
 5. The plans which had a stand-alone Public Health Element did emphasize health to a greater extent than those that did not, even if that health element was simply a collection of public health-oriented goals from other sections.
 6. Most plans were written in an easy-to-follow format.
- and Human Services and Social Cohesion and Mental Health.
 2. Most plans did not use imagery, particularly maps, to convey information about the distribution of resources or other community assets.
 3. Even plans with strong public health-oriented policies did not use public health data (e.g. crash or injury rates; chronic disease rates; crime) or include information on the current distribution and accessibility of services such as clinical, grocery, or transit services.
 4. Similarly, even plans with strong public health-oriented policies did not identify metrics by which to measure/track success for goals and policies.
 5. Most plans lacked implementation strategies including benchmarks, responsible parties, timelines, etc. which will make it difficult to measure progress.

Areas for Improvement

Broadly, there was a lack of explicit discussion about how the built environment can affect a range of public health factors, even among plans that had a significant number of policies that promote health. Additionally, great variation within the plans meant that even in documents that used strong language for some public health-related topics, they used weak implementation language such as "consider" or "encourage" for others. Some plans used such weak language throughout.

1. Most plans had weak coverage of Food and Nutrition and Emergency Preparedness, and very weak coverage of Health

Final reports from the first two phases of this research can be accessed and downloaded from the PCH website: www.planning.org/research/publichealth.

The third and final phase of this research analyzes how public health goals and objectives became a part of the planning process for seven of the previously evaluated plans and how these goals and objectives are being implemented in their respective jurisdictions. Extensive, in-depth interviews were conducted with key government officials and nongovernment partners heavily involved in the planning process or implementation efforts of the selected plans.



Children and adults play with a parachute at a Healthy Chino community event. (Credit: City of Chino, California/Healthy Chino)

METHODS

Plan Selection

From the pool of 22 plans evaluated for the previous report, APA assessed which plans represented different geographies and the best coverage of public health goals and policies in each category. APA then reached out to the planning directors from 10 different jurisdictions with a detailed letter explaining the purpose and history of the project, inviting them to participate in case study research. Positive responses were received from seven, which then participated in the present study.

As can be seen from the map below and Table 2 on the next page, the six cities and one county not only cover the U.S. Census regions, they also represent diversity in size and demographics.

Outreach and Interviews

Following initial outreach, APA followed up with personal phone calls and emails. After each planning director, or their

designee, agreed to participate in the study, APA scheduled initial interviews with a member or members of the planning department. Interview questions focused on the genesis of including health in the plan, who was involved in plan creation, and what goals and policies have received priority attention since the plan was adopted. Respondents were also asked about how the implementation of health goals has been or will be funded, and if any changes to city or county legislation have been made as a result of the plan.

At the completion of each interview we asked if there were any other people we should talk to about health in the plan and if so, obtained introductions to those individuals. Through this method we were able to speak to respondents that included representatives from planning, health, foundations, nonprofit organizations, and hospitals. We spoke with a total of 31 respondents over the course of 24 interviews in seven jurisdictions between January and March 2013. We then transcribed and analyzed the qualitative data, in consultation with our advisory committee.

SEVEN JURISDICTIONS STUDIED IN THIS REPORT

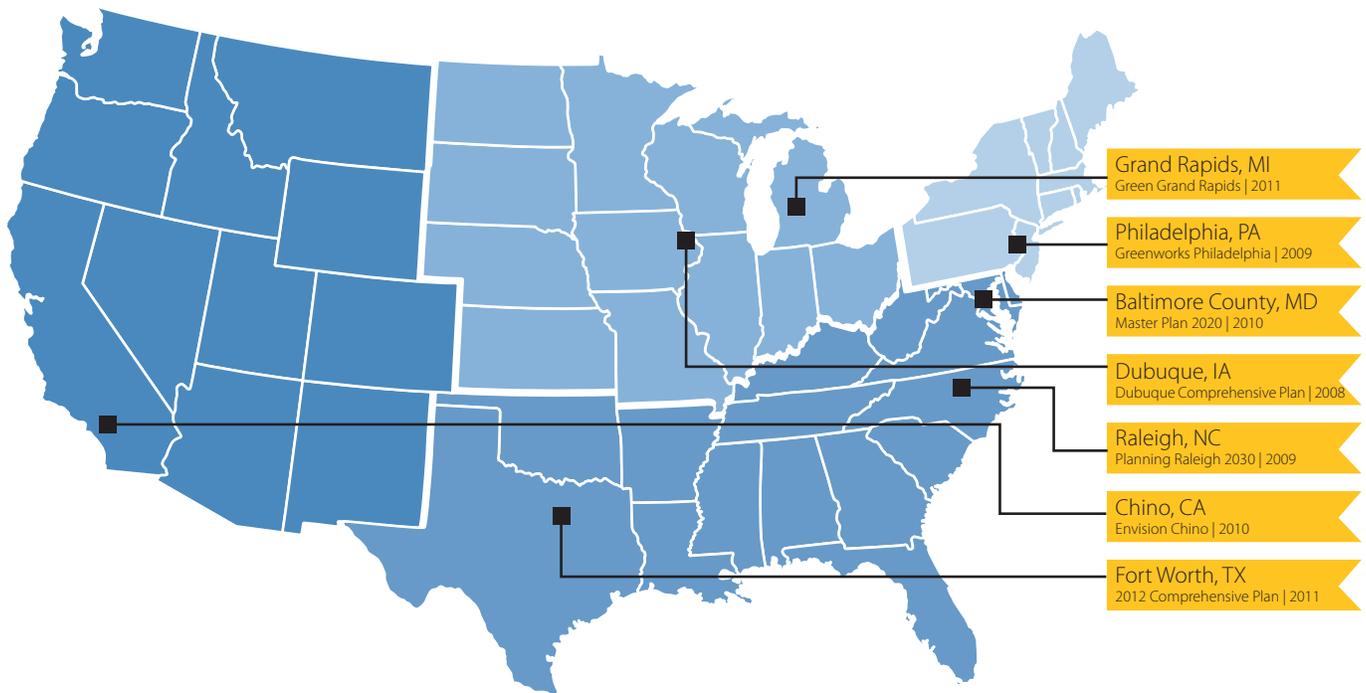


TABLE 2. CASE STUDY SITES WITH BASIC DEMOGRAPHIC DATA

Jurisdiction	Plan Title	Year Adopted	Population	Percent White	Percent Individuals Below Poverty Line	Percent High School Graduate or Higher	Percent Carpooled to Work	Percent Public Transit to Work	Percent Walked to Work	Percent Receiving SNAP Benefits
Baltimore County, Md.	Master Plan 2020	2010	802,487	63.4	8.2	89.2	10.1	4.2	2.3	6.2
Chino, Calif.	Envision Chino	2010	78,050	27.3	7.4	76.4	11	1.2	1	4.3
Dubuque, Iowa	Dubuque Comprehensive Plan	2008	57,679	91.1	11.8	90	8	1.4	6.3	10.2
Fort Worth, Tex.	2012 Comprehensive Plan	2011	724,699	42.3	18.1	79	11.3	1.2	1.1	11.2
Grand Rapids, Mich.	Green Grand Rapids	2011	189,853	57.8	25.5	82.7	11.1	3.4	2.9	22.7
Philadelphia	*Greenworks Philadelphia	2009	1,514,456	37.1	25.6	80	9.2	25.9	8.6	19.7
Raleigh, N.C.	Planning Raleigh 2030	2009	395,091	53.7	15.1	90.7	10	2.1	2.3	7.3

* Sustainability Plan

All data derived from U.S. Census Bureau's 2007–2011 American Community Survey five-year estimates

Workers in a community garden in Chino, California. (Credit: City of Chino/HealthyChino)



FINDINGS AND ANALYSIS

Introduction

Certain recurring factors emerged as key elements in both the incorporation and implementation of public health goals and objectives in comprehensive plans. These factors were categorized as:

1. Champions
2. Context and Timing
3. Outreach
4. Health Priorities
5. Data
6. Collaboration
7. Funding
8. Implementation
9. Monitoring and Evaluation

For the most part, these categories follow a chronological timeline, tracking the narrative of how public health objectives were incorporated and implemented through the selected plans. At the same time, categories overlap. For example, some jurisdictions received grant funding and special donations in the initial stages of plan preparation and this influenced the inclusion of public health from the start. In other cases, funding was limited almost exclusively to carrying out the public health objectives of the plan. Similarly, collaboration was something that some jurisdictions focused more on in the plan-writing stage while other jurisdictions focused on collaboration during implementation. Interview results for each community are summarized in Tables I and II, followed by an analysis of the patterns that emerged in the nine categories.

SUMMARY TABLE I. INCORPORATING HEALTH INTO COMPREHENSIVE PLANNING AND IMPLEMENTATION					
Jurisdiction	Champions	Context and Timing	Outreach	Health Priorities	Data
Baltimore County*	County health director; state government, planning department, parks and recreation, department of environmental protection, NeighborSpace (nonprofit land trust)	<ul style="list-style-type: none"> • State policy requires smart growth planning and significant land preservation • Long history of public health and planning working together 	<ul style="list-style-type: none"> • Internal framing of vocabulary • Nongovernment partners assisted with outreach • Expert presenters brought in to present to community members, developers, and design folks on creative ways to incorporate greenspace into infill development • Interagency Master Plan committee formed • Citizens advisory committee formed (over 50 citizens; two meetings) • Public meetings held (four meetings) 	<i>Social Cohesion & Mental Health; Active Living; Environmental Health</i> <ul style="list-style-type: none"> ◦ Agricultural and natural land preservation ◦ Transit-oriented development ◦ Access to open space ◦ Ecological health • Public safety 	<ul style="list-style-type: none"> • Health Coalition provides quarterly reports to state health department on rates of readmission for diabetics, percentage of overweight kids, number of adult smokers, percentages of chronic disease, number of kids on low- and reduced-cost meal plans, Medicaid population by zip code • Planning department tracks acres left suitable for development permits, number of developments approved, locations of schools, new road segments
Chino*	Private developer, planning department, department of community services, YMCA, school districts	<ul style="list-style-type: none"> • Report came out with alarming statistics on childhood obesity and physical activity in Chino 	<ul style="list-style-type: none"> • Expert presenter brought in to discuss connection between land use, obesity, and physical activity as part of large public workshop • Small community meetings held in various locations • Over 500 residents responded to written surveys 	<i>Active Living, Food and Nutrition, Environmental Health, Health and Human Services</i> <ul style="list-style-type: none"> ◦ Access to parks ◦ Developing a comprehensive transportation network ◦ Community Character element in plan 	<ul style="list-style-type: none"> • California conducts physical fitness tests for children • Obesity and physical activity report spurred action • School districts supply data on children with diabetes • Planning Department conducted outreach surveys

SUMMARY TABLE I. INCORPORATING HEALTH INTO COMPREHENSIVE PLANNING AND IMPLEMENTATION

Jurisdiction	Champions	Context and Timing	Outreach	Health Priorities	Data
Dubuque*	Planning department, city and county health departments, Mercy Hospital	<ul style="list-style-type: none"> Economic downturn led city council to embrace sustainable planning Federal Healthy Cities Initiative led to Healthy Dubuque Long history of public health and planning working together 	<ul style="list-style-type: none"> Hospitals, libraries assisted with outreach Used data in presentations Strong advocacy from mental health coalition Local organizations sought for expertise The planning department created a new community engagement coordinator position charged with developing a community engagement process aimed at populations they had not historically been able to reach 	<i>Social Cohesion & Mental Health, Health and Human Services, Environmental Health</i> <ul style="list-style-type: none"> Equity Sustainable Dubuque elements addressed in comp plan include: Healthy Local Food, Green Buildings, Reasonable Mobility, Healthy Air, and Clean Water, among others 	<ul style="list-style-type: none"> Extensive community survey done for Healthy Dubuque 2000 Required to produce a Community Health Needs Assessment/ Health Improvement Plan (CHNA/ HIP) every five years that captures a large amount of public health data Alarming rates of binge drinking resulted in a substance abuse coalition and colleges making changes
Fort Worth*	City planning director, county health director, Regional Council of Governments	<ul style="list-style-type: none"> Congestion Mitigation and Air Quality Improvement Program funding led to regional embrace of multimodal transit. Vision North Texas brought together county health department and city planning department in effort to plan for the future health and prosperity of the region. Strong relationships developed between the directors of both departments. 	<ul style="list-style-type: none"> Small meetings held in various locations Social media campaign Tagline embraced Emphasized "lifestyle options" provided by transit-oriented development 	<i>Active Living, Environmental Health</i> <ul style="list-style-type: none"> Multimodal transit Transit-oriented development Mixed use neighborhoods 	<ul style="list-style-type: none"> Plan includes data on percent of multifamily housing and vacant land Data obtained from county health department which maintains its own Behavioral Risk Factor Surveillance Survey (BRFSS) Update data in appendices annually Plan maintains list of capital projects; code compliance department data, traffic safety, and air quality data Community Needs Assessment conducted every five years
Grand Rapids	City planning director; various community organizations and foundations; Residential Steering Committee (appointed by mayor)	<ul style="list-style-type: none"> Extensive outreach during 2002 comp plan update Strong mayoral support for sustainability Need existed to address shrinking municipal revenues, cuts to park funding, school consolidation, Emerald Ash Borer infestation of tree canopy, lack of undeveloped land, and rising fuel prices Strong community interest in green infrastructure, recreational use of Grand River, and local food security 	<ul style="list-style-type: none"> Interactive games developed (Green Pursuits) "Quality of life" used instead of "public health" PR staff member regularly updates community on plan progress Stakeholder interviews Community Green Gatherings 	<i>Environmental Health, Active Living, Food and Nutrition, Social Cohesion and Mental Health:</i> <ul style="list-style-type: none"> Tree canopy Multimodal transit Local Food Equity Parks Stormwater management Green Infrastructure Connections The Grand River 	<ul style="list-style-type: none"> Plan includes goal metrics of miles of bike lanes; park access (within one-quarter mile), tree canopy Collect data through planning process Use data for grant applications and public outreach

SUMMARY TABLE I. INCORPORATING HEALTH INTO COMPREHENSIVE PLANNING AND IMPLEMENTATION

Jurisdiction	Champions	Context and Timing	Outreach	Health Priorities	Data
Philadelphia	William Penn Foundation, Next Great City Coalition (made up of various community groups), Interdepartmental Sustainability Working Group	<ul style="list-style-type: none"> Next Great City Coalition created through William Penn Foundation grant; created list of "asks" for next mayoral candidate Mayor Nutter elected and embraced coalition's requests Greenworks builds upon goals of 2007 Local Action Plan for Climate Change developed by Sustainability Working Group 	<ul style="list-style-type: none"> Health focus came from Next City Coalition (bottom-up) Interconnections of health-promoting policies allow tailoring message to different constituencies based on what will resonate Part of job is to keep people excited—to have wins AND report realistically Describe health and sustainability as quality-of-life factors; that's how you excite people about it. GHG esoteric/hard to conceptualize Health adds value to framing sustainability (this is why you should care about open space, trees, air quality)—health is something people relate to and can be an immediate benefit 	<p><i>Food and Nutrition, Environmental Health, Social Cohesion and Mental Health</i></p> <ul style="list-style-type: none"> Reduction in vehicle miles travelled Access to healthy foods Access to open space 	<ul style="list-style-type: none"> Use EPA's Energy Star rating system to evaluate building construction Plan includes targets for greenhouse gas emissions; waste tonnage; park access within 10 minutes; local healthy food access within 10 minutes; tree canopy; vehicle miles travelled; and green jobs created Worked with various departments to accumulate baseline data
Raleigh*	City planning director, city manager	<ul style="list-style-type: none"> Community inventory identified public health as a concern Need for comprehensive plan update Rapid growth/population change 	<ul style="list-style-type: none"> Interactive games Small meetings held in various locations Framed "active living" as "an opportunity for a higher quality of life" Focused on engaging youth Three rounds of public meeting Questionnaires Interactive website 	<p><i>Food & Nutrition, Active Living, Environmental Health, Health and Human Services</i></p> <ul style="list-style-type: none"> Pedestrian improvements Community gardens Air and Water quality Open space Equity 	<ul style="list-style-type: none"> Community inventory collected at start of planning process Use proxy indicators for public health: acres of open space per person, linear feet of sidewalks, number of facilities within walking distance, existence and location of food deserts, number of community gardens, vehicle miles traveled, etc.

* Plan includes a Health Element or Chapter

Definitions:

Champions: The government agencies, individuals, and nongovernmental organizations that drove the incorporation of public health in the comprehensive plan.

Context and Timing: The factors that brought various partners together or encouraged the inclusion of public health goals and policies in the plan.

Outreach: The various outreach strategies and language used to convey the importance of health and planning to the general public.

Health priorities: The elements that were cited by respondents as doing the most to address health in each respective plan, categorized according to the health topics listed on pp. 8–9.

Data: Indicators, metrics, and strategies used for data collection.

SUMMARY TABLE II. INCORPORATING HEALTH INTO COMPREHENSIVE PLANNING AND IMPLEMENTATION (CONT.)

Jurisdiction	Collaboration	Funding	Implementation	Monitoring and Evaluation
Baltimore County	<ul style="list-style-type: none"> • Interdisciplinary task force formed for master plan • Local health coalition formed • Nongovernmental partners 	<ul style="list-style-type: none"> • Community Transformation Grant • State and county land preservation funds • Private land donations • Nonprofit grants 	<ul style="list-style-type: none"> • Zoning overlay to preserve open space Pedestrian and Bicycle Access plans • County Library Plan • Land Preservation, Parks and Recreation Plan • HUD Consolidated Plan • Agricultural Profitability Report • Mapping website • NeighborSpace Strategic Plan • Parks and recreation department looking for locations throughout county for indoor recreation centers 	<ul style="list-style-type: none"> • Can measure against goals of Plan Maryland • Required to report to state at five-year mark on what has been done to implement plan • Health department provides quarterly reports to the state on status of Health Coalition indicators
Chino	<ul style="list-style-type: none"> • Healthy Chino Coalition formed (60 total representatives selected from all city departments, insurance companies, faith-based groups, hospitals, and the county health departments of San Bernardino and Riverside) 	<ul style="list-style-type: none"> • City funding • State Healthy Cities and Communities grants • Private developer donations • Hospital donations 	<ul style="list-style-type: none"> • Green building ordinance • Climate Action Plan • Cooking and gardening workshops • Chino Walks program • Rethink your drink campaign • Healthy Chino Coalition has worked with school district to get healthy foods into schools • Cottage Food Bill • Trying to work with developers to make healthier development decisions 	<ul style="list-style-type: none"> • University of Southern California doing five- to 10-year study on preserve area • Community services staff implements programs, tracks success, and reports quarterly to the Healthy Chino Coalition • Community services and planning department meet annually to identify accomplishments for the year and outline next steps
Dubuque	<ul style="list-style-type: none"> • Planning department partnered with hospitals, parks and recreation, visiting nurses, city and county health departments • County Wellness Coalition formed • Documenting needs helps develop partnerships • Disaster preparedness sparks collaboration • Healthy Dubuque team with numerous interdepartmental task forces 	<ul style="list-style-type: none"> • Green and Healthy Homes grant • ACHIEVE grant • Community Transformation Grant • Used goals and data from comprehensive plan and CHNA/HIP to apply for funding • Funding for community survey through Healthy Dubuque 	<ul style="list-style-type: none"> • Secured a Federally Qualified Health Center in an underserved area • Stronger ordinance language about filling in sidewalk gaps • Updated unified development code • Completed bridge over Highway 52 • Green and Healthy Homes Initiative • Community engagement coordinator hired 	<ul style="list-style-type: none"> • CHNA/HIP provides annual public health progress report to state • Comprehensive plan updated every five to six ears • One to two times a year section leaders of CHNA/HIP gather to talk about progress made and future areas to focus on

SUMMARY TABLE II. INCORPORATING HEALTH INTO COMPREHENSIVE PLANNING AND IMPLEMENTATION (CONT.)

Jurisdiction	Collaboration	Funding	Implementation	Monitoring and Evaluation
Fort Worth	<ul style="list-style-type: none"> • Transit-oriented development is a key area for collaboration • Regional collaboration took place in surface transportation technical committee • A number of city council members and planning staff serve on NCTCOG policy body • Department mergers break down previous silos • Vision North Texas regional plan led to significant collaboration between city planning and county health departments 	<ul style="list-style-type: none"> • Federal Transit Administration's New Starts program (pending) • Transportation funding from North Central Texas Council of Governments • YMCA received Pioneering Healthy Communities Grant • Applied for Community Transformation Grant—did not receive it, but application process created new ideas and partnerships • "Live a More Colorful Life" program funding from State Congestion Mitigation and Air Quality Improvement program funding 	<ul style="list-style-type: none"> • "Live a More Colorful Life" food and nutrition program • Expanded farmers market ordinance to sell items other than fresh fruit and vegetables • Mayor's "Fit Worth" physical activity initiative • Active design in workplace policies • Tarrant County Health Department has task force in place to advance more walkable, livable communities (planning department has a member on this task force) • Healthy vending 	<ul style="list-style-type: none"> • Update different sections of comprehensive plan every year • Update appendices and data in comprehensive plan annually • Report on progress to city council biannually • Community Health Needs Assessment every five years
Grand Rapids	<p><i>City partnered with:</i></p> <ul style="list-style-type: none"> ◦ Grand Rapids Tree Coalition ◦ Friends of Grand Rapids Parks ◦ Mayor's Urban Forestry Council ◦ Bike Coalition of Greater Grand Rapids ◦ Rapid Wheelmen ◦ Grand Rapids Whitewater ◦ Western Michigan Environmental Action Council ◦ Local food movement 	<ul style="list-style-type: none"> • Various local foundations • Grand Action • Grand Rapids Downtown Development Authority • City of Grand Rapids • HUD Sustainable Communities • Community Development Block Grants • Special assessments • Brownfield tax credits 	<ul style="list-style-type: none"> • Creation of community organizations through planning process • HIA on Michigan Street Corridor Project • Increase number of farmers markets • Built local food processing and training center • Installed community gardens • Building bike/BRT infrastructure • Combining stormwater management with park redevelopment • 27 new miles of bike lanes (in one year) • 20 miles of street on road diets • Two new parks built 	<ul style="list-style-type: none"> • Progress report on Green Grand Rapids issued annually

SUMMARY TABLE II. INCORPORATING HEALTH INTO COMPREHENSIVE PLANNING AND IMPLEMENTATION (CONT.)

Jurisdiction	Collaboration	Funding	Implementation	Monitoring and Evaluation
Philadelphia	Mayor’s Office of Sustainability partnered with: <ul style="list-style-type: none"> ◦ Next Great City Coalition ◦ Pennsylvania Horticultural Society ◦ Water Department ◦ Air Management Office ◦ Municipal Energy Office ◦ Streets Department ◦ Transportation & Utilities ◦ Commerce Department ◦ Food Trust ◦ Bike Coalition of Philadelphia ◦ University of Pennsylvania ◦ Farm to City ◦ Pennsylvania Environmental Council ◦ Trust for Public Land 	<ul style="list-style-type: none"> • William Penn Foundation • Communities Putting Prevention to Work grant • Community Transformation Grant • American Recovery and Reinvestment Act funds 	<ul style="list-style-type: none"> • Rewrite of Zoning Code • Philadelphia2035 Comprehensive Plan— health a key component • As-of-right exemptions for solar and alternative energy installations • Urban agricultural rezoning • PhillyFood Bucks • Prison garden food production • Ethnic cooking classes • TreePhilly program • Weatherizing low-income houses • Investing in green infrastructure for stormwater management— Green City, Clean Waters 	<ul style="list-style-type: none"> • Annual reports measure progress made toward Greenworks targets • Targets can be adjusted based on changing circumstances

SUMMARY TABLE II. INCORPORATING HEALTH INTO COMPREHENSIVE PLANNING AND IMPLEMENTATION (CONT.)

Jurisdiction	Collaboration	Funding	Implementation	Monitoring and Evaluation
Raleigh	<ul style="list-style-type: none"> • City Charter defining comprehensive plan as a plan for entire city leads to interdepartmental responsibility • Strong interdepartmental working group created • State and county health departments, research hospitals, local food and community gardening organizations, bike/ pedestrian advocacy groups, interfaith group and affordable housing nonprofit coalition involved 	<ul style="list-style-type: none"> • State Department of Transportation • Tax increment financing • Streetscape funding • Local transportation bonds • Trying to reform capital budgeting process to tie funding to comprehensive plan goals and metrics 	<ul style="list-style-type: none"> • New unified development ordinance that increases requirements for sidewalks • New pedestrian plan • Expanded community garden code pending • ‘Open space with quality’ development standard pending 	<ul style="list-style-type: none"> • Community inventory collected at start of planning process • Evaluate comprehensive plan every year • Annual review of department heads evaluates their department’s progress in helping to implement the goals of the comp plan • Opportunity to suggest changes to goals and objectives annually

Definitions:

Collaboration: The agencies and nongovernmental partners carrying out implementation work and the types of activities around which different agencies have partnered.

Funding: The various sources of funding available or provided to implement the policies and objectives of the plan.

Implementation: Efforts undertaken and tools used to implement plan goals and objectives. These included new policies, codes and regulations, capital improvements, and programming.

Monitoring and Evaluation: The process by which plan goals and objectives are tracked and adjusted, the type of data used to show progress, and the agencies entrusted to monitor this.



A ribbon-cutting ceremony at the opening of a new park in Dubuque. (Credit: City of Dubuque/ Planning Services Department)

Champions

- *Look for existing community champions and partner with them*
- *Groom champions from within government*
- *Seek funding to build champions*

Various individuals, community members, and government departments have taken the lead in incorporating public health goals and policies into their respective city or county's comprehensive or sustainability plan. Of the seven jurisdictions interviewed, three (Fort Worth, Raleigh, and Grand Rapids) had planning directors that led much of the push for health to be included in those city's plans. Both Grand Rapids and Philadelphia were largely motivated by residents in those cities. In Philadelphia citizen mobilization happened through the creation of a citizens organization through a local foundation, while in Grand Rapids, various local movements such as local foods and bike groups mobilized independently and were given voice and ownership through the process of plan making. In Chino, a local developer saw the opportunity to incorporate health into a large greenfield development site, which became a key motivation for the city's planning department to embrace the same focus.

Health officials and practitioners also played a key role promoting conversations about public health. In Baltimore and Chino, Health Coalitions were formed between health departments, private providers, and various other arms of government. The director of public health in Tarrant County, Texas, also played a key role in bringing public health to the table in discussions

about land use and the built environment in Fort Worth.

Regional efforts can also lead to a greater focus on public health. Six of the seven case studies were cities and only Dubuque and Philadelphia had city health departments. Many jurisdictions mentioned working with regional environmental councils as well. In Fort Worth, the planning department was closely involved with regional efforts at the North Central Texas Council of Governments, writing a plan for the region that embraces public health as a core component.

Often these regional efforts benefited from high level support. The support of top political leaders was found to lead to more robust and effective efforts. Baltimore County and Dubuque were exemplary of very top-down approaches, where state policy embracing aspects of healthy planning filtered down to the municipal levels through laws and mandates. Since all plans must be approved by the city council, it seems obvious that some level of political support is needed. However, in most of these jurisdictions, high-level involvement went beyond mere support. Mayor Nutter of Philadelphia created a Mayor's Office of Sustainability, which wrote Greenworks Philadelphia. The city manager of Raleigh signaled his support by tying the annual evaluations of department heads to their respective progress implementing relevant goals from the city's comprehensive plan. This proactive political leadership, even if not directly related to the public health goals in these plans, gave the plans themselves the political weight to make their public health goals and policies a greater part of the jurisdiction's law.



Seniors wait for a bus in a renovated bus shelter. These shelters make transit safer and more accessible for everyone. (Credit: City of Raleigh/ Department of City Planning)

Context and Timing

- *Take advantage of opportunities as they present themselves*
- *Use plan updates to create partnerships and steer the focus toward health*

Context and timing came up again and again as key elements to the success these plans had incorporating public health goals, objectives, and policies. First of all, the necessity for an update to a comprehensive plan or the adoption of a new sustainability plan are opportunities to begin the discussion about how to incorporate public health into a jurisdiction's blueprint for its future. Many of the jurisdictions we interviewed mentioned that their previous plan was extremely outdated due to significant demographic change and obsolete zoning ordinances. Plan updates and adoptions already call for input from various departments, so it was an opportune time to initiate cross-departmental conversations. One way to do this is by forming interagency working groups or task forces. At a minimum, task forces would include representatives from various city and county departments, but would ideally also include agencies outside of government. Such task forces do not need to be centered on public health but can provide an avenue for health to enter the conversation around various other aspects like transportation or sustainability. In Philadelphia, an interagency task force on sustainability existed prior to the mayor's mandate to create a sustainability plan. The meetings this task force held greatly influenced the goals and targets included in Greenworks Philadelphia. Another great way to facilitate interdepartmental conversations on health is through the creation of local health coalitions, as happened in Baltimore County and Chino. Oftentimes, this effort is spurred by a dedicated funding stream focused on the coalition creating goals and implementation work, but this can inform plan policies as well.

Nongovernmental actors can also play a huge role in creating awareness of public health concerns. In Philadelphia, the Next City citizens organization created a list of asks for the mayor and was convened with funds from a local foundation. In Grand Rapids, a host of local foundations interested in funding efforts by community members helped shape the goals of Green Grand Rapids.

Timing can also be fortuitous. A confluence of factors and processes can present opportunities for public health to enter the conversation and can lead to institutionalization through policy and zoning code changes. In Dubuque, for instance, the need for an update to the city's comprehensive plan

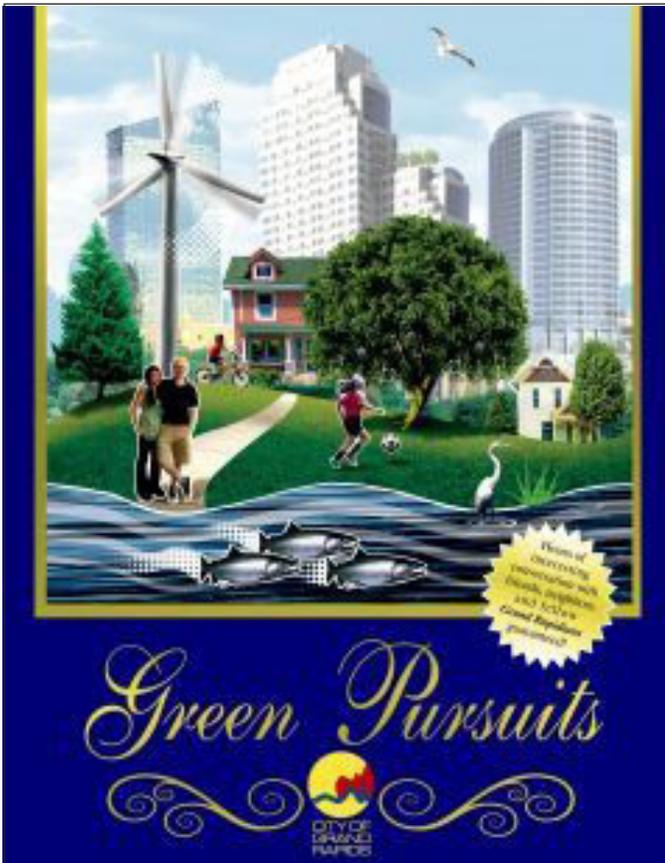
corresponded with an initiative at the county level to create a Health Improvement Plan entitled Healthy Dubuque. The outreach, goals, and policies of both of these efforts fed off one another and helped make public health a pillar of Dubuque's comprehensive planning. This process also served to create lasting connections between the city's planning department and city and county health workers. In Philadelphia, Greenworks was written and adopted just before Philadelphia's planning commission started a citywide rezoning effort. This led to a number of the recommendations in Greenworks being adopted into the new city zoning code, effectively institutionalizing them. The framework and priorities of Greenworks also informed the policies of Philadelphia2035, the city's new comprehensive plan.

Outreach

- *Educate departments about the connections between planning and public health when involving them in the comprehensive planning process*
- *Educate the general public about the benefits of addressing public health through planning*
- *Involve community stakeholders in meaningful ways*

Most jurisdictions did not communicate directly with the public about health. Many mentioned that it was better to focus on topics that people were already concerned with, and then communicate public health messages through those lenses. For example, Fort Worth mentioned that transit-oriented development and the sites of new transit stations were key topic areas where the interplay between planning and health could be discussed. However, instead of overtly focusing on health, they chose different terms to approach the subject. "Quality of life," "community character" and "sustainability" were all found to be terms that people connected to more easily and avoided the challenge of seeming to tell people how to live their lives. Philadelphia emphasized how interventions that have a public health benefit can often be talked about in multiple ways since they offer multiple benefits. For city staff there, it proved much more effective to talk about tree canopy interventions in neighborhoods that experienced frequent flooding by discussing the benefits the trees offered to stormwater retention as opposed to discussing their air quality and climate cooling effect.

To present consistent vocabulary to the public, there needs to be internal framing first. This means coming to consensus across departments on the terms that will be used to discuss different interventions and learning and sharing the lingo of



Grand Rapids was creative in its outreach, developing an interactive board game called Green Pursuits, which was a play on Trivial Pursuits. The game included question cards and an answer booklet for residents to record their responses as well as a city map where they could mark desired areas for green infrastructure interventions. Volunteer citizen planners organized groups to play the game, which could take place in any living room across the city. “Green gatherings” were then held to talk about what was learned from the game and to identify community champions to carry certain policies forward. (Credit: City of Grand Rapids/ Planning Department)

<http://grcity.us/design-and-development-services/Planning-Department/Green-Grand-Rapids/Pages/Green-Pursuits.aspx>

data and statistics, particularly between planning and health departments. When presenting this information to the public, the use of imagery (e.g., maps, photos, charts) proved to be a valuable tool by simplifying the message. Fort Worth and Baltimore County both used photos in public presentations to help citizens visualize healthy communities.



Chino used a proactive approach to outreach, meeting with residents at a number of community events around town. Through these efforts over 500 residents completed written surveys that asked about their preferences on a number of different topics including public health. These responses were used to craft the following vision statement to guide the general plan: “The City of Chino will continue to be a vibrant, safe city with a small-town feel, emphasizing healthy, active lifestyles for Chino’s residents.” (City of Chino 2010). (Credit: City of Chino/ Community Development Department)

Chino, Fort Worth, and Baltimore all deployed national experts to give lectures on topics related to some aspect of health and planning. All three jurisdictions cited these efforts as effective not only in gaining public support for a health focus in the plan, but for educating other departments on the important interconnections of these topics for positive community outcomes. In multiple jurisdictions, the key to effective citizen engagement was to “steer and not row.” This meant that city staff provided broad guidance and support but allowed citizen groups to define their own priorities and involvement in the plan.

Interactive games and small-scale, proactive meetings in unique locations were some traits that exemplified outreach efforts in Grand Rapids, Raleigh, and Chino. Chino was the only jurisdiction to specifically mention citizen surveys, but a board game developed by Grand Rapids also provided survey-like responses. Dubuque previously utilized an extensive community survey when shaping the health goals of their Healthy Dubuque 2000 plan. These goals have remained staples throughout subsequent comprehensive plans for the city.



Forth Worth focused on reviving neighborhoods by creating dense, walkable “urban villages,” like the one shown above. (Credit: City of Fort Worth/ Planning and Development Department)

Health Priorities

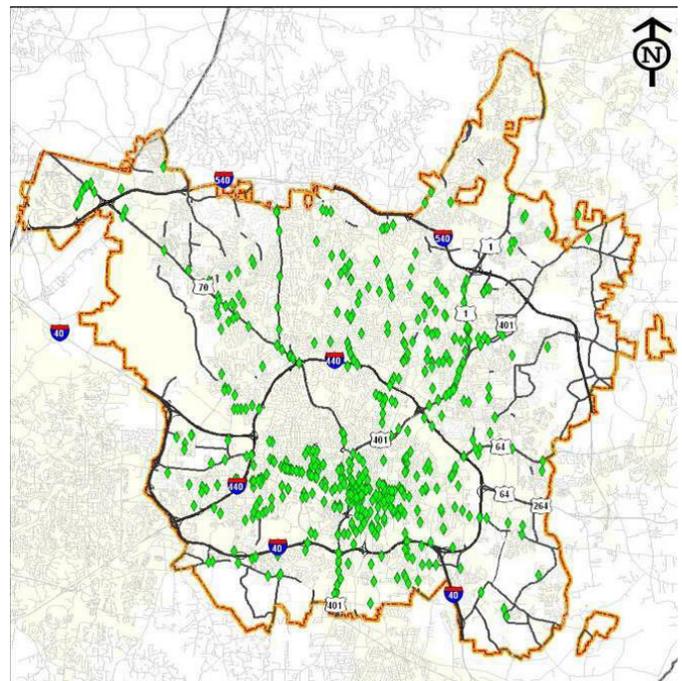
- *Explicitly address health in designing the comprehensive planning process and the structure of the plan itself*
- *Solicit input from local or county health departments on all chapters of the plan to ensure that health is addressed throughout*

The most common health priorities mentioned were active living, transit-oriented development, tree canopy, air and water quality, open space, land conservation, local, healthy food, and equity through access. Baltimore County, Chino, and Fort Worth all had a similar focus on creating dense neighborhood centers that embraced walkability and transit-oriented development. Some unique priorities were Chino’s subsequent Climate Action Plan, brought on by a California Environmental Quality Act lawsuit, and Dubuque’s strong focus on mental health, driven by a very active mental health advocacy coalition that formed during the most recent comprehensive plan update.

It is notable that the same topic areas were repeatedly mentioned across all case studies as the areas of public health focus in the plans. This means that the public health topics neglected across

Planning departments are often in the ideal position to articulate the potential health benefits of the built environment to other departments. Education is a core component of outreach, especially when trying to explain the connections between planning and health. Such education needs to occur both interdepartmentally and to benefit the public. Through the comprehensive planning process, the planning department regularly solicits input from other departments and looks for connections between the objectives of different departments and how future planning can incorporate these. Education has a relatively lengthy timescale, however, so it is important to start early and be consistent with the message and purpose being conveyed.

The outreach phase of planning is a great time to collaborate with other departments and engage the community to identify existing gaps in data and data gathering opportunities. Community groups can help organize outreach meetings and promote the plan if they feel engaged in a meaningful way. There are many creative ways to do this, from small neighborhood meetings in various locations to the creation of games that promote discussion on the future of the community, city, and county.



Raleigh created this map using pedestrian crash data compiled through its community inventory process, which outlined needs and priorities for Planning Raleigh 2030. (Credit: City of Raleigh/ Department of City Planning)

sites were also quite similar. Very few respondents mentioned anything about disaster prevention or emergency management, crime, public safety, brownfields, or mental health. Five of the seven jurisdictions had chapters or elements that explicitly focused on public health. However, many of the individual policies that promoted better public health outcomes did not mention public health as a primary focus. For example, in Raleigh, pedestrian improvements were given priority in its plan, yet this was done primarily to provide better transportation options for those who cannot afford a private vehicle, not explicitly to encourage physical activity. Although equity and access are both important public health considerations, the direct health benefits associated with walking did not drive these improvements. However, as a result of addressing this issue, walking became safer and more appealing for everyone.

In nearly all cases, including a specific chapter explicitly focused on public health ensured that there was a greater emphasis placed on public health throughout other chapters of the plan as well. Although health is intrinsic to a number of chapters regularly found in comprehensive plans such as parks and recreation, transportation, and the environment, policies in those chapters do not always articulate their connection to health. Pulling certain policies from these chapters out in a separate health chapter, as Chino's General Plan does, is one way to highlight health's presence.

Data

- *Assess current gaps in local data*
- *Make data gathering a part of outreach process*
- *Ensure that all departments use common data sets integrating planning and public health sources*
- *Tie goals and objectives in plan to available data that are trackable over time*

Data and figures can spur action and bring the focus on health to the forefront. In Chino, the Healthy Chino Coalition highlighted poor rates of physical fitness and overweight and obesity statistics among Chino's youth. This motivated the city to focus on the health of its residents. The Healthy Chino Coalition then worked closely with the city's planning department and its consultants throughout the drafting of Chino's comprehensive plan. In Dubuque, information on the high rate of binge drinking was discovered through a Community Health Needs Assessment. This prompted a public awareness campaign, new partnership efforts with universities,

Ever since its initial Community Health Needs Assessment and Health Improvement Plan in the mid-1990s with the Healthy Dubuque initiative, Dubuque has aligned this process with its comprehensive plan updates. Making these two processes parallel has allowed the city to utilize data from the CHNA & HIP to guide the policies of the comprehensive plan. Not only does the CHNA & HIP provide various public health statistics from a number of different databases, it conducts a SWOT analysis (strengths, weaknesses, opportunities, and threats) for improving these statistics. These findings can then be translated into concrete goals, objectives, and policies in the comprehensive plan.

and policies in the comprehensive plan addressing alcohol abuse among youth.

The use of quantitative and qualitative data proved a highly effective way to encourage community involvement by showing that there was a need to be met. Grand Rapids used an iterative process of collecting data, presenting this data to residents, and then discussing different measures that could improve certain outcomes while also focusing on what data gaps exist. Raleigh collected data through a massive community inventory at the start of the planning process and then used the information to steer public meetings toward the main issues the data showed the city faced or would face in the future. This process gave planning meetings structure because it defined clear problems which citizens then had to address through their input.

Such findings indicate that there is a basic need for data when initially deciding which areas of public health need to be prioritized. There is also a need for data as a way to identify health priorities and design a monitoring and evaluation system to measure the progress and impact of a comprehensive plan. Since health data is not typically available at the city level, data collection is a great time for health and planning departments to work together to share their respective expertise. The health department and planning department can work together to provide the other with the data that it lacks.

During initial plan development and outreach, an opportunity exists to collect comprehensive baseline data before setting specific targets for the plan. Periodic health inventories and Community Health Needs Assessments are great ways to compile this type of data. Collaboration with different departments is essential in data compilation both to develop



The Fit Worth Mayor's Initiative has recruited a number of private businesses and citizens to partner in efforts to promote physical activity. (Credit: City of Fort Worth/ Planning and Development Department)

a comprehensive picture and to ensure that all departments are using the same future projections. Data collection is also a great time to engage community groups and recruit local residents' assistance, such as Grand Rapids did to acquire the baseline data used in Green Grand Rapids.

Outside of comprehensive plan updates, the formation of task forces, working groups, or health coalitions can be avenues for collecting data. It is important to look at any potential opportunity where interdepartmental groups focus on health and seek ways for those groups to help collect and track local health data.

Collaboration

- *Institutionalize collaboration in the planning process and implementation*
- *Constantly look for opportunities to partner with other departments and organizations outside of municipal government on projects to promote public health*

Working with various government agencies, citizens, and the private sector are all keys to implementing public health

goals and policies. Numerous potential partners and ways to collaborate were identified through the case studies. Potential partners include state and county health departments, local philanthropic foundations, transportation departments, water departments, parks and recreation, hospitals, mental health coalitions, bike and pedestrian groups, affordable housing advocates, environmental councils, regional councils of government, land trusts, universities, "friends of" groups, urban forestry councils, food trusts, farmers markets, and community garden collaboratives and co-ops.

One strategy that proved highly effective throughout all case study jurisdictions was the formation of some sort of interdepartmental agency or working group. Some working groups were generally tied to the planning process, such as Raleigh's, while others focused on one specific topic such as the sustainability working group in Philadelphia or the health coalitions in Chino and Baltimore County. Once these interdepartmental groups are formed, they present the opportunity to build a lasting history of collaboration, as happened in Dubuque when the planning department first got together with the city and county health departments and the private health care sector in the mid-1990s to conduct a health needs assessment and health improvement plan for Healthy Dubuque.

At times stronger interdepartmental collaboration was facilitated through the consolidation and reorganization of departments. In Raleigh, seven different city-level departments that dealt with development were consolidated under the head of the planning department. In Fort Worth, a separate development department merged with planning in 2007, and in 2010 the program management office joined the others. In addition, Fort Worth's city health department, which had worked with the city's planning department on previous comprehensive plan updates, was dismantled in 2008, and many of its former responsibilities were taken over by Tarrant County Public Health. This created a closer relationship between the city planning and county health offices and facilitated broader regional collaboration around health and planning.

There were a number of other gateways to collaboration mentioned by respondents including applying for grants, regional efforts, and transit-oriented development. In Fort Worth, the process of applying for a CDC Community Transformation Grant (even though they did not end up receiving an award), led to so many great ideas for collaboration between health and planning that the city and county decided to pursue those measures through other funds. Transit-oriented development was mentioned as a key starting point to pull public health into

conversations that already involve a number of different partners and agencies. The North Central Texas Council of Governments, through its Center of Development Excellence, is also currently working on a 2050 plan for the region, which has allowed different agencies to collaborate regionally with a focus on creating a viable regional public transportation network.

As mentioned above, the updating of a comprehensive plan is an ideal time to form an interdepartmental working group or task force. Comprehensive plans encompass goals and policies that shape a jurisdiction's development and touch all government departments in some way. A comprehensive plan also provides a central document for all departments to refer to. Thus, there should already be an intended effort to reach out to other departments in the plan development process. Channeling this collaboration through the creation of a formal interdepartmental group is a great way to institutionalize it. These groups can be maintained after plan adoption and throughout the ongoing implementation of the plan. Nongovernmental groups, businesses, organizations, and individuals from the private sector can also become partners in these groups. Frequent, ongoing updates and reports on plans are a great way to maintain the relationships built during the initial planning process and to instill a culture of interdepartmental cooperation.

Preparing for and even recovering from emergency events can be a time for departments to come together since these circumstances highlight the different expertise and resource capability that each possesses. Fort Worth and Baltimore County both mentioned specific health crises that rallied different departments to work together to address public health. In Baltimore County it was an outbreak of H1N1 and in Fort Worth it was the West Nile virus.

Size and proximity also facilitate easier collaboration. Small jurisdictions have the advantage of working more easily across departments since there are fewer departments and staff members. Physical proximity also plays a role. In Fort Worth, Tarrant County Public Health has its main office in the city, which allows county health staff to meet easily with various city departments and stay abreast of developments in the city.

Finally, efforts to institutionalize or mandate collaboration have been found to be highly effective. In Baltimore County, the health officer was charged with forming a Health Coalition. Due to this mandate, he was able to get department heads and senior officials from all county departments together by sending them a letter stating that the health department

was charged by law to create this coalition. Mandates such as this require high-level support in the jurisdiction. In this case, council support and interdepartmental collaboration have helped influence each other so that working together and building relationships across departments has encouraged greater council support.

Funding

- *Be proactive in pursuing diverse sources of funding for efforts addressing public health*
- *Partner with community groups and the private sector on fundraising*
- *Prioritize limited funds to target health-oriented initiatives*

Funding for plan implementation came from a number of diverse sources. There were federal funds, state and local funds, and private grants from local or national foundations. Encouragingly, a number of funding streams were tied to the Centers for Disease Control and Prevention (CDC). Baltimore County, Dubuque, and Philadelphia all received Community Transformation Grant (CTG) funding and Fort Worth used their unfunded application for a CTG to develop ideas for future collaborative projects. Philadelphia also received Communities Putting Prevention to Work funding to hire a food systems planner in the health department. A YMCA in Dubuque received an ACHIEVE grant and a Fort Worth YMCA received a Pioneering Healthier Communities grant, both used to fund education campaigns and programming promoting healthier lifestyles. Aside from CDC funding, other federal funds used for healthy planning initiatives were Community Development Block Grants (CDBG), HUD Sustainable Communities, Green and Healthy Homes, FTA New Starts, brownfield tax credits, and combined FTA/FHWA Congestion Mitigation and Air Quality funding.

Raleigh has perhaps gone the furthest in trying to address some of the inherent problems with budgets, different funding streams, and the implementation of comprehensive plan objectives. The city has been working to tie Capital Improvement Program funding to the goals of the comprehensive plan so that capital improvement spending will further the plan's objectives. It is also working to align the budget priorities of different departments and of different funding streams to better meet the goals of the comprehensive plan and not produce duplicative or contradictory work.



Grand Rapids was able to tap into a strong network of local foundations and was adept at leveraging multiple sources of funding on single projects. A park in an underserved area was redeveloped by leveraging CDBG funds with combined sewer overflow dollars to create a space for neighborhood recreation as well as underground storage for stormwater overflow. The Michigan Street corridor project uses 17 different funding sources, both public and private. The Downtown Market is another key public/private partnership combining funding from the philanthropic organization, Grand Action, with the Grand Rapids Downtown Development Authority. The Green Grand Rapids update itself was funded through large donations from a number of local foundations that later committed additional funds to help implement the goals and objectives that come out of this. The Dyer-Ives Foundation even set aside \$5 million that would only be granted for three potential uses, one of which was the implementation of Green Grand Rapids.

Grand Rapids creatively leveraged CDBG funds and brownfield tax credits with combined sewer overflow dollars to revamp and expand a park in an underserved, low-income neighborhood in the city, creating a splash park and underground storage facility for stormwater overflow.

State and local government funds also assisted many of these efforts. Fort Worth's close work with the regional council of governments resulted in various transportation funds. Raleigh also received transportation funds from the state department of transportation for sidewalk improvements. Baltimore leveraged a number of state land conservation programs to preserve rural agricultural and natural lands. On the local level, Raleigh was very proactive, implementing tax increment financing to fund certain projects and issuing a number of local bonds. Grand Rapids has experimented with special tax assessments in neighborhoods to procure funding for new park construction.

Private funds came from personal donations, hospitals, and a significant number of local foundations. Volunteer labor and in-kind donations were also essential to many of these efforts. Grand Rapids leveraged an impressive amount of money from

a wide assortment of local foundations to help fund both the drafting and implementation of Green Grand Rapids. In Chino, a private land developer made a significant contribution to help fund the creation and work of the Healthy Chino Coalition. That coalition also received multiple grants from the California Healthy Cities and Communities fund, a program run by the Center for Civic Partnerships, a California-based support organization that offers technical assistance to various cities and communities nationwide. The center itself actually developed initially out of a small Preventive Health Services Block Grant from the CDC in the late 1980s (Center for Civic Partnerships 2008).

This information provided a number of lessons related to funding. The basic lack of funding was the core challenge mentioned. Most jurisdictions had very few local public funds dedicated to planning initiatives specifically focused on public health. Programs and projects which primarily focused on public health benefits were often funded through grants, both private and federal. One respondent made the comment that if the planning department could hire someone with a public health background to look for grant funding opportunities, a lot more could be done with a primary focus on health. There



Chino Walks in action. (Credit: City of Chino/Healthy Chino)

are a number of resources available for funding public health projects, but oftentimes planning departments do not have the staff time or expertise to find it.

If local funds were used, they were often leveraged in a creative way, and rarely called out public health as the primary focus. Examples included using transportation bonds to fund sidewalk connections in Raleigh or using stormwater funding to plant trees in Philadelphia. These projects offer key public health benefits, but are primarily concerned with addressing other departmental objectives, such as equity and flood management, respectively.

It is important to use plan goals and data when applying for funds. Dubuque mentioned how it was able to procure a Federally Qualified Health Center by showing that there was a need through the data compiled in its Community Health Needs Assessment and Health Improvement Plan. Grand Rapids repeatedly mentioned examples of community groups using the goals and objectives of Green Grand Rapids to strengthen their applications for grants from foundations. If a particular objective is included in a jurisdiction's comprehensive plan, it means there is political will behind it and any community group doing work that addresses that objective will be more likely to receive funding.

Grand Rapids was also skilled at leveraging a number of different funds for one project. Their strategy was not to ask for too much money from any one funder. This proved a great way for the community to remain in control of the project, since no one funder contributed so much that they felt entitled to dictate the development of the project.

Giving different community groups ownership of specific elements of implementation was another key lesson learned from Grand Rapids. By including these groups meaningfully from the very initial stages of the planning process, the groups developed a vested interest in the success of the plan. Having

community groups that feel a strong connection to a plan encourages them to assume the costs and responsibilities of various implementation projects. This community ownership removed the burden of implementation costs from the city and was a great way to encourage volunteer assistance.

Implementation

- *Institutionalize health-related goals and objectives*
- *Implement comprehensive plan goals and objectives through more detailed planning initiatives*
- *Address regulatory and organizational barriers to implementation*
- *Give communities ownership over implementation by involving them early and meaningfully*

Effective comprehensive plans have implementation elements that specify actions (interventions) that will be taken to achieve plan goals and objectives. These actions range from regulatory changes to capital improvements to new programs or partnerships. Each intervention has a different time horizon to implement and evaluate success and all of these case studies are in the early stages of implementation. Effective implementation further depends on the jurisdiction (administration, departments, etc.) using the plan policies to guide decision making.

It can be quite difficult to quantify the health impacts of any intervention given the multiple pathways that exist and because we do not yet have the tools to measure the separate impact of the built environment from personal lifestyle decisions. However, there is strong evidence that making the healthy choice the easy choice leads to significant improvements in individual health (Guide to Community Preventive Services 2001). All seven case studies have attempted to make their jurisdictions healthier places to live, work, and play through a diverse assortment of implementation tools.

Policies laid out in the comprehensive plan can be useful ways to shape development by informing the decisions of development review boards. Chino staff pointed out policies in their General Plan to encourage developers to include more pedestrian access and sit-down restaurants (as opposed to drive-throughs) before going through development review. Policies also assist and direct the work of city agencies. Philadelphia developed a new policy making it easier for the city to plant trees along the right-of-way and created a food policy council to inform decisions on local food systems. Fort Worth promoted healthy vending

in schools and city facilities and is actively recruiting full-service grocery stores into food deserts. Many of the comprehensive plans also called for the creation of subelement, small area, or departmental plans, which included more specific policies tailored to their particular focus.

Regulatory changes are also a key way to institutionalize health priorities. Chino and Fort Worth both passed new ordinances dealing with farmers markets and local food sales, making it easier to bring a wider variety of local foods to market. Raleigh passed a new unified development code that expands sidewalk width to 14 feet in downtown areas and requires sidewalks on both sides of the street in all areas. Baltimore County passed a new zoning ordinance that allows the county to preserve selected areas as open space within its Urban Rural Demarcation Line (URDL), where open space is sorely lacking currently. Philadelphia did a complete rewrite of its zoning code after Greenworks in which a number of new codes were adopted that reflected the sustainability plan's goals and objectives. Included in the rewrite were new as-of-right exemptions for solar installations on homes.

Capital projects are another way to show progress. Many of these projects have focused on improving pedestrian and bicycle infrastructure with the aim of connecting existing networks. Grand Rapids, in partnership with the Greater Grand Rapids Bicycle Coalition, has set a goal of marking 100 new miles

of bike lanes by the end of 2014, and Raleigh has focused on providing wayfinding to better connect its existing greenway system. Dubuque completed the construction of a bicycle and pedestrian bridge over a major highway that now connects the city's downtown to the Heritage bike trail. Two jurisdictions, Raleigh and Grand Rapids, are in the process of conducting Health Impact Assessments on plans for new pedestrian and bike improvements on two large corridors in their respective cities. Other capital projects underway in Grand Rapids include the redevelopment of a parking lot into a park and the new Grand Rapids Downtown Market. This large, multiuse development will feature a permanent indoor/outdoor farmers market, a shared commercial kitchen to support start-up entrepreneurs, and a rooftop greenhouse. Funding was made possible by combination of capital funds through the Grand Rapids Downtown Development Authority and private funds provided by the civic organization Grand Action.

New staff positions and programs were also created from these plans. Philadelphia was able to hire the aforementioned local food systems planner as well as a public relations specialist to promote Greenworks. Raleigh hired a transportation planner to evaluate pedestrian access to transit stops. The new TreePhilly program gave away trees to city residents in Philadelphia to plant on their private property. In Fort Worth, the Mayor's Fit Worth initiative promotes 15-minute walking breaks at work and provides technical assistance for creating healthy work places. Chino has a similar program run through the Chino Health Coalition called Chino Walks, which gives out pedometers and has kids track their steps to reach far-flung destinations. The Healthy Chino Coalition also has a program to activate stairwells to encourage people to use the stairs.

The areas addressed by the above-mentioned implementation mechanisms strongly correspond to what respondents cited as the main priorities in their plans: open space, land preservation, biking/walking, food and nutrition, access, parks, healthy buildings, stormwater management, tree canopy, farmers markets, and health and human services. Largely missing from this list are services directly addressing mental health, crime, and brownfield redevelopment. This could signal a lack of focus and champions for these latter categories, both inside and outside the public sector. It could also be that people speak to what they have made the most progress on and what is fresh in their minds. If a jurisdiction had a focus in their plan on pedestrian improvements and has done a lot of work filling in sidewalk gaps and building new sidewalks, they could choose to mention that issue as an initial priority rather than something that has not had as much traction.



Fort Worth's bike share program launched in April 2013 with 30 docking stations and 300 bikes. Bike share systems capture commuter data that can be tracked and evaluated to assess progress made on physical activity goals and environmental objectives. (Credit: City of Fort Worth/ Planning and Development Department)

Monitoring and Evaluation

- *Build evaluations and regular updates into plan implementation programs*
- *Revisit goals and objectives based on progress updates and emerging trends*
- *Ensure that plan indicators and metrics can be tracked over time when setting a baseline and targets*

A common trend across almost all jurisdictions interviewed is that there is some kind of evaluation mechanism written into their plans. These evaluation mechanisms either call for an annual report to be issued or for the plan to be updated on an annual or semiannual basis. The most proactive plan updating encountered was in Fort Worth, where they update certain sections of the plan and the appendices annually. Baltimore County and Dubuque are on a longer schedule of updates. While Baltimore County updates its plan every 10 years, Dubuque undertakes an update every five or six years. Baltimore County also issues Quarterly Subdivision Reports that document approved development plans and permits to the state. Grand Rapids, Philadelphia, and Raleigh issue yearly progress reports, with Philadelphia being the most precise at measuring the success made in meeting the targets set in Greenworks. The competitive nature of sustainability plans, which can often be used to showcase the accomplishments of current political administrations, likely contributes to this. The only jurisdiction that did not mention a specific follow-up mechanism for its plan was Chino; however, the Health Coalition there reports quarterly on its goals and the progress made on them.

As mentioned previously, Raleigh's city manager evaluates progress made toward implementing the city's comprehensive plan as part of the overall evaluation of every department head. Similarly, Plan Maryland, a statewide comprehensive plan, mandates that every county meet certain objectives every five years, providing another way of monitoring progress

Annual progress reports are published to track the targets set in Greenworks Philadelphia. These reports outline the actions the city has taken to implement the plan and update statistical figures to see how close the city is to achieving its targets. Targets and indicators can be adjusted based on feedback or changing circumstances but any adjustment must be justified, since the progress reports are publicly accessible. In this way the city is held accountable to the goals it set in Greenworks and to the continued tracking of their progress.

on Baltimore County's plan. Having that kind of high-level monitoring or mandate goes a long way toward ensuring that the goals in these plans are implemented.

Part of monitoring and evaluating a plan's progress toward its goals or objectives must be flexibility. It is important to be open to adjusting the initial data used to track progress as well as adjusting the stated goals based on data found. Grand Rapids initially used baseline data for tree canopy that wasn't easily measurable over time. Raleigh found that its transportation department had been developing its internal priorities from different population projections than other departments and was able to rectify this in the planning process.

Frequent evaluations of plan goals also allow for jurisdictions to change policies or priorities if they are not achieving their intended results. They also allow departments to adjust goals based on emerging trends and critical issues. In Raleigh the evaluation of department heads allows them to explain why certain goals and policies in the comprehensive plan have or have not been met and, if there is a justified reason why the goal should be adjusted or removed, to make an argument for that. Philadelphia adjusted various goals and policies in Greenworks after it became apparent that the initial goals described did not quite capture the intent. For instance "access to local food" was later changed to "access to local, healthy food".

Conclusion: Strengths and Areas for Improvement

Strengths

The strongest areas jurisdictions in this study identified were their abilities to leverage diverse funding streams, their interdepartmental collaboration and partnerships with community groups and private organizations, their focus on active living and food and nutrition as health priorities, their understanding of the huge impact health-related goals and policies have on equity, and their ability to build in updates or progress reports to track the implementation of plans.

All jurisdictions utilized a combination of diverse local, state, and federal grants and donations. They also leveraged community support by allowing community organizations to take ownership of various aspects of plan implementation. The planning process itself brought a number of government departments and nongovernmental groups together and presented an opportunity to engage in conversations and collaborative work. Many jurisdictions formed interdepartmental working groups as part of the planning process, or collaborated on creating health-

SEATTLE HEALTHY LIVING ASSESSMENT – Collecting and Applying Public Health Data during the Planning Process

In the Rainer Beach neighborhood of Seattle, public health data was collected during the planning process for a small area plan. This was done through a Healthy Living Assessment (HLA) that included a framework, indicators, a questionnaire and asset mapping. The HLA process allowed data to be collected on the local neighborhood level, a geographic scale where data is not normally captured. Planners in Seattle asked neighborhood residents to map their neighborhood assets and how they commuted to them. Maps were then produced showing these community gathering places and the linkages between them. To find out more about the HLA process in Rainer Beach, go to www.seattle.gov/dpd/cityplanning/completenesslist/rainierbeach/background/default.htm.

related policies through the formation of local health coalitions such as the ones in Baltimore County and Chino. Overall, the interdepartmental collaboration was strong in all case studies and was a key reason why health was included holistically in their respective plans.

Policies in plans and respondents strongly addressed both active living and food and nutrition as health priorities. Equitable access plays a huge role in both of these areas and jurisdictions understood this and focused on it. Raleigh installed sidewalks with an eye toward equity and access to transportation and services; Fort Worth pushed for full-service grocers in areas that lacked healthy food options; Dubuque brought health services to low-income communities; and Philadelphia included access goals for parks and healthy food.

Finally, the periodic updates many jurisdictions are mandated to do through state law, and the progress reports built into the tracking and evaluation of these plans, are encouraging signs. Every jurisdiction mentioned some way that progress on plan implementation was periodically evaluated. Some, such as Raleigh and Philadelphia, allowed for adjustments to their goals and policies through this evaluation. These periodic evaluations and adjustments make the plan a living document that has the ability to change as circumstances dictate.

Areas for Improvement

There were a number of areas found that could be addressed more robustly in future efforts. Many of these deal with

the collection and use of data. The planning process could better integrate public health data and apply it during the development of plans so that plans include numerical targets. This would help track progress, direct resources, and guide efforts. Although it can be difficult to evaluate the effects of plan policies and implementation measures on public health, since individual behavior is a key variable to consider, data can inform specific policies from the outset, justify their need, and be used to garner community support and financial assistance. Sharing data among departments, especially between health and planning departments is a key step that can be taken.

Conducting surveys that are representative of residents and utilizing citizen assistance in data collection at the outset of the planning process could also be addressed more robustly. Very few jurisdictions made any mention of a survey and those that did, such as Chino, did not necessarily mention whether this was used to determine the health priorities addressed. There are a number of new technologies available for planners today to assist in citizen engagement (e.g., Textizen, Wiki maps, SurveyMonkey) that can help capture and store feedback and data. Philadelphia widely deployed Textizen during its Philadelphia2035 comprehensive planning process, but jurisdictions did not mention the use of these techniques during outreach and data collection for the plans profiled in this report.

Most jurisdictions did not schedule public meetings specifically focused on health. Instead, many focused on other aspects that impacted health, such as transit-oriented development. In future efforts, it could be beneficial to organize particular meetings on public health so that citizens have a greater opportunity to shape these priorities.

Finally, the health priorities that were not robustly addressed, such as Emergency Preparedness and Social Cohesion and Mental Health, could be integrated and highlighted more clearly as public health issues. Many of the plans addressed these issues, but did not make their connection to public health clear, either in the plans themselves or in interviews.



A local strawberry vendor at Raleigh's popular downtown farmers market. (Credit: City of Raleigh/ Department of City Planning)

RECOMMENDATIONS AND ACTION STEPS

The following recommendations and action steps are taken from the case study findings and analysis presented above. Written from the perspective of a planning department as the agency charged with leading development and implementation of a comprehensive plan, they aim to provide jurisdictions with a menu of strategies for the successful inclusion of public health throughout all stages of the process. Recommendations are given under each of the nine key elements identified in this report.

Champions

Look for existing community champions and partner with them

- Seek out organizations and groups that are doing work that could inform healthy planning (active transportation groups, housing advocates, interfaith groups, community gardeners, community centers, gyms, schools, environmental groups, hospitals, and health care organizations, etc.)

Groom champions from within government

- Enlist the support of departmental directors and political leaders
- Hire health department and planning department staff who have experience, educational training, or a demonstrated understanding of the connections between the two fields; in particular, those with joint degrees in urban planning and public health
- Recruit a planning commission member or members with a special interest/expertise in public health

Seek funding to build champions

- Look for funding that can be dedicated to health purposes (e.g., hire new staff, support the work of health coalitions)

Context and Timing

Take advantage of opportunities as they present themselves

- Be aware of the work other departments are doing and their effects on community health
- Institute regular interdepartmental updates
- Monitor grant opportunities and state and federal initiatives
- Integrate multiple efforts underway to leverage positive effects on health

Use plan updates to create partnerships and steer the focus toward health

- Institute interdepartmental working groups
- Organize interdepartmental group discussions or one-on-one meetings, both formal and informal, to share information and support partnership building
- Assign ongoing collaborative tasks that address health



Various Baltimore County Departments, including the Department of Environmental Protection and Sustainability, the Department of Recreation and Parks, and the Department of Planning, have worked closely with the land trust Neighborspace to help conserve open space within the Urban Rural Demarcation Line. In 2012, a new Neighborhood Commons Zoning Overlay District Ordinance was adopted. This new ordinance allows certain land within the URDL to be designated as open space, protecting it from future development.

The county also has a formal joint use agreement among all Baltimore County public schools and county parks. This agreement has been in place since 1952, with the result being that most school recreation facilities offer an impressive and enticing environment for student recreation and physical activity. Currently, there are over 160 spaces that serve this dual role as education and recreation facilities.

Outreach

Educate departments about the connections between planning and public health when involving them in the comprehensive planning process

- Reach internal consensus across departments on the terms that will be used to discuss different health interventions
- Learn and share the lingo of data and statistics between planning and health departments

Educate the general public about the benefits of addressing public health through planning

- Start outreach and education early to promote understanding of connections between planning and health
- Use easily understandable data and images (e.g., maps, photos, charts) when talking about health to the public
- Bring in national experts to present to city leadership and the public on the importance of planning for public health
- Approach health through language that appeals to residents (e.g., quality of life, community character, providing choices)
- Discuss the benefits of health interventions that resonate most with residents

Involve community stakeholders in meaningful ways

- Draw on preexisting community resources for public health (e.g., organizations with a health-related focus, hospitals and clinics, educational institutions)
- Listen to and involve community groups and other nongovernmental partners from the earliest stages of plan preparation and assign them clear responsibilities, especially regarding health-related policies
- Create working groups, citizens advisory committees, health coalitions
- Invite community leaders to be on health task forces
- Create new groups with health-based missions as part of the plan

Health Priorities

Explicitly address health in designing the comprehensive planning process and the structure of the plan itself

- Encourage participants in the planning process to consider a range of issues in setting health priorities, including less obvious ones such as disaster planning, public safety, and mental health
- Include a chapter explicitly on health and weave health goals and policies throughout all chapters

Solicit input from local or county health departments on all chapters of the plan to ensure that health is addressed throughout

- Invite health department representatives to planning meetings and to sit on advisory boards
- Send drafts of plan to health department representatives

Data

Assess current gaps in local data

- Compile data from other departments prior to setting targets
- Determine indicators that will be used to track progress on health objectives

Make data gathering a part of outreach process

- Conduct Community Health Needs Assessments or baseline community inventories and use this data to set specific targets
- Encourage local health coalitions, working groups, and task forces to assist in the collection and tracking of data
- Consider the use of statistically valid surveys to help determine public health needs and priorities

Ensure that all departments use common data sets integrating planning and public health sources

- Reach out to local or county health department to share/collect data
- Develop an integrated data inventory and analysis with indicators of citywide and community health status drawn from various sources

Tie goals and objectives in plan to available data that are trackable over time

- Write specific data tracking responsibilities into plan and include numerical targets and indicators

Collaboration

Institutionalize collaboration in the planning process and implementation

- Form interdepartmental groups or task forces focused on improving public health
- Enlist support of department heads in the planning process
- Assign collaborative implementation tasks through the plan
- Build progress reports into the plan and track health indicators
- Require frequent updates to plans so that departments maintain relationships

Constantly look for opportunities to partner with other departments and organizations outside of municipal government on projects to promote public health

- Share resources and health data among members of working groups and task forces
- Work with other departments on grant applications for health-promoting initiatives
- Bring health to the table in regional and other initiatives involving multiple partners
- Build links with universities that teach Healthy Community Design and Health Impact Assessment courses

Funding

Be proactive in pursuing diverse sources of funding for efforts addressing public health

- Hire or designate staff in the planning and health departments to identify sources of funding for health-oriented initiatives
- Look to federal, state, and local funding streams
- Identify dedicated funding streams that can be used to implement health-related programs and projects proposed in the comprehensive plan
- Consider proposing assessment fees or developer fees and directing these toward projects benefitting public health

Partner with community groups and the private sector on fundraising

- Use health data and plan goals and policies to strengthen funding applications
- Leverage private sector resources through public/private partnerships

Prioritize limited funds to target health-oriented initiatives

- Find ways to use non-health-focused funding streams to promote positive health outcomes
- Align capital improvement plans or programs with comprehensive plan goals

Vision North Texas is a regional plan for the entire north Texas region, encompassing the city of Fort Worth. It was developed through the NCTCOG's Center of Development Excellence which is guided by principles including Pedestrian Design, Activity Centers, Environmental Stewardship, Efficient Mobility Options, and Healthy Communities. Through the process of working together regionally on a plan that embraces a healthy future for the region, state, county, and city representatives from various departments have come together to forge relationships around public health. Fort Worth has been able to leverage these relationships to assist and inform the development of its own comprehensive plan and its focus on public health.

Implementation

Institutionalize health-related goals and objectives within decision-making processes

- Enforce plan policies through regulatory changes
- Include language in plan policies to provide clear direction for development reviews and other decisions by governing bodies

Implement comprehensive plan goals and objectives through more detailed planning initiatives

- Include health goals in other types of plans (sustainability, food systems, departmental, small area, neighborhood, etc.) to ensure overlap and consistency
- Ensure that all policies, codes, and subsequent plans reinforce comprehensive plan objectives by tying these processes together

Address regulatory and organizational barriers to implementation

- Tie zoning and regulatory code updates to goals and objectives set in the comprehensive plan
- Establish an interdepartmental working group and address comprehensive goals and objectives in departmental work plans

Give communities ownership over implementation by involving them early and meaningfully

- Let them lead community presentations on certain topics
- Make sure the goals and objectives of their work were determined by them

Monitoring and Evaluation

Build evaluations and regular updates into plan implementation programs

- Include plan implementation responsibilities in departmental evaluations
- Require annual update reports on plan targets met
- Review progress in implementing the plan annually and conduct larger updates every two to five years

Revisit goals and objectives based on progress updates and emerging trends

- Allow departments to explain why they think a goal, objective, or action should be changed
- Adjust actions, indicators, or numerical targets based on progress and feedback

Ensure that plan indicators and metrics can be tracked over time when setting a baseline and targets

- Talk to other departments to find out what data are already tracked and readily available
- Test metrics to assure that they promote the desired results
- Assign clear data collection, tracking, and monitoring responsibilities
- Include capital projects as implementation measures in the plan as a way to show progress

A NEW MODEL TO INTEGRATE PUBLIC HEALTH INTO THE COMPREHENSIVE PLANNING PROCESS

Figure 2. Comprehensive Planning for Health Process Model



Comprehensive plans are typically prepared through a process organized around three basic questions:

Where Are We Now?

What are the key conditions, issues, and trends that impact the jurisdiction now and will impact it in the future? This phase of the process involves inventory and analysis of data related to the topical areas of the comprehensive plan (land use, transportation, etc.), coupled with input to determine what citizens perceive to be the key issues for the future of their community.

What Do We Want to Be?

What is the long-range vision (typically 10- to 20-year time frame) for quality of life improvement in the jurisdiction? This phase of the process engages citizens in defining a vision of positive change (compared to the likely results if current conditions and trends continue), supported by goals for the plan’s topical areas or themes.

How Do We Get There?

What action will we take to achieve the vision and goals? In this final phase of the process, policies, strategies, and specific actions are defined that the jurisdiction and its implementation partners will carry out over time to move toward the community-defined vision.

Mirroring these three phases in an ideal planning process, effective comprehensive plans:

- Are based on robust data and analysis of existing conditions, trends, and issues;
- Reflect meaningful community engagement to define the issues and articulate a shared vision for the future; and
- Include an accountable implementation component that defines timelines and responsibilities for action, as well as procedures for monitoring and evaluating progress.

Based on analysis of the seven in-depth case studies addressed in this report, along with the larger pool of 22 plans evaluated for the previous report, a new process model is recommended for consideration by communities that are beginning a comprehensive plan or other type of planning process. As previously noted, one of the key research findings is that plans including a Public Health Element typically place greater emphasis on public health throughout the plan than those that do not include such a chapter. The recommended model builds on this finding by encouraging communities to conceptualize public health as a fundamental motivation for the entire plan (not just one element) and to consider how it can be addressed in each of the three stages of the plan development process as defined above. It also draws from a component of public health practice—the Logic Model or Theory of Change—by integrating plan development with organization, implementation, and evaluation in a larger framework or ongoing process of change. This process model was informed through resources available from The Community Tool Box (see References).

Note: While designed for a comprehensive planning process, the model shown here can also be applied to a sustainability plan or other type of plan, such as a neighborhood plan.

Fairmont Park, Philadelphia (Credit: City of Philadelphia/ Mayor's Office of Sustainability)



Appendix 1. Community Profiles: Case Studies of the Seven Jurisdictions

The following seven case studies were selected from the 22 plans evaluated in the previous phase of this report. These seven case studies stood out as geographically diverse and all received high marks in the various categories of public health that were reviewed. They include six cities and one county, and six comprehensive plans and one sustainability plan.

Following initial outreach to the planning directors of each of these jurisdictions, APA scheduled initial interviews with a member or members of the planning department. At the conclusion of these interviews, additional contacts in other government departments or nongovernmental organizations were suggested and APA then pursued interviews with these individuals.

Respondents included representatives from planning departments, transportation departments, parks departments, environmental departments, consulting agencies, health departments, community organizations, philanthropic foundations, and hospitals. In total, APA spoke with 31 respondents over the course of 24 interviews between January and March 2013.

Interview questions focused on the genesis of integrating public health into the plan, the various causes and partners involved in collaboration around health goals and implementation work, and accomplishments that have achieved public health benefits since the plan was adopted. Respondents were also asked how the implementation of health goals has been or will be funded, and if any changes to city or county legislation have been made as a result of the plan.

The following narratives are a summation of the information obtained from each of the seven case studies. This information was compared and analyzed to find emerging patterns, strategies, and challenges that make up the findings and recommendations presented in this report. All information comes directly from respondents unless otherwise noted.

Baltimore County, Maryland: Master Plan 2020

Champions, Context, and Timing

Baltimore County is located in the northern part of Maryland and is home to a population of 805,029, as of the 2010 census. The county is a unique home-rule jurisdiction that has no incorporated towns, thus all policies are countywide. Since the Baltimore County Planning Board approved the creation of the Urban Rural

Demarcation Line (URDL) in 1967, land preservation and growth management have been central themes of the county's master plans. The URDL separates the exurbs of Baltimore City, located in the inner portion of the county, from the rural and agricultural land to the north. Land is zoned for different uses inside and outside the URDL and the county provides no sewer connections or other infrastructure assistance for developments outside the URDL. This has had the result of maximizing the efficiency of county revenues on infrastructure in urban areas and preserving important natural and agricultural resources in rural areas. Ninety percent of the county's population has resided within the URDL for at least two decades. The dense development within the URDL has spawned efforts to promote more neighborhood open spaces for quality of life.

The Baltimore County Department of Planning is required to update the county's master plan every 10 years. In November 2007, an interagency committee was formed to draft the county's most recent plan, Master Plan 2020. This committee, under the leadership of the county executive and county council, included representatives from the departments of Environmental Protection and Resource Management, Public Works, Recreation and Parks, Community Conservation, Economic Development, Permits and Development Management, Aging, Health, and Planning. The county's school and library systems were also involved in the master planning process. Once a draft was written in 2009, the planning department sent it to county officials, agencies, and the general public for review and comment. During the feedback process, health department staff encouraged the county to promote public health throughout all elements of the master plan.

Statewide legislation in Maryland also ensured the incorporation of various health policies in Baltimore County's Master Plan. Statewide Smart Growth legislation, passed in 1997, informs all local policies. In 2011, Governor Martin O'Malley endorsed PlanMaryland, a statewide planning effort that sets benchmarks and targets for each county. Every six years, each local jurisdiction is required to report to the state on how its local plan and implementation efforts meet the goals and policies laid out in PlanMaryland. Although PlanMaryland was not yet in effect at the time that Master Plan 2020 was adopted, the goals and objectives of Master Plan 2020 must be kept in concert with those outlined in the statewide plan. The State Agricultural Stewardship Bill of 2010 also had a slight effect on Master Plan 2020. This legislation requires every county to designate a certain amount of land for preservation and easements. Baltimore County has been at the forefront of doing this, and continues to reiterate its efforts. Master Plan 2020 calls for at least 80,000 acres to be preserved.

At the same time outside groups were advocating for policies that addressed various elements of public health. NeighborSpace, a nonprofit land trust created by the county council in 2003 and funded through developer fees, promotes and preserves open space within the URDL. It works closely with the Department of Environmental Protection and Sustainability and the Department of Recreation and Parks and has also reached out to the Planning Department on occasion. The Valleys Planning Council and other conservation/preservation groups, land trusts, and community groups do similar work outside the URDL to preserve the rural experience and land uses within a 130 square mile area in the northern county. Bike advocacy groups were also engaged, calling for more bike infrastructure and the development of pedestrian and bike access plans for both sides of the county. The Eastern Baltimore County Pedestrian and Bicycle Access Plan had previously been adopted before Master Plan 2020 and the Western Bicycle Pedestrian Plan was adopted subsequent to it. In Baltimore County, anytime a local or community plan is adopted, it is considered a part of the Master Plan and is mentioned in the appendix. The county council officially adopted Master Plan 2020 on November 10, 2010.

Outreach

Before Baltimore County planners presented Master Plan 2020 to the public for feedback, they engaged other departments to ensure that they would present issues in ways that were sensitive to the desires of these departments. NeighborSpace helped organize separate outreach and education around preserving green space within the URDL. It connected with residents by talking about whether they had a place to walk their dog or for their children to play. Its website features a video showing the history of land development in the county and it organized experts to speak to community members and developers. Ed McMahon, from the Urban Land Institute, gave a presentation on creative ways to incorporate green space into infill development.

The department of planning led a robust and inclusive public engagement effort, organizing a series of community meetings in different regions of the county. These meetings were followed by an ample period of time for public comment, and then, a public hearing. Every community meeting began with an introduction to the goals of Master Plan 2020, which all impact public health: “continue the success of growth management”; “improve the built environment”; and “strengthen resource conservation and protection” (Baltimore County 2010: i).

Collaboration

Collaboration between the health and planning departments had taken place prior to the development of Master Plan 2020.

In 2008–2009 the county established an Interagency Council on Aging, made up of representatives from the Social Services, Aging, and Health departments as well as the Office of Community Conservation, to plan for issues affecting the county’s aging population. It quickly became apparent that these agencies had many similar interests and that they should be working together on issues that stemmed beyond aging, including housing, community development, and lead abatement programs. As a result, the county consolidated the human service agencies, the Office of Community Conservation, and the Office of Planning to create the Department of Planning, which overtook all of the previous agencies’ responsibilities.

At the end of 2011, the Maryland Department of Health and Mental Hygiene, as part of its state Health Improvement Process, required all county health departments to create and lead local health coalitions. The county health director invited hospitals, academic institutions, nonprofits, physician groups, faith groups, and other county departments, including the department of planning to join the coalition. The legislative mandate proved to be an effective tool to bring together stakeholders to determine the goals and policies of the health coalition.

The Health Coalition determined strategies and action steps to meet its core priorities of reducing the proportion of young children and adolescents who are obese from 12 percent to 11.3 percent by 2014, and reducing the incidence of low- and very low-birth weight among babies born to black women by 10 percent by 2014. Various departments were assigned to partner on each action step. The recreation and parks and planning departments partnered on an action step to promote the location of community areas for free exercise. The recreation and parks department also partnered on action steps to encourage Baltimore County Public School students to volunteer in programs that focus on reducing childhood obesity, explore collaboration with local professional and collegiate sports teams, and create neighborhood events for exercise. The planning department has also provided useful geographical data to the health department to help it decide where to place limited resources.

The the departments of planning and public works, bicycle advocacy groups, the recreation and parks department and the health department have also been doing extensive work around bike trails. They are building on previous efforts including adoption of both the Eastern and Western County Pedestrian and Bicycle Access Plans. The county has begun construction on a four-mile Bike Beltway in Towson with dedicated bike lanes and “share the road” signage. It was recently awarded a state grant to expand the project by 4.5 miles (Meoli 2013).

The health department now receives grants from the department of planning to provide nursing care in the shelters. The health department has also worked with the planning department on lead abatement initiatives and testing of children and the fire department on scenario trainings and CPR certifications for county employees. During the H1N1 outbreak, the health department worked closely with a number of partner agencies and departments, both public and private, to vaccinate the population. Libraries have also helped promote new health programs and initiatives and are a key partner to have at the table due to their ability to educate the public.

The police department has partnered with the recreation and parks department to run nine police athletic league centers throughout the county that provide recreational sports leagues for at-risk youth. The county also has a formal joint use agreement among all Baltimore County public schools and county parks which has resulted in enhanced school recreation facilities at public schools. Currently, there are over 160 spaces that serve this dual role as education and recreation facilities.

Nongovernment groups have also been heavily involved in efforts around Master Plan 2020. When NeighborSpace first started out, it collaborated mostly with the department of environmental protection and sustainability and department of recreation and parks. However, more recently it has reached out to the Planning Department, inviting representatives to attend board meetings and meeting separately with county planners.

Health Priorities

Public health is enshrined in the introduction of Master Plan 2020, which states, "Policies and actions proposed herein will promote public health, safety, morals, order, convenience, prosperity and the general welfare". There is a strong push throughout the plan to promote transit-oriented development in community enhancement areas (CEAs). While the concept of CEAs isn't new to Master Plan 2020, more emphasis was placed on redeveloping these areas to make them more compact, walkable and transit-accessible while incorporating a mix of uses. The plan also discusses the ecological health of the Waterfront in its Vibrant Communities element and calls for "using a variety of methods to protect and restore wildlife habitat and regenerate ecological capacity where it has been lost. It should promote design guidelines that consider the diverse architectural styles found in the region while utilizing sustainable practices and materials, and provide continual education including inter-jurisdictional cooperation" (Baltimore County 2010: 87).

The public health benefits of protecting the county's water resources are a focus of the Sustainable Environment element. The plan also acknowledges that "A balanced economy is needed to provide a healthy place to live, work and play" and that "Forests and trees improve public health, provide recreational opportunities, and enhance urban living" (Baltimore County 2010: 137 & 171). There is also a Public Safety and Health chapter under the Community Services element that mentions the need to work collaboratively across multiple departments to ensure public security and well-being. One of the specific policy items under the Public Safety and Health chapter is to "promote outdoor physical activity in all regions of the county, in collaboration with appropriate county agencies" (Baltimore County 2010: 118).

Funding

Diverse sources of funds were used to implement the various policies and action in the plan. A number of state and county programs have provided traditional funding for land preservation over the years, which has been used to meet the goals of Master Plan 2020. These programs include the Rural Legacy Program, the Maryland Land Preservation Foundation, Baltimore County's Land Preservation Program, and Program Open Space. Program Open Space allows state and local government to acquire land to be preserved as recreational and open space for public use. However, funding for this program was largely cut in the FY2013 state budgetary cycle. Other funding has been leveraged by local organizations and private individuals. According to one respondent, roughly one-third of protected property in the county is preserved through personal donations.

The Gunpowder Valley Conservancy has been awarded grants from the National Fish and Wildlife Foundation, Chesapeake Bay Trust and REI to fund its work on stream restoration and tree planting. It has also been able to recruit a significant number of volunteers to help keep labor costs low. The Maryland Department of Health and Mental Hygiene received a Community Transformation Grant in FY2011, which it has used to create the Healthiest Maryland Initiative. This initiative recruits business, education, and community partners throughout the state to promote public health and develops resources to adopt and implement wellness policies. Baltimore County was also selected as a recipient of HUD's Office of Healthy Homes Lead Hazard Reduction Demonstration Grant Program Plan, which directly incorporates components of Master Plan 2020.

Implementation

A number of plans, including the Eastern and Western Pedestrian and Bicycle Access Plans, the County Library Plan, and the

Recreation and Parks Master Plan, have been adopted by the county that deal with health and either informed the inclusion of goals and policies within Master Plan 2020 or were a product of those goals and policies. The department of planning also developed a Local Consolidated Plan for HUD that addressed job opportunities for low-income individuals in the county and an Agricultural Profitability Report was a citizen-led effort to stimulate local food production. The department of health has also developed a “My Neighborhood” website that displays information on neighborhood health amenities such as fire stations, schools, and health centers. It plans to add neighborhood parks and trails to the website in the near future. The recreation and parks department has been actively promoting walking and active recreation, regularly incorporating path systems in new park development. It is also currently looking for locations for indoor recreation centers, to support more places for physical activity for youth.

The local Health Coalition has partnered with schools on childhood obesity prevention, encouraging more schools to participate in the Alliance for a Healthy America. It paid for a speaker to talk to all physical education teachers in Baltimore County about the physical activity component of learning. The coalition has focused significant attention on low birth weight babies, and has worked with private hospitals and federal qualified health centers to share best practices related to prenatal care. Mental health providers, who are part of the coalition, have been very active in outreach to the intractable homeless. Finally MDQuit, a separate coalition working on tobacco prevention, has been aggressively advocating for hospitals and campuses to go smoke-free.

Outside groups are also driving the county's efforts to implement many of the goals laid out in the Master Plan. In 2012, NeighborSpace was instrumental in helping to create the new Neighborhood Commons Zoning Overlay District Ordinance, which allows for the designation of certain land within the URDL for open space preservation. NeighborSpace is also currently working on a new strategic plan to improve the livability of the first-tier suburbs, conserve land, and raise money. The land trust is partnering with the National Park Service in this effort to identify opportunities for land conservation through GIS mapping. The hope is for this strategic plan to be adopted into the county's Master Plan.

Implementing the Master Plan has not come without challenges. State legislation focuses heavily on rural conservation and restricts most new development to occur inside the URDL. This densification of development has limited open space for residents there. Also, while the county has made significant progress in adopting a number of bike plans, little bike infrastructure exists to date.

Additionally, the Master Plan does not specifically discuss the tools it will use to support the development of walkable communities and provide opportunities for physical activity in community enhancement areas. There has also been NIMBY opposition to new trails, as some residents believe they will bring crime. The recreation and parks council has also opted for all-purpose courts instead of outdoor basketball courts. While these new courts still offer an opportunity for physical activity, they have isolated some user groups.

Data, Monitoring, and Evaluation

Every county in Maryland is required to develop a new Master Plan every 10 years and provide an update to the state every five years on the implementation status of its plan's goals. Furthermore, additional accountability measures for every county in the state are built into PlanMaryland, and compliance is evaluated on a six-year basis. Projects in Baltimore County are also consistently evaluated through the eyes of the community, as community input is required in the development review process.

MasterPlan 2020 uses data from a number of different departments including public works, recreation and parks, environmental protection and resource management, and the office of information technology. This data is used to map ecologically impaired areas, tree canopy, greenways, fire stations, schools, health centers, and libraries. The local Health Coalition tracks and reports quarterly on measurements including the amount of readmission for diabetics, number of overweight kids, number of smoking adults, population percentages of various chronic disease, the number of kids on low and reduced meal plans, and Medicaid population by zip code. This data gives the county the opportunity to evaluate statistical change over time and can also provide justification for the public health goals and policies in Master Plan 2020.

Respondents:

Barbara Hopkins, director, NeighborSpace

Lynn Lanham, chief of development review,
Department of Planning

Della Leister, deputy health officer, Baltimore County
Health Department

Wally Lippincott, Jr., land preservation manager, Department of
Environmental Protection and Sustainability

Patrick McDougall, planner, Baltimore County Recreation and
Parks

Lloyd Moxley, Senior Planner, Department of Planning

Kui Zhao, AICP, Demographer and Master Plan Manager,
Department of Planning

Chino, California: *Envision Chino*

Champions, Context, and Timing

The City of Chino has a population of 78,050 (U.S. Census 2011). It sits near the southwest corner of San Bernardino County, roughly 35 miles east of Los Angeles. Chino is a city that went through a series of changes due to the development of three major state freeways. Between 1940 and 1960, the Corona Expressway (State Route 71, now known as the Chino Valley Freeway) and Riverside Freeway (State Route 91) were built, connecting the city to Southern California's burgeoning network of highways. This led to a rapid increase in housing development and population as the city became a bedroom community for the region's workers. In the early 1960s, State Route 60 (the Pomona Freeway) also opened, further tying the city to the larger region. From the 1980s onward, land use shifted from agricultural to industrial and warehouse distribution, which has continued to the present.

A 5,200-acre development site, known as the Preserve, was annexed into the city in 2003. The master developer of the site announced his vision to turn it into a new urbanist community that embraced development standards for healthy design. At the same time, the planning department was preparing to update the city's General Plan for the first time since 1981. The fact that such a large development project was actively promoting healthy communities had a significant influence on the focus and priorities of the city's General Plan.

In 2004, the city council voted to form a Healthy Chino Coalition to address the national health epidemic. The coalition's initial meetings were funded by a \$5,000 grant from California Healthy Cities and Communities, a statewide philanthropic organization. Private donations were also provided by the developer of the Preserve. These meetings brought together insurance companies, faith-based groups, hospitals, local government departments, and the county health departments of San Bernardino and Riverside. Representatives from the planning department were brought into Healthy Chino Coalition meetings as well and the coalition played a key role in shaping many of the health goals and policies of the General Plan.

During the initial phase of the planning process, the Healthy Chino Coalition brought attention to fitness statistics from the California Department of Education's Standard Fitness Test showing that, in the 2005–2006 school year, 91 percent of 5th, 7th, and 9th graders in Chino were not meeting the state's physical fitness standards and that 45 percent were overweight or obese. These statistics added an urgency to significantly address health in the city's plan update. Chino's General Plan was adopted in 2010. It was written in

collaboration with the consulting firm Design, Community & Environment, which has helped draft a number of plans throughout California that have a strong focus on public health.

Outreach

The Chino Planning Department did extensive community outreach leading up to its General Plan update in 2010. In 2006, it proactively went to the community, setting up booths at various community events and including a newsletter about the plan update in monthly utility bills. Surveys with general questions regarding resident levels of satisfaction and the importance of various city services were circulated at community events and meetings to determine the key concerns of Chino's residents. Visual preference posters were also presented, showing images of different housing types and density levels. A positive finding of this outreach was that most residents were already very happy with the city and the services provided. However, most also preferred the existing land uses and enjoyed their single-family homes. This created a challenge for Chino's planners since they wanted to encourage physical activity through the development of denser, more walkable neighborhoods. One way in which the city attempted to address this was to develop specific neighborhood centers where denser development that adhered to the principles of smart growth would be concentrated.

The city found that when approaching the issue of public health with citizens, it is best to present healthy messages in a fun and enjoyable way instead of telling people the best way to live or listing the ways in which their living habits are harming their health. In addition, a large public meeting was held where Dr. Larry Frank, director of the Health and Community Design Lab at the University of British Columbia, gave a presentation on the connection between land use, obesity, and physical activity. This presentation from an outside expert made clear the connection between health and planning for many individuals working on the General Plan.

Collaboration

The planning department selected a 20-member steering committee with individuals representing various community interests. At the same time, the Healthy Chino Coalition brought together 60 representatives from all city agencies, insurance companies, faith-based groups, hospitals, and the county health departments of San Bernardino and Riverside to discuss how to make Chino a healthier place to live. The director of the department of public works and the city manager attended these meetings. The consultant group, Design, Community & Environment, contracted to design Chino's General Plan, was also very interested in health and they worked to incorporate the goals of the Healthy Chino Coalition into the General Plan update.

A number of lessons were learned from initial outreach and collaboration. One was to be realistic about timing. Educating the community and other city agencies about the connection between health and the built environment takes time, as does building the necessary relationships for collaboration, so planners should start seeking partners and initiating cross-departmental conversations early and always be prepared for partnership opportunities as they arise. Additionally, targeting specific stakeholders through focused outreach is a more efficient and effective strategy than general outreach to everyone. It is also important to make sure community champions are dedicated to carrying out implementation.

Health can be a conduit for involving new stakeholders in the planning process. Many departments and organizations became involved in the General Plan process through the Healthy Chino Coalition meetings. Prior to the coalition's meetings, these actors did not have much knowledge of the General Plan. The planning department was also proactive about sharing data, literature, and news articles across departments, making a concerted effort to highlight information that would be particularly relevant to each. Previous relationships with community groups also proved effective in gaining the support of the city council. Respondents mentioned that it is best to go before the city council with a strong coalition of community groups and with data to justify proposed policies and interventions.

Health Priorities

The result of these efforts was a General Plan update that includes a strong focus on community health. The Healthy Chino Coalition greatly influenced these goals and policies through its five focus areas, all dealing with public health: fitness, health and human services, nutrition, public education, and safe and walkable neighborhoods. The third chapter of the General Plan, after the introduction and vision chapters, compiles all of the health-related goals and policies found throughout the entire plan, making them easily accessible to the reader and helping to emphasize the plan's focus on health.

Many specific objectives relate to the infrastructure that promotes physical activity, air quality, and healthy residential environments. The development of neighborhood centers also features prominently in the plan. This ties into the Transportation Element, which is focused on creating complete streets and a comprehensive network that includes bicycle, pedestrian, and equestrian infrastructure. The Parks and Recreation Element includes a focus on equity, looking at the underserved areas of the community and mapping where new parks could be located. A new focus on a larger number of small, three-acre parks will allow more residents to have easy access. Many of the health-related goals and policies that

deal with the built environment, such as encouraging mixed use, pedestrian friendly design, were packaged within the Community Character Element.

Funding

After an initial \$5,000 planning grant from the California Healthy Cities and Communities program of the Center for Civic Partnerships, the city financed a new position in the Community Services Department dedicated to implementing the goals and policies of the Healthy Chino Coalition. The coalition also received three-year funding from Lewis Development, the same company that is developing the Preserve, and the city budget allocates general fund dollars to it annually. Small, in-kind donations, such as administrative support and medical equipment, are often received from hospitals, and three subsequent grants from the California Healthy Cities and Communities program have been awarded. This support has allowed the coalition to effectively continue its programs but it has been a challenge to find additional funds that would allow the coalition to expand.

Implementation

Unfortunately, the implementation of this plan was held up due to an unexpected lawsuit brought against the city by an environmental group charging that the plan failed to adequately address climate change and GHG emissions and did not comply with the California Environmental Quality Act (CEQA). After a year and a half in court, an agreement was finally signed for the city to develop a Green Building Program and a Climate Action Plan to address these concerns. A Green Building ordinance was passed in late 2012 and the Climate Action Plan must be completed by the end of 2013.

This lawsuit was not the only challenge the city has faced in the development of this plan. Measure M has also been a large barrier to overcome. This is a voter-initiated growth control measure that freezes the city's land-use plan as of 1988, which severely limits the possibility to construct multifamily housing on built-out land and infill sites. This forced the General Plan update to be creative in how it addressed a healthy livable environment that would still provide mixed use, denser development. Where one path toward better health was blocked (increased density through building multifamily housing), efforts had to be made to pursue the larger goal of a healthier city through other policies (policies to support pedestrian and bike infrastructure). To address this issue, the General Plan includes an additional land-use map showing the city's vision for future land uses on parcels that would require a Measure M referendum. This gives property owners included on the map an indication of the types of uses they could incorporate into future plans, and provides some procedural assistance to help

them implement the city's vision.

Due to the setbacks suffered from the CEQA litigation, the planning department has focused on other avenues to pursue its goals. Pedestrian access has been encouraged on new development projects through the development review process. This process acts as a negotiating tool to help planners influence new development. The General Plan provides the legal backing for this as there is a policy calling for stronger pedestrian connections between commercial and residential areas.

In the Preserve, development standards are geared toward the policies of the General Plan, so building a community there that embraces public health goals is a much simpler task. Developers are required to assist in the construction of a planned community trail and the city is working with local mass transit providers to develop a transit loop that will connect the Preserve to other parts of Chino.

Tying the Preserve into the rest of Chino's built environment is a challenge. The Preserve sits in the southeast corner of the city limits, where it is geographically removed from the rest of Chino by a state prison that occupies three square miles and has no roads running through it. Thus the transit loop is a significant project since it addresses the Preserve's current status as an outlier and offers the opportunity to connect it with the rest of Chino's residents.

In other efforts, the city's community services department, which runs Healthy Chino, has implemented a number of programs that promote healthy communities. It has partnered with school districts to get healthy food into schools and has provided healthy cooking and gardening workshops for community members. It also started the "Chino Walks" program, through which individuals can sign up to receive a pedometer to record steps and join group walks to help meet distance targets set by the city, such as "walking to the moon." The Healthy Chino Coalition has also developed a "Rethink your Drink" campaign to address sugar-sweetened beverages. However, the coalition operates independently, mainly in the role of creating programs and events, not policy. Once the city starts implementing policy, it will be up to planners to be more involved with the coalition. When the city has more resources, it plans to engage more with the coalition.

Even though the city has been somewhat constrained in what it has been able to do thus far to implement the plan, development in the city has started to make a comeback. Although much of this is greenfield development, due to the strict limitations imposed by Measure M, the city has tools to shape this new development to be more conscious of its impact on public health. There are plans to

develop a transit loop within the Preserve that will have a dedicated transit lane. Developers are required to construct the right-of-way improvements when their development site is adjacent to the streets where the transit loop will be located. While the line will not be built for some time, these developments are setting the stage for a healthy transit system in the future. California also recently passed a Cottage Food Bill that allows people to prepare food items in their homes to be sold in local markets, promoting the production and development of local food systems.

Along with this there has been an effort to encourage the availability of healthier foods in stores. Traditionally cities have not been involved with regulating the type and quantity of goods sold in stores. Therefore, communicating with individuals and private interests about changing habits and encouraging certain items to be sold, such as healthy foods, poses a significant cultural change and unique challenge. Typically there are three distinct forms of regulation that affect businesses: business licensing, health inspection, and zoning. However, all are handled by separate agencies and none have the specific authority to regulate healthy food availability. The policy in Chino's General Plan says store owners "should" provide healthy options, but there is no existing legislation to enforce this.

However, respondents noted that it can be tough to implement change in a community where most people are happy with the status quo. Also, while the Healthy Chino Coalition has been great at developing new programs to impact behavioral patterns, there is still a need for strong community and city champions of health in the built environment.

Data, Monitoring, and Evaluation

The initial push for Chino to begin addressing public health was driven by obesity and physical activity reports for children. Much of the health data used to inform the planning process came from the California Health Interview Survey. This state-level phone survey involves a random sampling of adults, children, and adolescents and asks questions related to health status, individual behaviors, and access to health care services. Results are then broken down by zip code, providing a more precise and useful geographic boundary for evaluating Chino's health than the county level health data that most cities typically have access to.

As city departments, community organizations, and the Healthy Chino Coalition have begun implementing policies and programs to address these statistics, they are tracking progress in various ways. The community services and planning departments sit down annually to look over each of the Healthy Chino Coalition's five key focus areas, compiling accomplishments for the year as well

as outlining goals to accomplish over the next year. Community services staff tracks the progress of its programs and reports this information to the Healthy Chino Coalition quarterly. School districts have also helped by supplying the city with data on children with diabetes and helping to track childhood obesity and physical activity. Nongovernmental partners are also helping with data collection. The University of Southern California is currently conducting a five-year study on the Preserve area that will be completed this September measuring the effects of smart growth development principles on obesity rates and individual and social behaviors. The city has found that having solid data to back up proposed policies is crucial to gain political support.

Respondents:

Dahlia Chazan, AICP, senior urban planner, ARUP (formerly of Design, Community & Environment)

Tina Cherry, community services manager, City of Chino

Martha Hernandez, community services coordinator, City of Chino

Nick Liguori, deputy director of community development, Community Development Department, City of Chino

Linda Reich, director of community services, City of Chino

Dubuque, Iowa: Dubuque's 2008 Comprehensive Plan

Champions, Context, and Timing

Following an economic downturn in the late 1980s, Dubuque's city council identified citywide strategic planning as one of the ways to keep the economy stable and advance a successful future. In 1990, the city council passed an ordinance initiating an annual goal setting process, splitting the Zoning and Planning Commission into two separate divisions, and defining by city code that the three pillars of sustainability (economic, environmental, and social) would guide the organization of the comprehensive plan. Health was identified as an element under the social pillar.

During this same period, Dubuque began working on a health planning process for the first time. 1990 was the first year that the federal government began its Healthy People initiative, an effort to promote health at the city and regional levels. As part of this initiative, the Dubuque County Health Department created Healthy Dubuque 2000, a Health Improvement Plan (HIP) that included a Community Health Needs Assessment (CHNA). The planning process for Healthy Dubuque 2000 brought together the county and city health departments and the city planning department, and a close relationship developed that has strengthened over time. Using contributions from hospitals and an outside grant, the county health department was able to hire a planner to assist with the development of Healthy Dubuque 2000.

Every five years Dubuque County updates its Community Health Needs Assessment and Health Improvement Plan. During these efforts, the city health department leads a community-wide discussion with stakeholders. On the same cycle, the planning department updates the Dubuque's Comprehensive Plan and can feed off the efforts of the CHNA & HIP updates. This has led to a strong public health focus in Dubuque's comprehensive plans ever since the 1990s.

Outreach

For the development of Healthy Dubuque 2000 in the mid-1990s, the health department had funding to do extensive outreach, including a detailed community survey. Apart from this effort, however, the department has had relatively little success with community engagement. The planning department generally has more resources to do outreach than the health department, but still experiences low interest by the general population to engage in the planning process. Dubuque's 2008 Comprehensive Plan includes Dubuque's Sustainability Plan, and was an effort that involved robust outreach. The city received technical assistance from the American Institute of Architects on planning for a sustainable future, formed a citywide Sustainable Dubuque Task

Force, and conducted nearly 900 community surveys in the years leading up to 2008. Through this effort, 11 Sustainability Principles were chosen to guide Dubuque's future planning efforts.

The planning department also created the new position of community engagement coordinator. This position is tasked with developing a community engagement process aimed at engaging people who have not previously been involved in citywide planning efforts. Local health stakeholders are one key group that the department hopes to engage through this new position. The planning department tries to engage stakeholders from service organizations who have expertise in the needs identified in each element of the plan. During the 2008 comprehensive planning process, an alliance of mental health service providers consistently attended community meetings and city council hearings, making their case heard. These efforts led to mental health being given additional attention in the Health element of Dubuque's comprehensive plan.

Collaboration

Through the process of creating Healthy Dubuque 2000, the city and county health departments and the city department of planning began working closely together. A number of outside stakeholders were also influential in this process, in particular Mercy Medical Center. The relationships forged from this initial collaboration have endured and additional partners have joined through subsequent efforts such as Sustainable Dubuque and the work of the Sustainable Dubuque Task Force. The Parks and Recreation Department, hospitals, and the Dubuque Visiting Nurses have all been key partners in periodically updating the CHNA & HIP.

The length of tenure of many city staff has also led to strong partnerships. Many respondents we talked to have been with their respective agencies since the beginning of the Healthy Dubuque planning process in the mid-1990s and partnerships have been maintained and strengthened over time. Health has been a useful link to create partnerships both during the planning process of the comprehensive plan and in its implementation.

The use of data makes it easier to document the need for intervention, which can help motivate collaboration. Thus, there is a necessity to track and document data. Local health departments can be key partners in collecting and tracking data. They can also provide input on various sections of the plan, not just the Health and Human Services elements. Air and water quality, environmental hazards, food safety, and disaster preparedness were some topics mentioned where consultation with local health departments would be beneficial. Local schools are also key partners to include when addressing community health, as they offer convenient ways

to reach youth and parents in various neighborhoods. Schools are addressing health through wellness programs that promote nutrition and physical activity. The Dubuque Community School District is also formatting a health and fitness assessment to be given to all elementary, middle, and high school students throughout the district (Dubuque Community School District 2013).

Health Priorities

Dubuque's 2008 Comprehensive Plan is made up of a policy statement, goals, and objectives for each element. The goals and objectives make reference to other local plans thereby pulling those plans into the comprehensive plan. For example, the comprehensive plan references the School District Plan, the CHNA & HIP, and the Bicycle Master Plan.

If goals are interrelated throughout multiple plans, they help reinforce one another. When the comprehensive plan was drafted, its goals and objectives were vetted through topic experts, such as social services or health care experts, who helped craft language for the city council and the planning commission to adopt. Many of these experts worked on the Healthy Dubuque planning process as well. The result is extensive interconnectedness between Healthy Dubuque 2000 and the 2008 Comprehensive Plan, particularly a focus on access to health care.

Priorities have evolved since Healthy Dubuque 2000, which was developed concurrently with the city's 1995 Comprehensive Plan. Mental health has been given added attention in the 2008 Comprehensive Plan, due to the involvement of mental health advocates throughout the plan updating process. Additional public health goals and policies have been included in elements throughout the plan, but are most concentrated in the Environmental Quality, Human Services, and Health elements. There is also a strong focus on walkable, livable neighborhoods and equity throughout the plan.

In many ways, public health and equity are intertwined. In Dubuque's comprehensive plan, equity has been addressed via issues of access and affordability. The Human Services element in particular addresses equity by promoting access to services for everyone. These services include healthcare, housing, economic development, and family self-sufficiency. According to our respondents, Dubuque is committed to making sure people don't fall through the cracks.

One major takeaway that our respondents mentioned was that timing played a significant role in the incorporation of public health into Dubuque's comprehensive plan. During the time of Healthy Dubuque 2000, the 1995 comprehensive plan and

an extensive community inventory and visioning process were unfolding. This allowed health to factor significantly into the planning and visioning process for the city. Likewise, from 2006 to 2008, the city was updating its comprehensive plan at the same time that it was conducting a robust outreach and engagement process for Sustainable Dubuque. The principles developed as part of Sustainable Dubuque were incorporated throughout the 2008 Comprehensive Plan and address many public health issues including “Green Buildings”, “Healthy Local Food”, “Reasonable Mobility”, “Healthy Air” and “Clean Water”.

Funding

Dubuque received funding from a number of different sources to develop and implement its comprehensive plan. By documenting the need for health care access and other services over the years in the city’s comprehensive plan and the county’s CHNA & HIP, Dubuque was eventually able to receive funding to implement measures that would address this need. It used radon, air quality, and asthma data from its CHNA & HIP and comprehensive plan updates to secure funding for a Federally Qualified Health Center. It also utilized similar data in its application for a Green and Healthy Homes grant from HUD and used obesity data from the CHNA & HIP to apply to become a Blue Zone Community. The planning department also used the city’s comprehensive plan to receive trail funding. The YMCA received an ACHIEVE grant from the Centers for Disease Control and Prevention (CDC) to carry out some of the work called for in Dubuque’s 2008 Comprehensive Plan. Dubuque County also received a Community Transformation Grant (CTG) from CDC in 2011 and created a Wellness Coalition made up of public and private partners to assist in the allocation of these funds and develop health and wellness programs throughout the county. As part of the work tied to this CTG funding, the city and county will work together to install bike racks around the city over the next three years.

Implementation

Dubuque has achieved notable successes in implementation. It passed stronger ordinances requiring the building of sidewalks to fill gaps in the pedestrian network and updated its unified development code to include the building of more trails and recreation areas, designating areas for conservation in the design of new subdivisions, and preserving agricultural land. The city also recently completed a bridge over Highway 52 to connect downtown Dubuque to the Heritage Trail, making it much easier for city residents to use the trail to bike ride and partake in other physical activities. The city has also participated in the Green and Healthy Homes Initiative, retrofitting old homes to make them more energy efficient and healthy to live in.

Often, it is left up to local communities to implement the goals and priorities outlined in the comprehensive plan. The plan can be used as a tool to launch private projects that lead to improved community health. The Wellness Coalition has led an array of programming aimed at promoting healthy behaviors. Local organizations have also used the goals of the comp plan or the CHNA & HIP as documentation to substantiate a need to promote or pass policies, establish new initiatives, or win grant funding. Mercy Medical Center cited the CHNA & HIP in its application to Trinity Health for a Call to Care Grant and received \$444,936 over three years to finance a diabetes case management program at Crescent Community Health Center in Dubuque.

Through its efforts to implement health-related goals and policies in its comprehensive plan, Dubuque found that it pays to create partnerships. Respondents mentioned the success of joint use agreements between schools and parks as well as the benefits of partnering with community groups for health promotion and programming. Respondents also mentioned that, since health-related work involves preventing things from happening, it can be challenging to get people to notice when you are doing your job well. They also mentioned the need to go beyond individual programs and institutionalize policy change to create a lasting impact on the city.

Data, Monitoring, and Evaluation

Data from the county’s CHNA & HIP updates has been used to inform the policies, goals, and objectives of concurrent city comprehensive plan updates. Much of the data compiled in the CHNA & HIP is provided by the city, county and state health departments. Every three to four years the CHNA & HIP is updated and there are yearly progress reports sent to the Iowa Department of Public Health. One to two times per year, department leaders involved in the CHNA & HIP are brought together to discuss progress made and future areas to focus on. The Comprehensive Plan is also updated on a five- to six-year cycle and many of the goals and objectives under the Health element directly support those expressed in the CHNA & HIP.

Data has also been used as a driver to promote change. Alarming rates of binge drinking were discovered during the Healthy Dubuque 2000 planning process and the city and county rallied around this issue. The result was a substance abuse coalition that worked with colleges to implement changes and stricter enforcement of alcohol consumption. Frequent, concurrent updates of plans allow departments to take advantage of emerging trends and critical issues brought about by new data discoveries.

Respondents

Laura Carstens, planning services manager, Planning Services Department, City of Dubuque

Art Roche, director of planning, Mercy Medical Center

Mary Rose Corrigan, public health specialist, Health Services, City of Dubuque

Dr. Charlie Winterwood, retired pediatrician/former planning commissioner

Fort Worth, Texas: Fort Worth's 2012 Comprehensive Plan

Champions, Context, and Timing

Fort Worth is a large and sprawling city, with an area of 350 square miles and low levels of multifamily housing (only 2.2 percent of its housing stock). Twenty-seven percent of land in the city is vacant and the population is projected to double in the region by 2050 (City of Fort Worth 2011). The history of incorporating public health in Fort Worth Comprehensive Plan goes back to 1998. That year, a new planning director was hired who had a personal interest in bridging the gaps between planning and health. At the same time, the comprehensive plan for the city was outdated and in need of an update. In preparation for the plan update, a large community outreach effort was initiated with assistance from Fort Worth's city health department. By 1999, the city had produced a draft table of contents for the plan which included a Public Health chapter.

At the regional level, there was a concurrent focus on air quality, regional transportation, and tracking vehicle miles traveled at the North Central Texas Council of Governments (NCTCOG). This interest came largely from federal Congestion Mitigation and Air Quality Improvement funding used to meet requirements of the Clean Air Act. In 2000, Fort Worth adopted its new comprehensive plan, but the public health chapter was rather limited in scope, addressing specific local public health concerns such as high rates of infant mortality among low-income groups rather than development patterns and ways to promote healthy lifestyles.

In the early 2000s, the NCTCOG created the Center of Development Excellence to help shape a prosperous future for the region. The center developed 12 Principles of Development Excellence including many that incorporate healthy planning, such as Pedestrian Design, Activity Centers, Environmental Stewardship, Efficient Mobility Options, and Healthy Communities. In 2005, the NCTCOG launched Vision North Texas (VNT), an effort that brought together public and private stakeholders throughout the region to plan for a sustainable and healthy future. Fort Worth's planning director and Tarrant County's director of public health were both heavily involved with this effort and formed a close working relationship.

In 2006, new staff in the Fort Worth Planning and Development Department began pushing for the city to become more involved in regional transit issues and active living. In 2008, the local health department of Fort Worth was cut due to budget issues and most of its responsibilities were shifted to Tarrant County Public Health. Tarrant County Public Health already had a comprehensive vision for the county which included assessing development patterns

and providing alternative transportation and access to local healthy foods. Once the local health department was dissolved, the county was asked to anchor the city's Public Health chapter.

Recent regional efforts have continued to keep the focus for the future on health. Health industry representatives have been involved in recent Vision North Texas planning sessions and VNT committee members co-organized an event with the University of Texas at Arlington and the Urban Land Institute in February 2013, where Richard Jackson, chair of environmental health sciences at UCLA's School of Public Health and former director of the National Center for Environmental Health at the Centers for Disease Control and Prevention (CDC), spoke about the connections between health and the built environment.

Outreach

When Fort Worth began preparing for the 2012 update to its Comprehensive Plan, the city used the 12 Principles of Development Excellence created by the Center for Development Excellence to inform the plan and used the tagline "Better than business as usual." Social media was used to reach out to the public and the plan was discussed at the yearly meetings of all 16 planning sectors in the city and at occasional town hall meetings. Significant outreach was made to neighborhood associations, community groups, and the business community. Focus groups and neighborhood meetings were held on various topics including passenger rail and the development of future rail sites. There was heavy community interest in active recreation and the development of new community rec centers.

Despite their robust efforts, city staff interviewed for this research still found it difficult to get many groups to attend their meetings and to convey the message that the demographic change projected in the region means that land use and development patterns must change. Holding smaller meetings and modifying presentations based on particular audiences were some strategies that proved more effective. Staff also found that what was intuitive to them was not necessarily intuitive to the general public. Thus, it was helpful to not assume anything and being clear and consistent with the vocabulary they used. They also found it useful to discuss the multiple benefits of certain development decisions. When talking about transit-oriented development, they bundled together economic development and livability goals. Transit-oriented development provides a mix of housing choices, concentrated development, a reduction in vehicle miles travelled, an improvement in air quality, and the ability to walk to numerous destinations.

Collaboration

When the 2012 Comprehensive Plan was being drafted, the city council's goals set the stage. Each individual department was tasked with developing the specific objectives for its respective areas of oversight and then implementing those objectives. A senior planner helped to coordinate all of these departmental efforts to ensure that they aligned with one another and were not duplicative. Many departments looked to the planning department for leadership and guidance on new development trends and the planning department tried to educate others about the adverse effects of sprawl.

Throughout the plan-updating process, the planning department consistently engages city council members and the zoning and planning commissioners through its Plan Progress Reports. These reports were instituted by Fort Worth's planning director brought on in 1998 and are biannual reports that look back on the previous two years, reporting on progress made in specific quantifiable categories and also look forward to identify future priorities for the city.

There were a number of past connections that encouraged strong collaboration between departments in the development, drafting, and implementation of Fort Worth's Comprehensive Plan. In 2007, the planning department merged with a separate development department. In 2010, the program management office also merged with the planning department. This brought in new staff members who had previously handled large interagency projects with the Texas Department of Transportation, North Texas Toll Way Authority, NCTCOG, Fort Worth Transportation Authority, Trinity Vision River Authority, and the Regional Water District. A number of city council members and planning department staff also sit on NCTCOG's policy body and have collaborated on its regional efforts.

There have also been some new initiatives that are bringing together different partners. Fit Worth, an initiative kicked off by Fort Worth's Mayor in 2011, brings together the University of North Texas Health Science Center, Tarrant County Public Health, and various school districts in an effort to promote healthy lifestyles. The state government has also been involved in obesity prevention, hosting an annual conference on the topic.

Tarrant County Public Health has been a critical partner promoting strong collaboration around health. The fact that the department's office is actually located in Fort Worth has enabled consistent communication with the city's planning and development department. The director of Tarrant County Public Health recently received her PhD in urban planning and sees the ability for health to be woven into every line of planning documents. When the Fort

Worth Comprehensive Plan was being drafted, the planning and development department sent a copy to Tarrant County Public Health. The department was able to review the document and expand on many areas to provide a more explicit focus on health. According to respondents, the earlier health is at the table, the better. Health Impact Assessments are often conducted too late in the process. They said health should be front and center before you commit to a development concept.

Respondents cited numerous challenges and strategies to effective collaboration. Getting departments out of their silos was a huge challenge. Since each department is held accountable to its own list of priorities, it can be hard to get them to focus specifically on public health. Cost is also a major challenge. Many developers contribute to sprawl due to the relatively low land costs of greenfield, suburban development. The city is working with developers to try to build relationships and promote more development inside city lines. By focusing on dense urban development the city hopes to attract future employers and nurture a strong employment base in the area. Transit-oriented development has proved to be an effective area for collaboration between departments because it can combine economic development, competitiveness, and attractiveness to businesses with public health goals. More success was found when linking public health to areas where other departments were already working and focusing on topics they cared about. The frequent updating of the comprehensive plan also led to consistent collaboration because it made the plan a living document that was evaluated and adjusted regularly.

Responding to disasters is another great way for partnerships to form. In designing a prevention strategy for West Nile virus, various agencies worked together to do mosquito surveillance and were able to successfully protect the region and limit the spread of the virus. Partnerships can also form when applying for grants, even when those grant applications are not successful. When Tarrant County Public Health and the Fort Worth Planning and Development Department worked together to apply for a Community Transformation Grant, so many promising ideas came out of this collaborative effort that, even though they were not awarded funding in the end, the departments decided to go ahead and pursue these ideas on their own.

Health Priorities

Health goals and policies are included throughout Fort Worth's Comprehensive Plan. The urban village program includes 24 mixed use growth centers that are intended to create dense, walkable, pedestrian and bike-friendly nodes of activity that revitalize certain areas throughout the city and accommodate growth. There is a strong focus on multimodal transportation and mixed use,

transit-oriented development throughout the plan. The Tex Rail Transit Project is a huge undertaking to link southwest Fort Worth, downtown, and the DFW Airport. The airport already links up with the Dallas Area Rapid Transit network, so providing connectivity from Fort Worth would enable a seamless regional network of transit connecting Fort Worth and Dallas.

Fort Worth's plan also includes a standalone chapter on Public Health. This chapter emphasizes the importance of development patterns to people's health, calling for more miles of bikeways and at least three annual multimedia campaigns promoting alternative modes of transit to single-occupancy vehicles. There is also a focus on health inspections and trainings to prevent the outbreak of food and waterborne illnesses. Maps of health care centers, farmers markets, and community gardens are also provided in the chapter.

Funding

Fort Worth is currently applying for a Federal Transit Administration New Starts grant to help fund the Tex Rail Transit Project. Funding has already been received from the NCTCOG for regional transportation improvements. The YMCA in Fort Worth also received a Pioneering Healthier Communities Grant from the Centers for Disease Control and Prevention. The "Live a More Colorful Life" nutrition program is funded through a state grant that helps provide access to fresh fruits and vegetables.

Implementation

Fort Worth has a number of strong goals and objectives set out in its comprehensive plan and has made significant progress on many of them. The city has made a concerted effort to tackle obesity, asking a number of organizations to craft policies for active design in the workplace. Schools, businesses, and government agencies have all been involved in stairwell and sidewalk initiatives. Healthy vending initiatives have also taken place in schools and government facilities. The city has also worked to actively recruit full-service grocery stores to low-income food deserts and expanded its farmers market ordinance to allow for the sale of items other than fresh fruits and vegetables. New items allowed include fresh meats, cheeses, eggs, and baked goods. This fits in with the urban village concept, allowing consumers to meet more of their dietary needs at the market. The new ordinance also doubles the amount of time that a vendor permit is valid without raising the cost.

Tarrant County Public Health has promoted the harvest, storage, and preparation of fresh fruits and vegetables through the Live a More Colorful Life program and has a task force in place to advance more livable, walkable communities. A representative from Fort Worth's planning department participates in the work of the task force. As part of the Pioneering Healthier Communities Grant, the

YMCA has formed an Obesity Prevention Policy Council that is conducting a Community Health Needs Assessment for a Health Improvement Plan.

One particular challenge mentioned in regard to bridging the gap between health and planning was the lack of interest in planning among general health department staff. Although the director of Tarrant County Public Health clearly sees the connections between health and planning, general department staff do not always view their work so holistically. According to respondents, the need for health department staff to be focused on meeting the specific deliverables of grants, may limit their ability to engage in larger interdepartmental projects.

Data, Monitoring, and Evaluation

The requirements to complete yearly updates of the comprehensive plan and provide biannual Progress and Priorities Reports to city council have put Fort Worth at the forefront of capturing data and tracking progress to show its success. Most of the comprehensive plan appendices include data that are updated on an annual basis. The Progress and Priorities Reports require a list of all capital improvement projects completed over the previous two years to show what has been done with city funds. The city also aims to conduct a Community Health Needs Assessment every five years, although, due to a lack of funding, the last one was completed in 2003.

Most of the health data used comes from Tarrant County Public Health, which conducts its own Behavioral Risk Factor Surveillance System (BRFSS) survey. This local operation of the BRFSS is unique and allows officials in Tarrant County to have access to focused, detailed, and high-quality health data. The department uses the health impact pyramid to assess interventions and focuses specifically on socio-economic status. A Health Research Team was created during the Vision North Texas process that helped identify key health indicators and measurements to assess the built environment.

Respondents

Lou Brewer, director, Tarrant County Public Health

Dana Burgdoff, deputy director, Fort Worth Planning and Development Department

Eric Fladager, AICP, comprehensive planning manager, Fort Worth Planning and Development Department

Scott Hanlan, assistant code compliance director, Fort Worth Code Compliance Department

Jack Tidwell, manager of environment and development, NCTCOG Environment & Development Division

Grand Rapids, Michigan: Green Grand Rapids

Champions, Context, and Timing

Grand Rapids, Michigan, is a city of 189,853 residents with a strong presence of community groups and local foundations. The city is located within one of the top five agricultural counties in the state with a robust regional food system. From 2000 to 2002, the city undertook its first master plan update in 40 years, which resulted in rezoning 40 percent of its land from industrial to mixed use.

By 2007–2008, a number of factors beyond the city's control led to the necessity for a new partial update to the plan focused on preserving a green and sustainable future. These factors included constrained economic times due to the Great Recession, an emerald ash borer infestation causing massive losses to the city's tree canopy, and rising fuel prices. Vacant and undeveloped land in the city was also decreasing and there was an active interest in expanding recreational use of the Grand River. The new update that developed out of these factors focused on promoting alternative modes of transit, restoring the city's tree canopy, and providing green infrastructure solutions. It was known as Green Grand Rapids and was adopted by city council in 2011.

Outreach

During the outreach process for the 2002 Master Plan update, the city tried to combat a lack of community trust with a robust outreach effort. During this effort, the city went to every neighborhood and presented maps, asking residents to highlight what they would like to see changed in the places they lived. This extensive outreach was crucial to rebuilding trust between the city and various communities and was carried forward during the Green Grand Rapids update.

Planning department staff developed new and innovative techniques to follow up on their successful 2002 outreach efforts. The centerpiece of this approach was a game developed in house called "Green Pursuits." The game included question cards and an answer booklet for residents to record their responses as well as a city map where they could mark areas in need of green infrastructure interventions. Volunteer citizen planners organized groups to play the game, which could take place in any living room across the city. "Green gatherings" were then held to talk about what was learned from the game and to identify community champions to carry certain policies forward. During this process, there was a conscious effort to use "quality of life" instead of "public health" when talking about the benefits of green interventions, since "quality of life" was thought to resonate more with residents on an individual level. Out of this process, a number of community

organizations came into existence, including Friends of Grand Rapids Parks, Greater Grand Rapids Bike Coalition, and Grand Rapids Whitewater. These organizations helped shape the goals of Green Grand Rapids and took ownership over certain elements of the plan's implementation.

Collaboration

The Green Grand Rapids planning process brought in a wide variety of outside partners and facilitated greater interdepartmental collaboration. The planning department gave a presentation to a group of health professionals and worked with various businesses to promote active transportation among all employees. The traffic safety department was heavily involved in planning for and promoting alternative modes of transit to the single-occupancy vehicle and parks and active recreation groups collaborated with the city to activate green spaces and natural resources throughout the city. The Grand Rapids Downtown Development Authority also partnered on a number of capital improvement projects that provided significant health benefits, such as the Downtown Market (described in detail below). A number of community partners were also involved through the funding and implementation of the plan.

Health Priorities

Green Grand Rapids focuses specifically on augmenting three of the seven 2002 Master Plan themes. All three—"Balanced Transportation," "A City that Enriches Our Lives," and "A City in Balance with Nature"—have a clear connection with public health. Public health was included in the plan in a number of ways. During the planning process, it was discovered that one-third of Grand Rapids residents didn't drive a personal vehicle. Encouraging multimodal transit then became a core equity issue and took on added significance. The Greater Grand Rapids Bike Coalition, with participation from the city, held a bike summit in January 2012 where the goal of 100 miles of new bike lanes by the end of 2014 was announced. While bike infrastructure had been a hot topic in Grand Rapids for nearly two decades, the conversations held during the Green Grand Rapids planning process matured into looking at ways to better connect neighborhoods, viewing bike infrastructure as an investment in an alternative commuting option rather than trail recreation.

Green Grand Rapids includes a number of additional benchmarks that also serve as targets for the city's 2011–2015 Sustainability Plan. For example: "Develop 4 miles of new sidewalks by 2012; Achieve 100% compliance with water quality permits annually; Eliminate three of the remaining seven combined sewer overflow points by 2015; Achieve 5% pervious pavement in new roads by 2015;" (City of Grand Rapids 2011: 95).

A long-term goal to achieve 40 percent tree canopy in the city came out of the devastation caused by an emerald ash borer infestation on the city's tree population. There is also a goal to develop a comprehensive database of all city-owned urban trees to track maintenance and guide future plantings. Park access is also addressed in the plan. Before the economic downturn, the city was 97 percent built out and faced a lack of open space and parks. Thus, the plan calls for ensuring that all residents eventually live within one-quarter mile of an "accessible" park with a playground. A benchmark was also included to "increase the number of people living within 1/4 mile of a park or open space by 10% by 2015" (City of Grand Rapids 2011: 95).

Although the plan includes a number of measurable goals related to public health, it does not call for measuring any health data associated with them. For example, the tree canopy goal presumes better air quality but does not call for tracking change in asthma rates or other associated public health indicators. This was cited by respondents as a challenge to measuring the plan's success in relation to public health.

Funding

The robust outreach and significant community involvement that helped shape Green Grand Rapids led to a large degree of support for the plan from community residents and local foundations. In 2007 and 2008, planning department staff started raising funds and preparing for the Green Grand Rapids update. A number of foundations were eager to give support due to the perceived community success of the previous Master Plan update. The Wege, Frey, Dyer-Ives, Grand Action, and Grand Rapids Community foundations as well as the Grand Rapids Downtown Development Authority and the city of Grand Rapids all committed funds to this effort. The Frey Foundation provided roughly half of the total funding for the plan update process.

At the end of 2008, the city realized that it would not be able to provide the necessary funding to implement many of the goals being developed in the plan. This led to stronger ties being forged with community champions and local organizations and giving them ownership over various aspects of the plan's implementation. Granting ownership proved to be an effective strategy that ensured the continued involvement of various community groups.

The work of these community groups was largely funded by local foundations. It became apparent to city staff that if foundations invested in the initial outreach and drafting of a plan, they were more likely to invest in its implementation. Green Grand Rapids thus presented a framework for developing and prioritizing funding requests. Knowing that there was strong political will behind the

goals and policies outlined in the plan, foundations were more willing to donate money to proposals that addressed them. The Dyer-Ives Foundation set aside \$5 million to disperse among various grant requests. Implementation of Green Grand Rapids was one of three categories that were eligible for funds. Respondents found that having immediate, quantifiable next steps helped secure funding from foundations since they provided accountability and evaluative measures. The city also made sure that its connections with local leaders remained strong, since foundations would not invest in places where there was not strong community support for the proposed intervention.

Not all implementation funding had to be procured from the private sector, however. The city allocated \$58,000 toward the implementation of new bike lanes and adopted a plan to put more general revenue into tree planting. Planning department staff also creatively leveraged a variety of funding sources to bring the goals of Green Grand Rapids into action. These funding sources included brownfield redevelopment tax credits, Community Development Block Grant (CDBG) funds, HUD Sustainable Communities dollars, state grants, Michigan Department of Natural Resources trust fund dollars, neighborhood special assessments, and local foundation grants. Key to the city's success was to ask for smaller amounts of money from a number of different sources. For example, the Michigan Street Corridor Plan, a million-dollar undertaking, used 17 different funding sources.

One major challenge for Grand Rapids is that there is no dedicated park funding in the city. After the creation of Friends of Grand Rapids Parks, the Grand Rapids Tree Coalition and Wege Foundation contributed funding to support its work. Diverse funds have also been used creatively to make improvements on parks. Combined sewer overflow dollars from the Environmental Services Department were leveraged with CDBG funds to redesign Joe Taylor Park to be an attractive community gathering place as well as provide stormwater mitigation and storage. Friends of Grand Rapids Parks was also supported by a "Parks Alive" sponsorship program where private entities sponsored certain amenities in parks and had their donations fully matched by the Steelcase Foundation.

Finally, neighborhood organizations do their own planning in Grand Rapids and the city provides \$5,000 toward each plan. Any additional funds must be raised by the neighborhood organizations themselves. The goals of these small area plans must be in accordance with those of the city's comprehensive plan.

Implementation

A number of projects in Grand Rapids have sprung up out of the goals and policies of Green Grand Rapids that have provided

clear public health benefits. One favorable example of this was the renovation of Joe Taylor Park in the Baxter neighborhood, a low-income African American neighborhood with a lack of decent park space and high rates of crime. After residents in the neighborhood selected an entire 16-block area of their neighborhood as an area they would like to see change, the city sent a team of representatives from various departments to do a walk-through. The area included 30-tax reverted lots, 13 double-frontage lots, and only three houses left standing, with one of these set to be demolished. The idea to renovate and expand a poorly used park in the center of this area gained support as a potentially transformational intervention.

At the same time, the city was in the process of separating its combined sewer line and the location chosen for the park was an ideal place for the storage of stormwater runoff from the surrounding 40-acre subwatershed. The city was then able to leverage combined sewer overflow dollars from the environmental services department to aid in the construction of the park. CDBG and philanthropic funds were also used. With these funds, a new two-acre extension with a splash pad was added to the renovated park. The water from the splash pad was recycled and used for irrigation. This was the first park in 17 years to be expanded. Currently the city is developing a brand new park on a 2.2-acre parking lot and the West Michigan Environmental Action Council is working on a comprehensive regional program for stormwater infrastructure.

Other projects underway include the Michigan Street Corridor Plan, which is a HUD Sustainable Communities grant project, and a \$2.2 million effort to rebuild the Fulton Street Farmers Market. In December 2012, a Health Impact Assessment was completed on the Michigan Street Corridor Plan. Additionally, Grand Action, a local philanthropic organization, has teamed up with the Grand Rapids Downtown Development Authority to fund the construction of the new Downtown Market. The market features 30 outdoor and 20 indoor stalls, a brewpub, a wellness center, community meeting rooms, a kitchen incubator, and the country's first community children's kitchen. Goodwill Industries offers food service employment training and the children's kitchen partners with local schools and the health community to provide lessons on healthy food preparation to youth. Downtown Market is also the first LEED-certified market in the country.

The city is also focused on providing multimodal transportation options. The Green Grand Rapids planning process found that one-third of city residents do not have access to a car. In collaboration with the Greater Grand Rapids Bicycle Coalition, the city announced a goal of adding 100 new miles of bike lanes by the end of 2014. So

far the city has added 27 new miles and identified the locations for 34 more. Twenty miles of roads have also been put on road diets and stations are being constructing for a new bus rapid transit system that will be fully operational in 2014.

The city has faced some challenges implementing aspects of Green Grand Rapids, however. Without a strong local food champion, it has been difficult to make headway on local food access. There have also been a number of school closings, which leads to fewer areas for children to play. New bike lanes have also created unforeseen challenges in other areas of municipal responsibility. In particular, former trash pickup sites are now bike lanes, making trash pickup in some neighborhoods more cumbersome.

The success of Green Grand Rapids points to the need for local partners to help implement a plan. It also points to the need to address infrastructure and the built environment. The county health department has been engaged in programming but not the built environment. Furthermore, the entire planning process determines the likelihood of implementation success. According to respondents, it is crucial to involve community members and local stakeholders at the earliest stages of this process. Next steps should be iterative and shaped by citizen desires.

In a number of instances, some of the goals set out in *Green Grand Rapids* do not come under the city's purview to implement. In these cases, the city can incentivize private and community partners to take on this implementation by showing support and removing legislative obstacles. Starting small with human-scale, pilot demonstration projects, such as taking a tree inventory in a single neighborhood, can attract attention and gain support to scale up the project. Successful individual experiences can also prove effective in garnering support for a wider concept. The impact of the initial Joe Taylor Park renovations on its immediate neighborhood led the city to initiate a broader effort to identify park-deficient areas throughout the city.

Data, Monitoring, and Evaluation

Every year, a report card is issued measuring progress made on the benchmarks of Green Grand Rapids. This progress report is then promoted through a public relations campaign by the city planning commission. During the initial planning process of Green Grand Rapids, the planning department collected new baseline data and found that these could be used to launch new organizations and build funding support. However, it also realized that data were most useful when they provided quantifiable measurements that could be compared and tracked overtime. The initial baseline for tree canopy was based on a single satellite image, which did not offer an accurate way to quantify progress and, thus, was not useful.

Once collected, data should be shared with the community to encourage educated discussion and participation.

Respondents

Steve Faber, executive director, Friends of Grand Rapids Parks

Kate Luckert Schmid, program director, Grand Rapids Community Foundation

Susanne Schulz, director, Planning Department, City of Grand Rapids

Chris Zull, traffic safety manager, Traffic Safety Department, City of Grand Rapids

Philadelphia: *Greenworks Philadelphia*

Champions, Context, and Timing

In 2007, the William Penn Foundation funded the creation of the Next Great City Coalition. This coalition brought together over 100 organizations composed of community groups, civic associations, local churches, businesses, and environmental and public health advocates. The goal of the coalition was to define a list of priorities that it wanted the incoming mayor to address. From a series of meetings and workgroups, quality of life and sustainability came up as the main concerns. Particular issues and actions steps that the coalition focused on included replanting neighborhood trees, adopting modern zoning, reducing asthma caused by soot, cleaning and greening vacant lots, and maintaining healthy parks. At the same time, a formal interdepartmental Sustainability Working Group made up of representatives from every city agency and affiliates, including SEPTA (the Southeastern Pennsylvania Transportation Authority) and the school district, had been meeting regularly. Roughly 40 to 60 staff members from various departments attended these meetings. Their work in the 2007 Local Action Plan for Climate Change, outlining a series of steps for the city to take to reduce greenhouse gas emissions by 10 percent by 2010, set in motion a number of the policies eventually included in *Greenworks Philadelphia*.

When Mayor Michael Nutter won election in 2008, he immediately established the Mayor's Office of Sustainability, the director of which is a cabinet-level administrator reporting directly to the mayor. After being formed, the Mayor's Office of Sustainability began drafting *Greenworks Philadelphia*, a sustainability plan for the city that includes a number of goals and policies that address public health. The city looked at PlaNYC and Chicago's Climate Action Plan as models, and wanted to create a multidimensional sustainability plan that stood out. In particular, green jobs and food access were two elements that were not being addressed by other cities at the time; they became key focal points for *Greenworks Philadelphia*. Health department representatives were brought in early on to provide technical capacity; the Office of Sustainability held two meetings with a handful of Health staffers. In addition, there was a strong local food movement already present due to the institutional legacy and work of the Pennsylvania Horticultural Society, and Health Department staff also helped convene members of the Food Policy Council. Aside from food, health was addressed through stream restoration, urban heat island effect, and access to green open space. *Greenworks Philadelphia* was adopted in 2009.

Outreach

Through community plans and the earlier visioning process of

Greenplan, an open space plan that the city began work on in 2006, connections were outlined among walkability, tree canopy, parks, active recreation, green space, sustainability, and health. *Greenworks Philadelphia* and the Next Great City Coalition helped emphasize these connections. Environmental groups also put pressure on the mayor to address environmental health as community advocates called for more green jobs. Much of the focus for the plan came from the bottom up and included feedback from local and national nonprofits, business leaders, and city employees from numerous departments. There was also a nine-month outreach process where staff from the Mayor's Office of Sustainability met with community groups and citizens presenting various elements of the plan.

There was high awareness of *Greenworks Philadelphia* among citizens. Many saw it as a movement and a way to promote environmental justice. In order to reach the most citizens, staff presented the plan in various ways to address particular interests and concerns. For example, the city was able to assuage pushback against the planting of new trees in certain neighborhoods by explaining the benefits the trees would provide for stormwater management to prevent flooded basements. Such explanations provided a more meaningful connection for the residents in those neighborhoods than talking about the environmental benefits of the trees. This also built trust between the city and the residents and allowed the city greater range to discuss other benefits of proposed interventions.

Health added significant value to framing sustainability in Philadelphia. It provided immediate benefits that residents could relate to their individual lives. The city found that describing health and sustainability as "quality-of-life" factors was a good way to engage people. For many people, highlighting the environmental effects of reducing greenhouse gases did not produce the same level of excitement. As the Mayor's Office of Sustainability continues to do outreach for *Greenworks*, part of its job of is to keep people engaged and excited about the plan. The office has found the greatest success for supporting the interconnection of sustainability across policy dimensions comes from tailoring messages to different constituencies based on what will resonate with them.

Collaboration

One of *Greenworks Philadelphia's* main contributions was that it created a place for the exchange of ideas and brought a number of like-minded individuals from various government departments and private organizations together who all cared about climate change, stormwater, clean energy, and health. It provided an informal setting for ideas to be proposed without

a set agenda and helped eliminate competition between departments, allowing for a synergistic discussion.

Staff size, interdepartmental positions, and geographic proximity have all contributed to the level of collaboration around developing and implementing the goals and policies of Greenworks Philadelphia. The Mayor's Office of Sustainability is a very small office, employing only seven people, two of whom work part-time for other departments. There is also a staff position in the city health department, created with support from a Communities Putting Prevention to Work (CPPW) grant, that handles community health planning, food policy, and sits on the planning commission. The Mayor's Office of Sustainability is also colocated in the same office as the planning commission. This proximity has allowed for more frequent conversations between the two departments as the commission works to incorporate many of the goals and policies from Greenworks Philadelphia into its new Philadelphia 2035 Plan.

There were a number of groups and organizations who played a significant role in the crafting of Greenworks Philadelphia and are continuing to carry out its implementation and work toward its targets. The deputy mayor, who at the time was also serving as health commissioner, was very involved in the initial meetings to outline the plan, and in particular directed his staff to assist the Greenworks team with the formulation of the food targets. The Pennsylvania Horticultural Society leveraged their work around community gardens and producing local food, along with the Philadelphia Water Department, which has been a critical partner in food production and stormwater management. The commerce department also provided financial support to food businesses trying to bring healthy food into the city.

While many barriers have been broken down throughout the adoption and implementation of Greenworks Philadelphia, expecting all barriers to disappear, as some individuals did, was an unrealistic expectation for the plan. Greenworks Philadelphia did provide a starting point for many more interdepartmental discussions, however, as responsibility for plan implementation fell to nearly every department in the city. In this way, cross-disciplinary goals can be seen as motivation for interdepartmental partnerships. Furthermore, Philadelphia was uniquely positioned with strong institutions such as the Pennsylvania Horticultural Society and University of Pennsylvania ready and willing to lend support. Because the Mayor's Office of Sustainability adopted a strategy to steer, not row, the result has been greater cooperation among and between government partners to implement plan goals.

Health Priorities

In general, Greenworks Philadelphia is intended to be more of a

framework than a plan. It is split into five sections of sustainability—Energy, Environment, Equity, Economy, and Engagement—and sets specific targets for each section. Many of these targets include goals and objectives that address public health. The goal underlying the Equity section is to deliver more equitable access to healthy neighborhoods. Targets include providing parks and recreation resources within 10 minutes of 75 percent of residents, bringing local food within 10 minutes of 75 percent of residents, and increasing tree coverage toward 30 percent in all neighborhoods by 2025. Other targets address more efficient energy use, reducing vehicle miles traveled, and improving stormwater management.

City staff found that having aspirational goals inspires people but that these larger goals need to be balanced with simple, realistic, and achievable targets to show success. Staff also found that it is good to have both qualitative goals and quantitative targets. Language also matters; the "local food access" target mentioned above was later reworded to become "healthy, local food access" after feedback suggested that the first phrasing did not accurately capture the true intention of the target.

Funding

Funding for the creation of Greenworks Philadelphia and its implementation has come from various sources. The William Penn Foundation provided the initial grant to create the Next Great City Coalition. The Health Department's Food Systems Planner position, as mentioned above, was funded by a CPPW grant from the Centers for Disease Control and Prevention (CDC). The Philadelphia Public Health Department also received a \$1.5 million Community Transformation Grant from the CDC, which is being used to promote smoke-free environments for public housing residents, study the effects of smoke-free housing on smoking and quitting behaviors, and encouraging Chinese take-out restaurants to reduce the sodium and fat content in their foods (Trust for America's Health 2013). The water department received some stimulus money from the American Recovery and Rehabilitation Act (ARRA) to fund various clean energy projects to assist biogas and solar energy production. The city also leveraged its own money to procure private funds to implement Greenworks. For example, Wells Fargo has helped fund the TreePhilly tree-planting initiative launched in 2012.

Implementation

A number of collaborative projects have been initiated to assist in meeting the targets laid out in Greenworks Philadelphia. The Mayor's Office of Sustainability and the department of parks and recreation worked closely together to create Green 2015, a plan that identified five neighborhoods in particular need of additional green space. The city teamed up with the Trust for Public Land

to match schools with recreation centers in these areas and encourage the adoption of joint-use agreements. Joint-use agreements have facilitated new partnerships and allowed asphalt lots to be transformed into new green spaces for play. The transportation, utilities, planning, and health departments are all working collaboratively to put up additional bike signage and establish new bike lanes. The city has also used CPPW money to open ten new farmers markets in underserved neighborhoods. Greenworks Philadelphia's main contribution may have been that it gave political weight to a number of project ideas that had been desired by the community and by city officials but had previously been unable to move forward. Exciting new clean-energy projects in solar and biogas production benefited greatly from the added political support that Greenworks Philadelphia provided. These examples show how laying out health-oriented goals and targets in a comprehensive or sustainability plan give greater credibility to health as an achievable end.

There have also been key political actions and code changes implemented as a result of Greenworks Philadelphia. In 2011, Mayor Nutter signed an executive order creating a Food Policy Advisory Council. The council provided recommendations on hunger alleviation, vacant land, and workforce development. The city also recently completed a massive rewrite of its zoning code which rezoned areas to allow more urban agriculture and put in place as-of-right exemptions to allow solar and alternative energy installations, making it much easier to put solar on rooftops.

New programs have also been initiated to help meet the goals of Greenworks Philadelphia. "Philly Food Bucks," a program run by The Food Trust and the city's department of public health, offers coupons to SNAP (Supplemental Nutrition Assistance Program) recipients to help SNAP funds go further at farmers markets. Every \$5 of SNAP funds spent at a farmers market is matched with a coupon good for an additional \$2 of fresh fruits and vegetables. There is also a prison garden food production program that trains prison inmates on gardening and producing the food that they eat in the prisons. The health department also offers ethnic cooking classes through to encourage a diverse array of healthy meals. The TreePhilly program is working to address the tree canopy target of Greenworks Philadelphia by giving away free trees to city residents and businesses to plant on their property. "Greenworks on the Ground" is a messaging campaign about things that people can do immediately to help Greenworks Philadelphia meet its targets, such as using the on-street recycling and solar trash compactors for trash.

The fact that the Mayor's Office of Sustainability is not in charge

of implementation frees the office to look at higher-level priorities and track policies and processes. When looking at when and where implementation occurs it is important to maintain a balance between a proactive and reactive approach. As opportunities arise it can take time to identify where there is the greatest need to direct interventions. It is important for Greenworks Philadelphia to precede the city's update to its zoning code since this allowed many of the goals of Greenworks Philadelphia to be institutionalized through the new code. Since all the goals set in Greenworks Philadelphia are targeted for completion by 2015, it is crucial to formulate legislation that maintains these policies for future administrations.

One challenge of implementation can be maintaining successful initiatives once put in place. After programs are created and targets are met, engaging citizens to maintain this success could be a challenge. It is also important to look at the complete cycle of solutions. For example, as farmers markets get established in an area, people need to be aware of the benefits of consuming fresh fruits and vegetables before they will become regular customers.

Data, Monitoring, and Evaluation

Perhaps the strongest element of Greenworks Philadelphia is its use of data and tracking. A key element of the plan involved finding data to set specific goals that could be measurable. The baseline data used in Greenworks Philadelphia came from a number of different departments. Much of the data from the Equity section of the plan came from the previous open space plan for the city, GreenPlan. The water department was also a key player in crafting and reviewing metrics and targets. Greenworks Philadelphia gave the department impetus to collect new data and create a universal metric to measure its Green City, Clean Waters initiative.

Greenworks Philadelphia is an active, living document with the ability to adjust goals and targets as results and feedback from the implementation process are assessed. Annual tracking reports on the plan's implementation are distributed publicly. The reports describe the initiatives underway to address each of the plan's goals as well as measure the progress made toward each of the specific targets outlined.

Health measures can be difficult to measure and it takes time to create a system to track numeric targets. However, these targets can be a great way to address issues of equity. The competitive and political nature of sustainability plans lends them to extensive data capture and measurement so that success and progress can be easily shown. Not all targets must be measurable, however. There is benefit to including some "big picture" support measures, such as supporting clear air legislation. It is important to use reasonable metrics when tracking goals. One way to do this is to

get ongoing feedback from those implementing the plan. If targets are unrealistic or not beneficial, they can be adjusted. Even if all targets are met, it does not necessarily mean that larger goals have been accomplished. There is still always the final test of whether the identified targets were the right ones and if they actually made an impact on the stated goal.

Respondents

Chris Crockett, deputy water commissioner, Planning and Environmental Services, Philadelphia Water Department

Mark Alan Hughes, distinguished senior fellow, PennDesign

Sarah Wu, outreach and policy coordinator, Mayor's Office of Sustainability, City of Philadelphia

Raleigh, North Carolina: Planning Raleigh 2030

Champions, Context, and Timing

In 2007, Raleigh began a new comprehensive planning process by conducting a community inventory and policy audit. During the community outreach portion of this process, the city's planning director read the city charter, which explicitly states that a comprehensive plan for Raleigh is intended to be a plan to guide the entire city and not just its planning department. After bringing this mandate to the attention of the city manager, implementation of the comprehensive plan was written into the performance evaluations for all city department heads. *Planning Raleigh 2030* was adopted in 2009. In January 2011, seven separate departments involved in various aspects of city development including planning were consolidated, and the city's planning director was placed in charge.

Outreach

Along with its interdepartmental collaboration in the initial stages of this comprehensive planning process, Raleigh conducted extensive and innovative outreach. The planning department specifically targeted young people since they historically had not offered input into plans, yet stood to be the ones most affected by the plan's policies for the future. The city made videos, created a game called "Kid City," and held meetings in local taverns. Due to this effort, 70 percent of the total participants in the public participation process ended up being under age 46.

In addition to this targeted outreach, five large meetings were held throughout the city. Emerging issues presented by the city at these meetings were that the city was getting older and more ethnically diverse, and that it was running out of land and water. Some of the key community interests identified were investing in open space and urban agriculture. There was also a strong preexisting active transit community advocating for more bike and pedestrian facilities and infrastructure.

Through this process, the city realized that active living needs to be communicated in the right way for government not to come off as lecturing people about their lifestyles. A good way to do this for Raleigh was for the planners to frame active living as an opportunity for a higher quality of life, more choices, and being better off in multiple ways. Respondents also mentioned a strong desire for people to feel a local connection to something whether it's food, water, a community garden, a neighborhood park, or a local business establishment. Appealing to this desire for local goods and services proved to be another powerful tool in communicating with the public.

Collaboration

Discovering the mandate to highlight the comprehensive plan as a model for action to be used by the entire city, and gaining the city manager's support in promoting and enforcing this understanding, led to a profound shift in collaboration among departments. This collaboration was institutionalized through the formation of an interdepartmental working group and incorporation of comprehensive plan implementation into the evaluation of department heads. These factors were instrumental in producing an inclusive plan that is being implemented with consistent attention and vigor.

Before the planning process began, certain departments reportedly were not communicating well with one another. To break down barriers, an interdepartmental working group was formed. This working group included senior staff from departments involved in urban development: administrative services, community development, community services, information technology, parks and recreation, public utilities, public works, and solid waste services. The group also met separately with other departments, such as the police who were involved in Crime Prevention Through Environmental Design. The planning department solicited input from other departments, considered their priorities, and gathered extensive feedback on the plan before presenting anything to the public. State and county health departments, research hospitals, local food and community gardening organizations, bike and pedestrian advocacy groups, interfaith groups, and affordable housing nonprofits were also consulted during the planning process.

According to those who participated, key to improved communication and successful collaboration is to make sure that all departments are involved in a meaningful way. The planning process is a great time to bring different departments together, but care must be given to solicit and incorporate each department's ideas. The planning department is well-suited to highlight the interconnectedness of each department's work and ensure that all departments are using the same baseline data for their projections.

Raleigh focused on issues that cut across the responsibilities of various departments, such as transportation planning, as a strategy to initiate collaboration. Including health departments and health agencies as partners in this process allowed health to become an explicit point of conversation between and within departments, particularly the parks and recreation department. However, when working with health departments, respondents pointed out that it is important to be explicit about what planning can and cannot do. Often, departmental budget priorities and the city's Capital

Improvement Program (CIP) did not mesh with the priorities outlined in the comprehensive plan, which challenged efforts at collaboration. Another difficulty discovered through the interaction of the working group was that different departments were using different population projections, which led to conflicting goals and policies for the future.

Health Priorities

Raleigh took the approach of health in all policies and threaded public health goals and objectives throughout its plan. There were four main public health topics that were touched on in numerous sections of the plan: local food systems, active living and exercise, air and water quality, and health care and services. Local food services are a growing trend in Raleigh pushed by local community advocates. Active living and exercise was spurred by the creation of a new bike/pedestrian advisory committee by the city council. The air and water quality goals address the management of urban stormwater and set specific goals to reduce vehicle miles traveled and traffic congestion. The health and services element focuses on the planning department's coordinating role in providing adequate space, connectivity, and access for the county health department to operate social services, including mental health and substance abuse programs.

Respondents mentioned that while it can be a challenge to have health policies threaded throughout the plan and not as a stand-alone element, doing so better integrates health into all aspects of planning. Raleigh's comprehensive plan calls for significant changes to increase pedestrian access and walkability around the city primarily in order to improve socioeconomic equity in transportation. For those who cannot afford other means of transportation, being able to walk safely to wherever they need to go is a key element of a healthy community; the respondents, however, did not discuss safety or gender, ethnicity, or disability status.

Funding

Various funding streams have been leveraged by the city to implement its comprehensive plan. These include state grants from the North Carolina Department of Transportation, streetscape funding from the city's CIP, tax-increment financing, and municipal bonds. Transportation bonds provided \$3 million for sidewalk construction. The city also received a grant from the Blue Cross/ Blue Shield Foundation of North Carolina to conduct a health impact assessment on Blue Ridge Road, a key corridor of attractions and institutions.

The city is exploring ways to reform the capital budgeting process so that departmental budgets are more aligned with the goals and

metrics of the comprehensive plan. Raleigh's city government is also attempting to develop return-on-investment tools to justify the use of capital funds on construction and infrastructure that promote health and sustainability. To date, the city has produced a map-based analysis of tax value per acre that demonstrates that the city's urban and mixed use centers yield more in property taxes than other land. There are also attempts underway to forecast the necessary infrastructure investment over time based on the future build-out proposed in area plans.

Implementation

Raleigh has made impressive strides implementing many of the goals and objectives laid out in its plan. It has done so through regulatory changes, staffing, and project prioritization. In regards to regulatory changes, the city has already proposed a number of new codes, new zoning districts, and new development standards. Currently pending approval, the proposed Open Space with Quality development standard would enhance requirements for open space amenities, improve street connectivity, and strengthen sidewalk standards for new developments. Also pending approval is a new community gardens code that would allow community gardens as-of-right within residential districts zoned for medium density (10 dwellings per acre). Presently, community gardens are only allowed as an accessory use, but this new code would allow a community garden to take up a whole lot. There are also new landscaping standards, a new tree conservation ordinance, and a new code that allows for greater tree canopy along the public right-of-way.

Other new policies and development standards have a strong focus on pedestrian access. A new pedestrian plan was adopted in January 2013 and the city hired a transportation planner to evaluate transit routes and pedestrian access to transit stops to make walking and transit more accessible and safe. The city's new bike plan suggests potential bike improvements for every street in the city and every time the transportation department does a street resurfacing, it consults these suggestions. A new unified development code was also adopted that included a 14-foot sidewalk standard in urban areas, a six-foot width adjacent to private property, and a requirement to build sidewalks on both sides of the street to create a "more gracious public realm."

The city has also implemented a development approval scoring system that scores development projects based on their adherence to comprehensive plan goals. One of the largest capital projects the city is undertaking is improving water quality in the Pigeon House Creek floodplain, the most impaired body of water in the city. The planning department is working with the water department and parks and recreation department on this project

and has been buying up land and developments in the floodplain. It recently purchased a large plot of land along with a bowling alley for \$14 million and has plans to purchase an existing motel. Since owners cannot currently legally do upkeep on their properties, as the properties decline the owners lose investment money unless they can sell to the city, so Raleigh planners are seeking ways to help with that. Apart from this project, the city has focused capital funds on wayfinding to connect its existing parks, greenways, and recreational facilities.

Plan implementation has not been without some challenges. For example, respondents state that expanding sidewalks in the right-of-way and creating connections among its greenway trails can, at times, require slices of private property and disrupt people's personal yards. This means the city must be flexible in its plans and work collaboratively with the property owners affected. There have also been concerns over the cost of new sidewalks, pushing the city to develop cost-benefit estimates on doing smart retrofits.

Additional proposed regulations require higher levels of pedestrian access in site plans prior to the completion of construction in order to end the problem of pedestrian sidewalks being addressed as an afterthought. These codes would also require new developments to include a door directly facing the street. At the same time, because of concerns over the cost of new sidewalks, the city is working to develop cost-benefit estimates on doing smart retrofits.

A great opportunity exists to eventually connect the Pigeon House Creek floodplain to the larger greenway system and create quality redevelopment that would establish a larger tax base for the city as well as protect the floodplain. Not having dedicated funding for a lot of this work has proved challenging. While the sustainability office has a person searching for grants all the time, the planning department would benefit from having a staff member who could spend time pursuing health-related funding. The funding is out there, according to those interviewed, but the planning department needs the time and the staff to pursue it.

Examples from Raleigh offer a number of key strategies for plan implementation, evaluation, and sustainability. Institutionalizing enforcement of plan goals through code changes has been a key element of Raleigh's implementation success. Focusing on pedestrian improvements creates meaningful change that helps to address at least certain aspects of equity. Access and connections are made that did not exist before. For this reason, according to those interviewed in Raleigh, sidewalk connections must be front and center while development projects are under review and not added as an afterthought. Analysis of the Raleigh case shows that health impact assessments can be useful tools for municipalities

but must be employed early enough in the process to help shape development. There should also always be a focus on connecting new developments with the existing systems, as well as on ways to maintain and sustain implementation.

Data, Monitoring and Evaluation

Data from the community inventory, collected at the start of the planning process, were used to inform many of the goals and policies of the comprehensive plan. However, respondents noted that the effect of built environment interventions on public health outcomes tends to be hard to measure. One can use proxy indicators such as acres of open space per person, linear feet of sidewalks, number of facilities within walking distance, locations of food deserts, or number of community gardens, but it is difficult to determine whether people are healthier because of more sidewalks, easier access to open space, or the availability of grocery stores.

Every year, the planning department has the opportunity to evaluate the comprehensive plan and supplement it with additional goals or objectives if need be. Progress made on implementing the plan is also considered as part of the annual evaluation of every department head. Having capital projects as action items in the plan has allowed departments to point to these as signs of success. If certain goals or objectives have not been met at the end of the year, department heads then have the opportunity to explain why, offer alternatives or adjustments to them, or advocate for their removal.

Respondents

Ken Bowers, AICP, deputy planning director, City of Raleigh

Travis Crane, senior planner, City Planning, City of Raleigh

Mitchell Silver, AICP, chief planning & development officer,
City of Raleigh

REFERENCES

- Atlanta Regional Health Forum (ARHF) and Atlanta Regional Commission (ARC). 2006. *Land Use Planning for Public Health: The Role of Local Boards of Health in Community Design and Development*. Available at www.cdc.gov/healthyplaces/publications/landuseNALBOH.pdf.
- Berke, P., and M. M. Conroy 2000. "Are We Planning for Sustainable Development? An Evaluation of Thirty Comprehensive Plans." *Journal of the American Planning Association* 66(1): 21–33.
- Berke, P., and D. Godschalk. 2009. "A Meta-Analysis of Plan Quality Studies." *Journal of Planning Literature* 23(3): 227–240.
- Boarnet, M., C. Anderson, K. Day, T. McMillan, and M. Alfonzo. 2005. "Evaluation of the California Safe Routes to School Legislation: Urban Form Changes and Children's Active Transportation to School." *American Journal of Preventive Medicine* 28(2): 134–40.
- Burden, D. 2000. "Street Design Guidelines for Healthy Neighborhoods." Urban Street Symposium conference proceedings. Transportation Research Board: Washington, D.C. Available at http://onlinepubs.trb.org/onlinepubs/circulars/ec019/Ec019_b1.pdf.
- Center for Civic Partnerships. 2008. "Organizational Overview." Available at www.civicpartnerships.org/docs/center_information/org_overview.htm.
- ChangeLab Solutions. (2009). *Healthy Planning Guide*. Available at www.phlpnet.org/healthy-planning/products/healthy-planning-guide.
- ChangeLab Solutions. 2009. *Healthy Planning Policies: A Compendium from California General Plans*. Available at www.phlpnet.org/healthy-planning/products/healthy-planning-policies.
- Committee on Environmental Health, American Academy of Pediatrics. 2009. "The Built Environment: Designing Communities to Promote Physical Activity in Children." *Pediatrics* 123: 1591–98.
- Community Tool Box. "Developing a Logic Model or Theory of Change." Available at http://ctb.ku.edu/en/tablecontents/sub_section_main_1877.aspx.
- Complete Streets Coalition. www.completestreets.org.
- Connerly, C. E., and N. A. Muller. 1993. "Evaluating Housing Elements in Growth Management Comprehensive Plans." Pp. 185–99 in *Growth Management: The Planning Challenge of the 1990s*, ed. J. Stein. Newbury Park, Calif., Sage.
- Corburn, J. 2004. "Confronting the Challenges in Reconnecting Urban Planning and Public Health." *American Journal of Public Health* 94(4):541–6.
- Dannenberg, A., R. Bhatia, et al. 2008. "Use of Health Impact Assessment in the United States: 27 Case Studies, 1999–2007." *American Journal of Preventive Medicine* 34(3):241–56.
- Dannenberg, A., H. Frumkin and R. Jackson, Eds. 2011. *Making Healthy Places: Designing and Building for Health, Well-being, and Sustainability*. Island Press: Washington.
- Dannenberg, A., R. Jackson, et al. 2003. "The Impact of Community Design and Land-use Choices on Public Health: A Scientific Research Agenda." *American Journal of Public Health* 93(9): 1500–08.
- Design for Health. 2007. *Comprehensive Plan Review Checklist*. Available at <http://designforhealth.net/resources/checklists.html>.
- Dubuque Community School District. 2013. Strategic Plan: Status Report February 2013. Available at www.dubuque.k12.ia.us/strategicplan/DCSD_strategicplan_actionsteps.pdf.
- Edwards, M. M., and A. Haines 2007. "Evaluating Smart Growth: Implications for Small Communities." *Journal of Planning Education and Research* 27: 49–64.
- Evans, G. 2003. "The Built Environment and Mental Health." *Journal of Urban Health* 80(4): 536–55.
- Feldman, E., et al. 2003. *Active Living for Older Adults: Management Strategies for Healthy and Livable Communities*. International City/County Management Association. Available at http://bookstore.icma.org/freedocs/Active_Living.pdf.
- Forsyth, A., C. Slotterback, and K. Krizek. 2010. "Health Impact Assessment in Planning: Development of the Design for Health HIA Tools." *Environmental Impact Assessment Review* 30: 42–51.
- Frank, L., M. Anderson, and T. Schmid. 2004. "Obesity Relationships with Community Design, Physical Activity, and Time Spent in Cars." *American Journal of Preventive Medicine* 27(7):87–96.

- Frank, L., M. Greenwald, et al. 2010. "Carbonless Footprints: Promoting Health and Climate Stabilization Through Active Transportation." *American Journal of Preventive Medicine* 50:99–105.
- Friedman, M., K. Powell, et al. 2001. "Impact of Changes in Transportation and Commuting Behaviors During the 1996 Summer Olympic Games in Atlanta on Air Quality and Childhood Asthma." *Journal of the American Medical Association* 285(7):897–905.
- Giles-Corti, B., and R. Donovan. 2003. "Relative Influences of Individual, Social Environmental and Physical Environmental Correlates of Walking." *American Journal of Public Health* 93(9):1583–9.
- Godschalk, D.R., and W.R. Anderson. 2012. *Sustaining Places: The Role of the Comprehensive Plan*. American Planning Association Planners Advisory Service Report #567.
- Guide to Community Preventive Services. 2001. "Environmental and policy approaches to increase physical activity: creation of or enhanced access to places for physical activity combined with informational outreach activities." Available at <http://thecommunityguide.org/pa/environmental-policy/improvingaccess.html>.
- Hodgson, K., et al. 2011. *Comprehensive Planning for Public Health: Results of the Planning and Community Health Research Center Survey*. American Planning Association. Available at www.planning.org/research/publichealth/pdf/surveyreport.pdf.
- Kerr, Jacqueline 2008. "Designing for Active Living Among Adults." *Research Summary*. Active Living Research. Spring 2008. Available at http://activelivingresearch.org/files/Active_Adults_0.pdf.
- Kramer, Melissa G., et al. 2013. *Our Built and Natural Environments: A Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality* (2d ed.). U.S. Environmental Protection Agency. Available at www.epa.gov/smartgrowth/pdf/b-and-n/b-and-n-EPA-231K13001.pdf.
- Leyden, K. 2003. "Social Capital and the Built Environment: The Importance of Walkable Neighborhoods." *American Journal of Public Health* 93(9):1546–1551.
- Librett, J., M. Yore, and T. Schmid 2003. "Local Ordinances that Promote Physical Activity: A Survey of Municipal Policies." *American Journal of Public Health* 93(9):1399–403.
- Lopez, R. 2011. "The Potential of Safe, Secure and Accessible Playgrounds to Increase Children's Physical Activity." *Research Brief*. Active Living Research. February 2011. Available at www.rwjf.org/content/dam/web-assets/2011/02/the-potential-of-safe--secure-and-accessible-playgrounds-to-incr.
- Lovasi, G., Kathryn M. Neckerman, et al. 2009. "Effect of Individual or Neighborhood Disadvantage on the Association Between Neighborhood Walkability and Body Mass Index." *American Journal of Public Health* 99(2): 279–284.
- Lucy, W. 2003. "Mortality Risk Associated with Leaving Home: Recognizing the Relevance of the Built Environment." *American Journal of Public Health* 93(9): 1564–69.
- McMillan, T. 2009. "Walking and Biking to School, Physical Activity and Health Outcomes." *Research Brief*. Active Living Research. May 2009. Available at http://activelivingresearch.org/files/ALR_Brief_ActiveTransport_0.pdf.
- Meoli, Jon. 2013. "Towson Bike Beltway to double in size." *The Baltimore Sun*. Sept. 27. Available at www.baltimoresun.com/news/maryland/baltimore-county/towson/ph-tt-beltway-spurs-1002-20130926,0,1378118.story.
- Morris, Marya. 2006. *Integrating Planning and Public Health: Tools and Strategies to Create Healthy Places*, American Planning Association Planners Advisory Service Report #539–540.
- Morris, Marya, ed. 2007. *Planning Active Communities*. American Planning Association Planners Advisory Service Report #543–544.
- National Coalition for Promoting Physical Activity. *National Physical Activity Plan*. www.physicalactivityplan.org.
- New South Wales Department of Health (2009). *Healthy Urban Development Checklist: A guide for health services when commenting on development policies, plans and proposals*. www.health.nsw.gov.au.
- Northridge, M., E. Sclar, and P. Biswas. 2003. "Sorting out the Connections Between the Built Environment and Health: A Conceptual Framework for Navigating Pathways and Planning Healthy Cities." *Journal of Urban Health* 80(4):556–68.

- Pendall, R., R. Puentes, et al. 2006. "From Traditional to Reformed: A Review of the Land Use Regulations in the Nation's 50 Largest Metropolitan Areas." *Research Brief*. The Brookings Institution Metropolitan Policy Program, Washington D.C.
- Ricklin, A., et al. 2012. *Healthy Planning: an evaluation of comprehensive and sustainability plans addressing public health*. Chicago: American Planning Association. Available at www.planning.org/research/publichealth/pdf/evaluationreport.pdf.
- Rodríguez, D. A. 2009. "Active Transportation: Making the Link from Transportation to Physical Activity and Obesity." *Research Brief*. Active Living Research. Summer 2009. Available at http://activelivingresearch.org/files/ALR_Brief_ActiveTransportation_0.pdf.
- Schilling, J., and L. Linton. 2005. "The Public Health Roots of Zoning: In Search of Active Living's Legal Genealogy." *American Journal of Preventive Medicine* 28(Suppl 2):96–104.
- Schmid, T. L., M. Pratt, et al. 2006. "A Framework for Physical Activity Policy Research." *Journal of Physical Activity and Health* 3(Suppl 1): S20–S29.
- Shoshkes, E., and S. Adler. 2009. "Planning for Healthy People/Healthy Places: Lessons from Mid-twentieth Century Global Discourse." *Planning Perspectives* 24(2):197–217.
- Taylor, W. C., and D. Lou. 2011. "Do All Children Have Places to be Active?: Disparities in Access to Physical Activity Environments in Racial and Ethnic Minority and Lower-income Communities." *Research Synthesis*. Active Living Research. November 2011. Available at http://activelivingresearch.org/files/Synthesis_Taylor-Lou_Disparities_Nov2011_0.pdf.
- Trust for America's Health. 2013. "The Prevention and Public Health Fund at Work in Pennsylvania." April. Available at <http://healthyamericans.org/health-issues/wp-content/uploads/2013/04/PA-Fund-at-Work.pdf>.
- University of California, Berkeley. 2011. "Disparities in Park Space by Race and Income." *Policy Brief*. Active Living Research. July 2011. Available at http://activelivingresearch.org/files/PolicyBrief_ParkDisparities_0.pdf.
- University of California, Berkeley. 2011. "Parks and Recreation Programs Help to Reduce Childhood Obesity." *Policy Brief*. Active Living Research. July 2011. Available at http://activelivingresearch.org/files/PolicyBrief_ParkProximity_0.pdf.
- U.S. Census Bureau. 2013. "Summary File." 2007–2011 American Community Survey. U.S. Census Bureau's American Community Survey Office. Available at <http://ftp2.census.gov>.
- U.S. Department of Health and Human Services. *Healthy People 2020*. www.healthypeople.gov.
- U.S. Environmental Protection Agency. *Climate Change—Health and Environmental Effects*. Available at www.epa.gov.
- Younger, M., H. Morrow-Almeida, et al. 2008. "The Built Environment, Climate Change, and Health: Opportunities for Co-benefits." *American Journal of Preventive Medicine* 35(5): 517–526.
- Zimmerman, R. 2005. "Mass Transit Infrastructure and Urban Health." *Journal of Urban Health* 82(1):21–32.



City of
**MOUNT
VERNON**

Appendix D

APA'S HEALTH IN THE DEVELOPMENT REVIEW PROCESS



HEALTH

In The Development Review Process



American Planning Association

Making Great Communities Happen

Guidance for Health in the Development Review Process is a product of the American Planning Association (APA)'s Planning and Community Health (PCH) Center. APA provides leadership in the development of vital communities by advocating excellence in community planning, promoting education and citizen empowerment, and providing tools and support necessary to effect positive change.

APA conducts applied, policy-relevant research that advances the state of the art in planning practice. APA's research, education, and advocacy programs help planners create communities of lasting value by developing and disseminating information, tools, and applications for built and natural environments. APA's PCH Center advances practices that improve human environments to promote public health through active living, healthy eating, and health in all planning policies.

ACKNOWLEDGEMENTS

This document was produced as part of the PCH Center's Planning Tools for Health project, a two-year effort funded by the Centers for Disease Control and Prevention's Healthy Community Design Initiative. We would like to thank Valerie Hubbard, Dee Merriam, Michelle Eichinger, Bill Bruce, and APA's research team. Without your assistance, this document would not exist. Your feedback helped to frame a document that we hope has practical application.

Cover Photo: Photo by Kelly Wilson. Copyright 2015 American Planning Association
Photo Below: Copyright US Department of Agriculture
Photo Page 4: Photo by Meghan Stromberg. Copyright 2015 American Planning Association
Photo Page 8: Photo by Carolyn Torma. Copyright 2007 American Planning Association



Making the Case: Going from Health in Plans to Health in Regulations	5
A Development Code for a Healthy Built Environment: Ensuring a Built Environment that Improves Health	6
Applying A Health Lens: A Health Outlook on the Review Process	8
Checklist: A Guide for Ensuring Development Encourages Healthy Behavior	9
Appendix A Descriptions	
Appendix B: Selected List of Resources	

Knowledge of how planning decisions impact the public's health has greatly increased in recent years. The availability of resources and increased emphasis on community engagement has led to the incorporation of health elements, language, and data in a growing number of plans and policies. Most communities use a comprehensive or general plan to guide land-use decisions. Implementation of these plans is accomplished through a series of mechanisms—zoning codes and other regulations, capital improvements programs, and other policies for decision making. Together, the comprehensive plan and how it is implemented can have a powerful impact on community health. Over the last few years, the American Planning Association (APA) has focused on comprehensive plans and health as a priority of its Planning and Community Health Center. *Guidance for Health in the Development Review Process* builds on this work by addressing the why and how of incorporating health into the development review process.

Guidance for Health in the Development Review Process complements the current guides and toolkits focused on street and neighborhood design to promote active living. Documents such as the Active Design Guidelines, the National Association of City Transportation Officials (NACTO)'s Street Design Guide, and the criteria outlined in the LEED-ND rating system serve as useful guides for the public and private sectors alike. Intended primarily for public-sector planners at the city and county levels, this guidance document is designed to support planners with the regulatory aspect of implementing a project that incorporates elements of these and other resources (see Appendix B).

APA hopes the information and resources in this document will assist planners' efforts to promote health in their communities. To our knowledge, this is the first document of its kind designed with planners in mind. Each of the four sections builds on the previous one, presenting more detailed and applied direction for how health can be considered in context-sensitive environments and what planners can do to lead the way in creating healthy communities.

KEY AUDIENCE:

- Local Government Planners

SECTIONS



SECTION 1: ***Making the Case***

The comprehensive plan guides a community through the policies, strategies, and actions necessary for achieving its vision. This vision is largely implemented through regulatory tools that ensure our communities foster healthy lifestyles. The importance and need for integrating health into all planning processes is described in this section.

SECTION 2: ***Development Code Provisions for Promoting a Healthy Built Environment***

In many communities, the development code guides the implementation of design principles. In order to create healthy built environments, a municipality's development code must incorporate health considerations into regulatory language. This section identifies the principles of a healthy built environment and the development code provisions most applicable to their implementation.

SECTION 3: ***Applying a Health Lens***

The creation of a new development code is an immense undertaking for a municipality. Without a complete code rewrite, it is still possible to apply a health lens to the development review process. This section explains how.

SECTION 4: ***Checklist***

Organized into six sections, this checklist provides detail on the considerations, elements, and features that promote healthy built environment principles. The review of a development application can apply these principles to ensure health-promoting activities are enabled through design.

SECTION 1

MAKING THE CASE

A healthy community is vibrant, active, and inclusive. Planners are uniquely positioned in the community to lead the way in promoting activities and behaviors that underlie healthy lifestyles. Through a Health in all Planning approach, planners can use a number of tools to pursue upstream efforts that create healthy places. Sound, efficient, and implementable plans and policies have the ability to create places where health-promoting activities are the easiest choice. A Health in all Planning approach takes health beyond the comprehensive plan and integrates health into a plan's next steps, strategies, actions, and tools. These tools (sometimes known as the planner's toolkit) include zoning, code amendments, permitting, environmental requirements, and design standards. Using such tools to ensure our communities are places where we can walk, bike, work, play, and gather is crucial for individuals and families to live healthy lifestyles.

WHAT IS HEALTH IN ALL PLANNING?

Health language and considerations in all governing land-use documents: comprehensive plan, small area plan, processes, zoning and other development code, siting policies, etc.

Every policy, code, or standard governing the built environment should flow from the goals and strategies identified in a comprehensive or land-use plan. Local governments (municipalities and counties) use these regulations in varied ways. In some states, the Future Land Use Map is the guiding document for permitting development. In other areas, the zoning code, land development code, or other emerging tools provide the legal mandate guiding development review. The differing regulatory hierarchies make the creation of a one-size-fits-all tool or regulatory guidance impractical. Instead, this document serves as **model guidance** for ensuring health is a consideration in the decision-making process for the review and approval of

HEALTH IN ALL PLANNING IDEAL:

A Development Code that facilitates the implementation of Healthy Built Environment principles

development plans—from a planned unit development to the subdivision and site levels. This model guidance is not meant to be comprehensive; instead, it is an *adaptable and evolving tool that can be applied to your jurisdiction's unique process.*

The full integration of health considerations into planning and land-use decisions requires that health be considered as a key element throughout the decision-making process. A complete Health in all Planning approach consistently applies a health lens to all planning documents. With the comprehensive plan as a guide, the zoning code, development regulations, design standards, and capital investment strategies should align to promote the overall goal of improving community health. The comprehensive plan typically includes a Future Land Use Map, labeling areas into broad categories. A municipality's zoning code provides more detail regarding use, density, and intensity of specific sections of a community. Zoning regulations also establish the three-dimensional building envelope and site layout standards. Subdivision regulations define the standards and conditions under which a tract of land can be divided into individual lots, including street layout and specifications. Design standards address the physical design of a particular site or neighborhood, including buildings, landscape, vehicular circulation and parking, etc. All together, these documents provide planners with the structure for creating healthy, livable communities.

SECTION 2

DEVELOPMENT CODE PROVISIONS FOR PROMOTING A HEALTHY BUILT ENVIRONMENT

Development regulations broadly refer to the package of government policies, incentives, and programs a community uses to manage how a particular piece of property is developed. The adoption of unified development codes that combine zoning, subdivision, and other land development regulations is on the rise. Incorporating all development regulation mechanisms into one legal document enables better implementation of the policies and strategies outlined in the comprehensive plan.

In many communities, the development code is the reference point for how a municipality reviews a proposed development. To ensure a development is consistent with advancing a community's vision and health-related goals, the municipality's development regulations must include language that promotes the incorporation of healthy built environment principles into new development. The chart on page 7 identifies the principles that promote healthy communities and connects them to the development code sections most applicable for implementation.

The overhaul of a municipality's development code is a significant undertaking. In many instances, an advisory committee is established to oversee the development code update. Working with local government staff and consultants, a code diagnosis or audit is conducted to identify issues with

the existing development regulations. Combining the audit results, community engagement, stakeholder feedback, and the comprehensive plan, an annotated outline of the new development code is created. Through continuous dialogue between the advisory committee, local government staff, stakeholders, and consultants, a draft of the new code is written and once complete, shared with the public for review and comments before formal adoption.

Across the country, cities and counties are pursuing comprehensive code revisions designed to foster livable and healthy spaces. These investments of both time and public resources can create the condition that enable developers, architects, and other related professions to design, finance, and build places that promote physical activity, social cohesion, and economic development.

HEALTH IN ALL PLANNING IDEAL:

Include representatives from the health sector on the advisory committee tasked with overseeing the comprehensive development code update

SECTION 2

DEVELOPMENT CODE PROVISIONS FOR PROMOTING A HEALTHY BUILT ENVIRONMENT

Healthy Built Environment Principles		Applicable Code Provisions
Complete, walkable streets	A street that provides equitable access to each transportation user: pedestrians, bicyclists, motorists, and public transit	<ul style="list-style-type: none"> • Subdivision Design Standards (street/lot layout, connectivity standards, etc.) • Street Design Standards (vehicle lanes, bicycle lanes, sidewalks, transit provisions, pedestrian crossings, etc.) • Building Design Standards (location/setbacks, massing, façade articulation, entrances)
Multimodal connectivity	A street grid that emphasizes shorter blocks and multiple intersections to facilitate increased pedestrian, biking, and transit use	<ul style="list-style-type: none"> • Subdivision Design Standards • Street Design Standards • Parking Requirements • Bicycle Requirements (bike lanes, parking)
Mixed uses	A combination of retail, commercial, and residential uses that allows for easier access to goods and services	<ul style="list-style-type: none"> • Zoning • Planned Unit Development Ordinance (emphasizing consistency and connectivity with adjacent land uses)
Accessible parks and open space	Safe outdoor spaces for physical activity within a half-mile or 10-minute walk of where one lives and works	<ul style="list-style-type: none"> • Subdivision Design Standards for open space • Park/Open Space Requirements (open space requirements, parkland dedication ordinance) • Complete Streets Policies • Street Design Standards
Green infrastructure	Green stormwater infrastructure refers to practices that mimic natural processes by absorbing water, such as green streets, green roofs, rain gardens, and pervious pavement. More broadly, green infrastructure refers to parks, open spaces, and natural areas that provide multiple benefits for people and wildlife.	<ul style="list-style-type: none"> • Landscaping Requirements • Stormwater Management Regulations • Park/open space Requirements • Subdivision Requirements • Street Design Standards • Parking Lot Design Requirements
Access to facilities and services	Equitable access to safe infrastructure, nutritious food, primary care, and community services, such as libraries, health care, and community centers	<ul style="list-style-type: none"> • Planned Unit Development Ordinance • Adequate Public Facilities Ordinance • Transportation Impact Analysis (addressing multiple modes)

SECTION 3

APPLYING A HEALTH LENS

A best practice within the planning profession is to revise the development code after the adoption of a new comprehensive plan or zoning code. This ideal process is not the reality in many cities. In most instances, the process takes years and requires considerable financial resources.

In the interim, there are varying ways to ensure health, broadly, is part of the plan review process. For example, jurisdictions can add representatives from the local health department to the review and recommendations process for site plans, planned unit developments, and subdivision plans. Planners and development review specialists can also work with real estate professionals from the onset of project development to ensure that proposed plans incorporate features that promote a healthy built environment. Additionally, health considerations can be a criterion in the review process for site plans, subdivisions, and planned unit developments. The checklist in Section 4 is a guide for identifying how health can be specifically addressed in the review process.

HEALTH IN ALL PLANNING IDEAL:

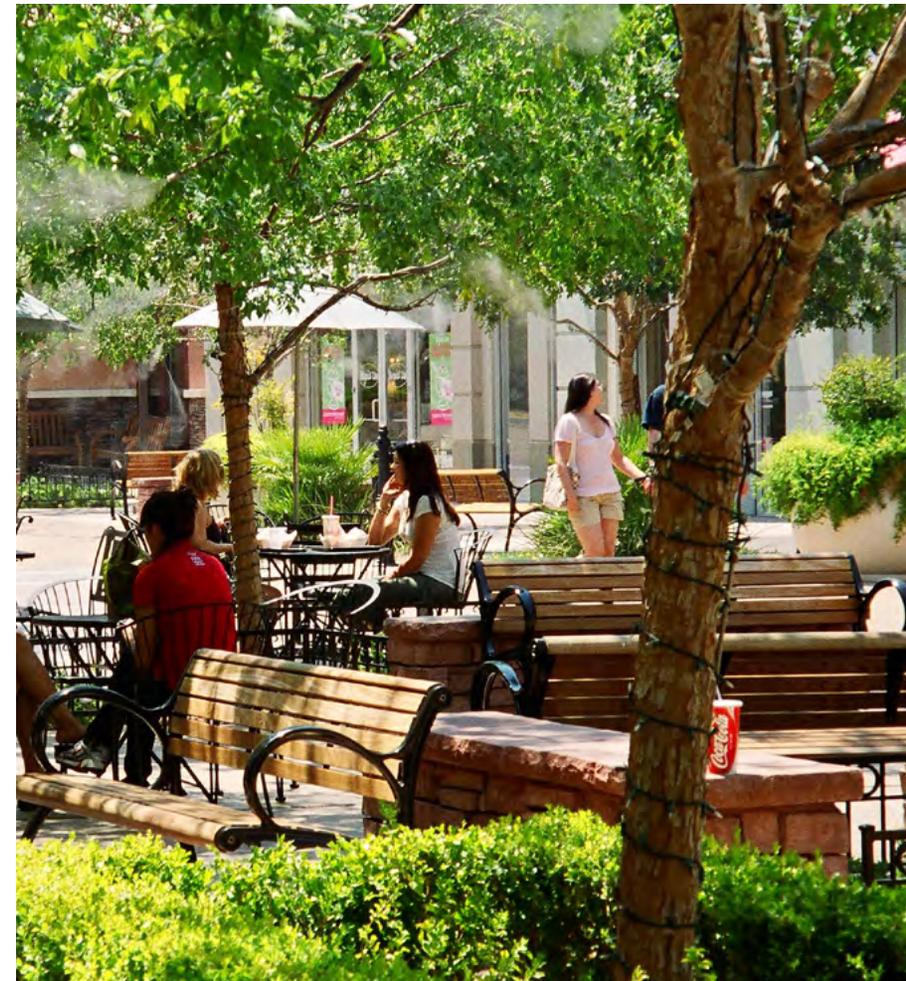
Include representatives from the health sector in the development review team

A development plan is required for all kinds of projects: from a small single-family home to mixed use development to conceptual documents for subdivisions and planned unit developments. This checklist has applicability to each of these development types. The checklist's sections are broad categories typically found in the code sections that govern site plan review. Depending on the use and size of the development under review, more of these checklist sections might apply.

HEALTH IN ALL PLANNING IDEAL:

Consider healthy built environment principles at the first stage or discussion of a proposed development

Each category of development review can incorporate health as a consideration when identifying recommendations for the local zoning board or planning commission. The content identified in this checklist is meant to serve as a guide for planning review staff to ensure that developments encourage healthy living, instead of contributing to negative health outcomes.



SECTION 4

CHECKLIST

Health is a broad concept that can be promoted or mitigated through the design and layout of roads, buildings, and public spaces. These characteristics of our environment are enforced through the development review process. The following checklist is designed to guide a local government planner through a development review process that incorporates health-related criteria. Through these six categories, the checklist identifies specific considerations, elements, and features necessary for healthy spaces, neighborhoods, and communities:

- Location
- Transportation
- Infrastructure
- Open Space
- Access to Goods and Services
- Other Considerations

For each of the categories, the checklist is broken down into the following:

- *Questions to Consider:* broad issues connecting land-use decisions to health implications. Such questions can be answered by assessing whether the development plan contains certain elements and features.
- *Elements:* aspects of the proposed development's application that address the checklist's broad issues.
- *Features:* specific, identifiable markers found within the proposed development's application. Appendix A offers a list describing each feature.
- *Applicable Code Section:* Development review is a regulatory process. The approval or denial of a development application must be tied directly to a code provision. If the jurisdiction's development code explicitly references the features that have been shown to support healthy built environment principles, space for this is included.
- *Health Connection, Behavior, or Outcome:* Lastly, how each of these elements and features corresponds to a particular health connection, behavior, or outcome is identified.

LOCATION

The location and desired use of a possible development has a direct influence on community health. Before a development enters the review phase, a best practice is to work with local government officials on the best use of a particular parcel(s) or identify the best parcel(s) for a desired use. An open and early dialogue between local officials, land owners and developers, and residents can lead to a collaborative process that promotes improved social cohesion and community engagement. The following considerations should be addressed through discussion and dialogue between the public and private sectors:

HEALTHY BUILT ENVIRONMENT PRINCIPLES:

Multimodal Connectivity; Green Infrastructure; Mixed Uses; Access to Facilities and Services

Questions to Consider	Elements	Features	Applicable Code Section	Health Connection, Behavior, or Outcome
Does the proposed development connect with the built environment?	Infill			▲ physical activity ▲ access to infrastructure, jobs, and services
	Redevelopment			
	Contiguous with Existing Development			
Does the plan address potential environmental concerns?	Environmental Suitability Analysis			▼ exposure to natural hazards ▼ exposure to industrial or similar hazards
	Surrounding Land Uses			
Is the proposed site and development addressed in any existing health assessment?	Consistency with County or City Health Assessment and Plans			▲ knowledge of existing conditions: pollutants, air quality, disease prevalence, etc.

An increase in population or daily trips is the expected result of any new development. The incorporation of transportation considerations is often a required element of the review process. A site plan or master plan that incorporates connectivity as a design element facilitates more opportunities to use active transportation, a key consideration for incorporating physical activity into daily behavior.

HEALTHY BUILT ENVIRONMENT PRINCIPLES:

Complete, Walkable Streets; Multimodal Connectivity; Accessible Parks and Open Space; Access to Facilities and Services

Question to Consider	Elements	Features	Applicable Code Section	Health Connection, Behavior, or Outcome
Does proposed development plan promote active living?	Context-Sensitive Street Design	Adequate Sidewalk Width		↑ perceived safety ↑ physical activity
		Bike Lanes/Paths		
		Intersection Design		
	Trails and Linear Parks within Development Plan			
Is the proposed site connected to existing multimodal transportation networks?	Context-Sensitive Street Design	Bike Lanes		↑ access to infrastructure, jobs, and services ↑ physical activity ↑ street safety
		Walkability Features		
		Multi-Use Paths		
	Participation in Transportation Demand or Mobility Management Program	Transit Stops Within or Adjacent to Development		
		Car Share Facilities		
		Bike Parking/Bike Share Facilities		
	Parking Maximums			

The proposed use and design of a development will impact local infrastructure—stormwater, wastewater, potable water, etc. These utility systems ensure the attainment of environmental health goals while promoting healthy built environment principles.

HEALTHY BUILT ENVIRONMENT PRINCIPLES:
Green Infrastructure; Accessible Parks and Open Space; Access to Facilities and Services

Questions to Consider	Elements	Features	Applicable Code Section	Health Connection, Behavior, or Outcome
Does the site plan incorporate stormwater best management practices (BMPs)?	Green Stormwater Infrastructure	Pervious Surfaces		↑ water quality
		Usable Open Space		↑ physical activity
		Bioretention		↓ potable water usage for non-drinking purposes
		Stormwater Reuse		↓ nonpoint source pollution
Does the plan address projected impact of development on existing wastewater infrastructure?	Capacity in Public Sewer System			↑ environmental health indicators, such as water and soil quality
	Inclusion of Environmental Health data			↓ exposure to environment health hazards
Does the plan address the projected impact of development on the existing potable water infrastructure?	Drinking Water Access in Public Spaces			↑ potable water access
	Capacity in Municipal Water Supply			

OPEN SPACE

Connection to nature is well-documented to positively influence human health. Exposure to trees, open space, and access to communal gathering spaces improve health through reduced air pollution, reduced heat island effects, and increased physical activity opportunities. Open space as a category is sometimes considered in the development review process, but often not as a required element. As cities and counties assess their current review criteria, open space requirements that contribute to supporting human health can be written into local regulatory codes.

HEALTHY BUILT ENVIRONMENT PRINCIPLES:

Complete, Walkable Streets; Green Infrastructure; Accessible Parks and Open Space;

Questions to Consider	Elements	Features	Applicable Code Section	Health Connection, Behavior, or Outcome
Do parks and open space opportunities exist in the area surrounding the site location?	Distance to Nearest Park via Streets and Sidewalks			▲ air quality ▲ physical activity ▼ heat island effect
	Connection to Existing Parks and Open Space	Green Infrastructure Multi-Use Paths		
Do parks and open space opportunities exist within the proposed development?	Dedicated, Usable Park Space	Community Gathering Space Park Design Merits Needs of Future Residents		▲ physical activity ▲ social cohesion
	Distance from Residences to Identified Park Location via Internal Street Network			

ACCESS TO GOODS AND SERVICES

Access to goods and services is rarely considered in the review stage of any development project. This category is important for ensuring that all citizens have equitable access to nutritious, affordable food; primary care; and community services, such as libraries and community centers. For an ideal Health in all Planning approach, development plans should address how the proposed use and location increases access to goods and services, particularly in underserved areas.

HEALTHY BUILT ENVIRONMENT PRINCIPLES:

Multimodal Connectivity; Mixed Uses; Access to Facilities and Services

Questions to Consider	Elements	Features	Applicable Code Section	Health Connection, Behavior, or Outcome
Does proposed development address access to fresh, healthy, and affordable food?	Distance from Fresh Food Store			<ul style="list-style-type: none"> ▲ awareness of food and nutrition issues ▲ healthy food access ▲ fresh food access
		Space for Community Gardens		
		Space for Urban Farm		
	Food Production Opportunities	Codes that Permit Accessory Gardens		
		Codes that Permit Livestock in Residential Districts		
Does proposed development address access to community services?	Distance from Primary Care Facilities			<ul style="list-style-type: none"> ▲ access to health care ▲ social cohesion ▲ access to social services
	Distance from Hospitals			
	Distance from Other Community Services (library, senior center, etc.)			

OTHER CONSIDERATIONS

A number of other health-promoting design elements can be considered in the development review process. Like access to goods and services, these considerations do not neatly fit into a site plan or development review category. This, though, does not diminish their importance in building equitable, healthy places. If these are not a regulatory requirement, they should be addressed through an incentive structure promoting health site design.

HEALTHY BUILT ENVIRONMENT PRINCIPLES:

Complete, Walkable Streets; Mixed Uses; Access to Facilities and Services

Questions to Consider	Elements	Features	Applicable Code Section	Health Connection, Behavior, or Outcome
Does the development promote safety and security?	Crime Prevention Through Environmental Design (CPTED) Techniques			<ul style="list-style-type: none"> ▲ perceived safety ▲ social cohesion
Does the proposed use of development promote economic activity?	Retail and Commercial Development			<ul style="list-style-type: none"> ▲ financial security ▲ perceived safety ▲ eyes on the street ▼ reduced stress
Does the residential component of the plan address healthy housing?	Smoke Free Housing			▲ social cohesion
	Universal Design			▲ neighborhood stability
	Housing Affordability			▼ asthma prevalence and symptoms
Will the plan take equity considerations into account?	Located in Medically, Underserved Area			<ul style="list-style-type: none"> ▲ access to services, jobs, transportation, and other infrastructure systems ▲ health equity
	Displacement of Existing Residents			
	Disparity in Health Outcomes from Data Sources, such as Morbidity Rates, Disease-Prevalence, Quality of Life Index, etc.			

APPENDIX A:

DESCRIPTION OF ELEMENTS AND FEATURES

LOCATION

Infill: Infill is the development of vacant lots or parcels within an existing development. Communities use infill development to encourage development in or near a city center that utilizes the existing street grid, utility lines, and other infrastructure. Many ordinances allow for infill projects that deviate from the base zoning in a district but work in context of the neighborhood.

- Examples of Infill Ordinance:
 - Sanford (Florida), City of. 2015. *Code of Ordinances*. Part III: Land Development Regulations, Schedule E: Additional Requirements and Provisions for Specific Uses, Section 15.0: Urban Infill Development Projects. Available at https://www.municode.com/library/fl/sanford/codes/code_of_ordinances?nodeId=PTIILADERE_SCHEDULE_EADREPRSPUS_S15.0URINDEPR.

Redevelopment: Redevelopment refers to the reuse or improvement of developed land. Many communities have specific redevelopment agencies that create redevelopment plans, invest in infrastructure, and purchase land. For the purposes of development review and Guidance for Health in the Development Review Process, the term redevelopment applies to projects aligned with existing redevelopment efforts in the local area or transformation of a particular parcel to increase density and walkability (in accordance with current community efforts).

Contiguous with Existing Development: This language is used to discourage “leapfrog” development and encourage a compact urban form as an extension of the existing built environment. In reference to development review, sites, subdivisions, and planned unit developments can connect to existing development via sidewalks, trails, access ways, and streets.

- *Sample Code:*
 - Fort Collins (Colorado), City of. 2015. Land Use Code. Article 3: General Development Standards, Division 3.7: Compact Growth Standards. Available at https://www.municode.com/library/co/fort_collins/codes/land_use?nodeId=ART3GEDEST_DIV3.7COURGRST.

Environmental Suitability Analysis: An environmental suitability analysis assesses the suitability of the site for various land uses, including industrial or agricultural activity, as well as land conservation. These assessments can be used to promote community health by identifying, classifying, and prioritizing land in order to promote sustainable land-use plans and decisions that result in increased physical activity and access to parks and open spaces. More resources:

1. Atlanta Regional Health Forum (ARHF). 2006. *Land Use Planning for Public Health: The Role of Local Boards of Health in Community Design and Development*. National Association of Local Boards of Health. Available at <http://www.cdc.gov/healthyplaces/publications/landusenalboh.pdf>

Surrounding Land Uses: The environmental impact of land uses on a particular site can have large impacts on surrounding areas. Agriculture uses large amounts of chemical inputs, industry creates various toxic and carcinogenic pollutants, and brownfields are often scattered throughout cities and counties, negatively impacting human health. Conversely, green open spaces provide a number of environmental services (such as carbon sequestration and water purification) that positively impact human health and transportation planning can reduce aggregate and per capita pollution by reducing vehicle travel and use of alternative modes. Comprehensive planning strategies spatially manage and consider the negative and positive impacts various land uses have on individual and community health. More resources:

1. Victoria Transport Policy Institute. 2006. *Promoting Public Health through Smart Growth: Building Healthier Communities through Transportation and Land Use Policies and Practices*. Available at http://www.vtppi.org/sgbc_health.pdf

Consistency with County/City Health Assessment and Plans: County or city health departments are required to conduct Community Health Needs Assessments (CHNA) and corresponding Community Health Improvement Plans (CHIP). These assessments and plans include existing health conditions of the entire geographic area as well as targeted neighborhoods or census tracts. The information in the CHNA and CHIP can reveal what areas of

the city are most exposed to air pollutants and at higher risk of injuries from traffic-related incidents. Consistency between the proposed development and the existing CHNA and CHIPs can better align built environment interventions that improve health outcomes. More Resources:

1. Community Commons: <http://www.communitycommons.org/chna/>
2. Local Health Department

TRANSPORTATION

Context-Sensitive Street Design: Context-sensitive street design is a planning and design approach that uses the context, or setting, of a roadway to determine design features, rather than simply basing roadway designs on hierarchical functional classifications. Localities can operationalize context-sensitive design by adopting street design standards that vary by context in addition to thoroughfare type. For example, the street design standards for an arterial boulevard in a walkable, urban environment would include different space allocations and design features than the standards for an arterial boulevard in a low-density rural area.

- *Adequate Sidewalk Width:* Proposed sidewalks within the development follow a tiered approach that reflects the surrounding land use. For example:
 - Commercial, Retail, and Mixed-Use: 8-12'
 - Residential: 5'
- *Bike Lanes:* A bike lane is a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. More Resources:
 1. NACTO's Urban Bikeway Design Guide <http://nacto.org/publication/urban-bikeway-design-guide/bike-lanes/>
- *Context-Specific Intersection Design:* In coordination with the proposed street designs, intersections within the proposed development are designed to be compact, integrate time and space, and offer shared spaces for each mode of trans-

portation. More Resources:

1. NACTO's Street Design Guide: <http://nacto.org/publication/urban-street-design-guide/>
- *Use-Specific Parking Maximums:* Setting a maximum amount of parking spaces that can be added to a development promotes a more livable, pedestrian-friendly area. Like parking minimums, parking maximums should be appropriate to local context and the type of development proposed.
 - Sample code:
 - Bellevue (Washington), City of. 2015. *City Code*. Title 20: Land Use Code. Chapter 20.20: General Development Requirements. Section 20.20.590: Parking, circulation, and walkway requirements. Available at <http://www.codepublishing.com/wa/bellevue/>.
 - Sets a maximum number of spots allowed, based on use.
 - *Walkability:* Walkability is a way of measuring how friendly an area is to pedestrians. Measurement criteria vary from place to place, but generally, a "walkable" neighborhood has good physical infrastructure such as well-maintained sidewalks and street connectivity, and neighborhood services accessible in a compact area.
 - Sample Code:
 - Alexandria (Virginia), City of. *Zoning Ordinance*. Article II: Definitions, Section 2-201-1: Walkability Index. Available at https://www.municode.com/library/va/alexandria/codes/zoning?nodeId=ARTIIDE_2-201.1WAIN.
 - *Multi-Use Paths:* Multi-use paths are intended to be used for walking, biking, and other forms of non-motorized transportation. Often, they are separated physically from roadways and sidewalks. The Federal Highway Administration suggests that multi-use paths be at least 10 feet wide and conform to accessibility standards with regard to grade, surface materials, and markings or signage. More Resources:

1. Federal Highway Administration. 2014. "Best Practices Design Guide." Available at http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalk2/sidewalks214.cfm
- *Trail and Linear Parks within Development Plan:* Communities measure recreation opportunities in a number of ways. Trails and linear parks can increase access to recreation opportunities within a subdivision or planned development. The suggested level of service standard is 5-10 acres per 1000 people, which was developed by the National Parks and Recreation Association (NPR). Some places set a goal of having parks within a quarter mile of residences. More Resources:
 1. Austin (Texas), City of. 2013. "Achieving Child-Friendly Infill Development in Austin's Early Suburbs." Available at https://www.austintexas.gov/sites/default/files/files/SN_White_Paper_-_Family-friendly_Infill_Early_Suburbs_081113.pdf.
 - Establishes a desired LOS of pocket parks within 1/4 mile of residences, or 1/8 of a mile in areas with high concentrations of multifamily housing.
 - *Participation in Transportation Demand or Mobility Management Program:* Municipalities often have Mobility Management or Transportation Demand Management programs, which aim to increase mobility and efficiency by influencing travel behaviors. Compliance with the local TDM program ensures multiple transportation modes—walking, biking, transit, and automobile—are considered through the plan development and implementation process. For example:
 - Arlington County, Virginia has a well-known Transportation Demand Management program for site plan development. The county works directly with real estate professionals to promote increased transit, ride sharing, walking, and biking through site plan features, such as bike share/parking facilities, carsharing services, transit stops, etc. This program was established through regulation approved by the county's Board of Commissioners in 1990: <http://www.commuterpage.com/pages/special-programs/tdm-for-site-plans/>

INFRASTRUCTURE

Green Stormwater Infrastructure: Green Stormwater Infrastructure is the incorporation of stormwater management systems that mimic nature to improve water quality in an ecologically sustainable manner. Pervious surfaces, stormwater reuse, existing vegetated open spaces, the use of bioswales, bioretention basins, rain gardens, rooftop and wall or vertical gardens are examples of components often found within green stormwater infrastructure. Green stormwater infrastructure has numerous public health and environmental benefits, including reduction in air and water pollution; reduction in incidents of obesity; enhanced mental and physical health; and a reduced exposure to numerous toxins. Green stormwater infrastructure is usually found within building and construction codes, land division codes, and/or stormwater management codes as well as environmental and public health planning documents.

- *Pervious Surfaces:* Pervious surfaces usually appear in planning documents and ordinances in regards to landscaping and parking areas. Pervious surfaces allow water to filter through the surface and to reach the ground water, replenishing the water table. Some ordinances will define pervious spaces by the percentage of groundwater that reaches the underlying soil while others focus on the impact that the pervious surfaces have on the underlying groundwater or focus on the composition of pervious surfaces within particular zones. Many times, a public official will monitor the performance and composition of pervious surfaces in order to meet local and/or national environmental compliance and goals. More Resources:
 1. Oldsmar (Florida), City of. 2015. *Code of Ordinances*. Part III: Land Development Code. Article VII: Streets, Access Control and Parking. 7.8: Off Street Parking. 7.8.1: General. Available at https://www.municode.com/library/fl/oldsmar/codes/code_of_ordinances?nodeId=PTIIIILADECO_ARTVIISTACCPA_7.8OREPA_7.8.1GE
 2. Pineo, Rebecca, and Susan Barton. 2009. "Permeable vs. Impermeable Surfaces." University of Delaware, College of Agricultural & Natural Sciences. Available at

<http://extension.udel.edu/factsheet/permeable-vs-impermeable-surfaces/>

- *Usable Open Space*: Usable open space refers to outdoor areas, excluding parking lots, which are devoted to active and passive recreational activities. There are numerous health benefits associated with such spaces, including physical activity, which helps to increase fitness and to reduce obesity; pollution mitigation within vegetative usable open spaces; and contacts with nature, which is proven to enhance well-being. While ordinances regarding usable open space can vary greatly at times in different communities, usable open space requirements are usually specified within particular districts and can vary from district to district within a given community.
 - Sample Codes:
 - Long Beach (California), City of. 2015. *Code of Ordinances*. Title 21: Zoning. Chapter 21.31: Residential Districts. Division II: Developmental Standards. 21.31.230: Usable Open Space. Available at https://www.municode.com/library/ca/long_beach/codes/municipal_code?nodeId=VOII_TIT21ZO_CH21.31REDI_DIVIIDEST_21.31.230USOPSP
 - Oakland (California), City of. 2015. *Code of Ordinances*. Title 17: Planning. Chapter 17.58: CBD Central Business Direct Zones Regulations. 17.58.070: Usable Open Space Standards. Available at https://www.municode.com/library/ca/oakland/codes/planning_code?nodeId=TIT17PL_CH17.58CBCEBUDIZORE_17.58.070USOPSPST
- *Bioretention*: Bioretention incorporates soils and plants that remove pollutants from stormwater runoff. The Environmental Protection Agency has designated bioretention as a stormwater best management practice. Cities and counties of all sizes have used bioretention as a technique for managing stormwater. More Resources:
 - Environmental Protection Agency: http://water.epa.gov/scitech/wastetech/upload/2002_06_28_mtb_biortn.pdf

- *Stormwater Reuse*: Stormwater reuse is generally unaddressed by regulations and codes. However, some communities do include stormwater reuse in their municipal codes, usually within land development ordinances or building codes. Water is increasingly scarce in large parts of the country and runoff is rife within urban environments as a result of the presence of non-pervious surfaces such as asphalt and concrete. The reuse of stormwater is particularly important for agricultural purposes and for use on lawns, parks, and fields. There are concerns about stormwater reuse as a result of possible human exposure to pathogens, cross-contamination of the potable water supply as well as concerns with mosquito breeding and contaminated pond sediments, all of which could have potentially large impacts on human health.
 - Sample Codes:
 - Basalt (Colorado), Town of. 2015. *Municipal Code*. Chapter 18: Building Regulations. Article II: Construction Codes. Section 18-25: Point Details. Available at https://www.municode.com/library/co/basalt/codes/municipal_code?nodeId=CH18BURE_ARTIICOCO_S18-25PODE
 - Minnesota Pollution Control Agency. 2015. *Stormwater Re-Use and Rainwater Harvesting*. May 14. Available at http://stormwater.pca.state.mn.us/index.php/Stormwater_re-use_and_rainwater_harvesting

Public Sewer System Capacity: Wastewater systems usually encompass pumping stations, treatment plants, and miles of underground pipes. In certain instances, existing infrastructure might be inadequate to handle the growth in demand that occurs with population growth and new developments. Municipal planners can ensure that the existing infrastructure has the capacity to support the proposed development. In many communities, an existing Adequate Public Facilities Ordinance might assist planners with ensuring that the capacity in the sewer system aligns with the proposed development. More Resources:

1. *Planner's Estimating Guide: Projecting Land Use and Facility Needs*

Environmental Health Data: Local health departments routinely monitor municipal sewer systems to ensure compliance with environmental rules and regulations. This monitoring and data collection can assist local planners with determining capacity and adequacy of the existing system, helping to limit exposure to contaminants and water borne diseases.

Capacity in Municipal Water Supply: Water systems usually include source facilities (wells and surface water intake points), treatment plants, pumps, and storage facilities. Municipal planners must consider a proposed development's impact on the local water supply. This consideration is particularly acute in areas affected by drought or low precipitation rates, such as the southwestern United States. More Resources:

1. *Planner's Estimating Guide: Projecting Land Use and Facility Needs*

Drinking Water Access: Municipal codes address drinking water through varying sections. The International Code Council sets requirements for drinking fountains, dependent on establishment classification and number of occupants. More Resources:

1. *Quenching Community Thirst: Planning for More Access to Drinking Water in Public Place:* <https://www.planning.org/research/publichealth/pdf/wateraccessreport.pdf>

OPEN SPACE

Parks and Open Space within Development: Parks and open spaces within developments can be secured through zoning requirements or incentives for private developers, within subdivision or neighborhood design standards & development codes within a city's code of ordinance, or within a city's land use code. Examples of open spaces include parks, plazas, trails, bike paths, playgrounds, forests, and wetlands. Parks and open spaces provide opportunities for exercise and relaxation.

- *Example of Parks and Open Space Ordinance within a Development:* Southaven (Mississippi), City of. 2015. *Code of Ordinances*. Title XIII: Zoning Regulations. Chapter 18: Development

Design Criteria. Section 13-18(d): Public Sites, Facilities and Open Spaces. Available at https://www.municode.com/library/munipro?stateAbbr=ms&clientName=southaven&contentType=codes&productName=code_of_ordinances&nodeId=CO_TITXIII_ZORE_CH18DEDECR_S13-18_D_PUSIFAOPSP

Parks and Open Space Surrounding the Site: Parks and open space surrounding the site should be readily accessible and designed to enhance the public and health benefits of those living in the areas bordering the parks and open spaces. Codes regarding parks and open space surrounding the site can be found within a city's code of ordinances or within a land development code. Examples of open spaces include parks, plazas, trails, bike paths, playgrounds, forests, and wetlands.

- *Sample Code:*
Orange (Florida), County of. 2009. *Comprehensive Plan 2010-2030: Destination 2030*. Orange County Community, Environmental & Development Services. March. Available at <http://www.orangecountyfl.net/Portals/0/resource%20library/planning%20-%20development/Comprehensive%20Plan%20GOPS%202030.pdf>

ACCESS TO GOODS AND SERVICES

Distance from Fresh Food Store: The distance between the proposed development and existing fresh food outlets can positively or negatively contribute to individual diets and related health outcomes. In metropolitan census tracts, the recommended distance between a fresh food outlet and a resident is one mile. In non-metropolitan census tracts, the recommended distance is 10 miles. More Resources:

- US Department of Agriculture. "Food Deserts." Available at <http://apps.ams.usda.gov/fooddeserts/fooddeserts.aspx>

Food Production Opportunities: If applicable to the development's size and use, the incorporation of food production into the development plan or strategy should be considered. These oppor-

tunities can take multiple forms, including:

- *Space for Community Gardens*: the allocation of viable land for a community garden
- *Space for Urban Farm*: most applicable to subdivision and larger planned unit developments, space for urban farms is the allocation of viable land for an urban farm enterprise
- *Codes that Permit Accessory Gardens*: refers to zoning, health, and building codes that allow for individual residences to maintain backyard or front yard gardens for food production
- *Codes that Permit Livestock in Residential Districts*: refers to zoning, health, and building codes that allow for the keeping of chickens and other small animals within residential boundaries

Distance from Primary Care: The distance between a proposed development and primary care facilities has the ability to influence how often individuals utilize preventive care. Developments, particularly those targeted to older adults and low-income residents, can increase access to care for those most in need.

Distance from Hospital: The distance between a proposed development and a hospital has emergency management and hospital implications. The consideration of both distance to facilities and accommodation of emergency vehicles into a development or site plan can increase access to necessary services in times of need.

Distance from Other Community Services: Municipalities provide residents with more than just utilities and a park system. Community services, such as libraries and community centers, are vital to health and livable communities. A new subdivision or development can increase opportunities for residents to access libraries, community centers, and other public services.

OTHER CONSIDERATIONS

Crime Prevention Through Environmental Design: CPTED is a set of strategies and design principles that aim to minimize criminal behavior through the built environment. These principles are access control, which helps designate between public, semi-private,

and private spaces; surveillance, which uses windows and other details to put “eyes on the street” to deter criminal activity; territorial reinforcement, which further delineates between public and private areas; and maintenance, which signals that people are watching out for the property and will not tolerate criminal activity. More Resources:

1. National Crime Prevention Council. 2009. Best Practices for using CPTED in Weed and Seed Sites. Available at: <http://www.ncpc.org/resources/files/pdf/training/Best%20Practices%20in%20CPTED%20-2.pdf/>.
2. Sample Codes:
 - a. Minneapolis (Minnesota), City of. 2015. *Code of Ordinances*. Title 20: Zoning Code, Chapter 530: Site Plan Review, Article V: Additional Standards, Section 530.260: Crime Prevention through Environmental Design. Available at https://www.municode.com/library/mn/minneapolis/codes/code_of_ordinances?nodeId=MICOOR_TIT20ZOCO_CH530SIPLRE_ARTVADST_530_260CRPRTHENDE.

Retail Opportunities: Site plans and related documents for nonresidential developments can incorporate retail opportunities—businesses that generate economic activity for the immediate surrounding areas. In addition to economic activity, increased retail opportunities within a neighborhood have the ability to improve access to jobs for the local population.

Smoke-Free Housing: More communities are choosing to adopt smoke-free housing ordinances for multi-unit buildings. The National Healthy Housing Standard says that smoking should be prohibited in all common areas of multi-unit buildings, and within 25 feet of entrances, air intakes, and open windows. More Resources:

1. National Healthy Housing Standard: <http://www.nchh.org/Policy/NationalHealthyHousingStandard.aspx>
2. Sample ordinances:
 - a. Berkeley (California), City of. Smoke Free Housing Ordinance. Available at http://www.cityofberkeley.info/uploadedFiles/Health_Human_Services/Level_3_-_Public_Health/TobaccoFreeMultiUnitOrdinance.pdf.

Universal Design: Universal design is also called inclusive design. It takes into account the needs of all people, including older people and people with disabilities. It seeks to create “barrier-free” housing that works for everyone through thoughtful design techniques. Some communities require that new subsidized housing developments utilize universal design, and some go further, applying universal design standards to all new housing construction.

Housing Affordability: Affordable housing refers to the residential units that are considered affordable—less than 30% of housing-related expenses—by households earning less than local median income. Affordable housing units can positively impact an individual’s health in several ways. When households have additional resources, they have increased options for healthy food and health care opportunities. Tenure in a residential unit and the stability it provides can reduce stress and associated health triggers. Development regulations are a proven tool for increasing affordable housing units.

Medically Underserved Areas: There are a number of ways to measure this, but the US Health Resources and Services Administration uses a 0-100 score system, where a “medically underserved area” is an area with a score of 62.0 or less. These measurements are based on the number of primary care physicians per capita, poverty, infant mortality rates, and percentage of the population over 65. More Resources:

1. US Health Resources and Services Administration: Medically Underserved Areas/Populations. Available at <http://www.hrsa.gov/shortage/mua/index.html>

Displacement of Existing Residents: Most applied to redevelopment or built-out communities, the displacement of existing residents is a strong consideration for developments that include housing. For developments that include the demolition or extensive renovation of the existing housing stock, plans submitted for review and approval can include considerations for existing residents: ability to relocate to temporary or permanent housing or ability to return to the new development.

Health Disparities: Health disparities are the preventable differences in health status between groups of people. Research focuses on a variety of factors, like race, ethnicity, sex, income, geographic location, and more. These factors are sometimes referred to as the social determinants of health. More Resources:

1. Department of Health and Human Services. 2015. “Healthy People 2020.” Available at <http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>
2. National Library of Medicine. 2013. Medline Plus: Health Disparities. Available at <http://www.nlm.nih.gov/medlineplus/healthdisparities.html>

APPENDIX B: ADDITIONAL RESOURCES

ACTIVE DESIGN GUIDELINES

The Active Design Guidelines provides architects and urban designers with a manual of strategies for creating healthier buildings, streets, and urban spaces, based on the latest academic research and best practices in the field. For planners, the guidelines include urban design strategies for creating neighborhoods, streets, and outdoor spaces that encourage walking, bicycling, and active transportation and recreation.

APA'S HEALTHY PLAN MAKING FACT SHEET

The comprehensive plan and the planning process can be used as tools for creating an environment that makes the healthy choice the easiest choice. This fact sheet lists strategies commonly used in the planning process to create vibrant communities, shows their connection to public health, and identifies best practices from across the country.

APA'S SMART CODES: MODEL LAND-DEVELOPMENT REGULATIONS

This report (PAS 556) is a guide to the development of model smart growth ordinances, including models that may be adapted by local governments to implement special planning policies for multimodal transportation, infill development, affordable housing, and other best practices in planning and development regulation. As used here, "smart growth ordinances" and "smart growth development codes" mean regulations intended to achieve a variety of objectives, including encouraging mixed uses, preserving open space and environmentally sensitive areas, providing a choice of housing types and transportation modes, and making the development review process more predictable.

CDC'S BUILT ENVIRONMENT ASSESSMENT TOOL

BE Tool is a direct systematic observation data collection instrument for measuring the core features and quality of the built environment related to behaviors that affect health, especially behaviors such as walking, biking, and other types of physical activity. The core features assessed in the BE Tool include: built environment infrastructure (e.g., road type, curb cuts/ramps, intersections/crosswalks, traffic control,

transportation), walkability (e.g. sidewalk/path features, walking safety, aesthetics & amenities), bikeability (e.g., bicycle lane/path features), recreational sites and structures, and the food environment (e.g., access to grocery stores, convenience stores, farmers markets, etc.).

CHANGELAB SOLUTIONS PEDESTRIAN-FRIENDLY CODE DIRECTORY

This online tool identifies specific zoning and subdivision codes designed to improve the safety and convenience for pedestrians, transit users, and bicyclists. Broken into 16 categories with numerous subcategories, this directory is a fairly comprehensive list of zoning and subdivision codes.

LEED-NEIGHBORHOOD DEVELOPMENT (LEED-ND)

The LEED for Neighborhood Development (LEED-ND) rating system is a product of the US Green Building Council, Congress for New Urbanism, and the Natural Resources Defense Council. LEED-ND criteria emphasizes projects that support the overall health, natural environment, and quality of life in our communities.

ULI'S BUILDING HEALTHY PLACES TOOLKIT

ULI's Building Healthy Places Toolkit: Strategies for Enhancing Health in the Built Environment outlines evidence-supported opportunities for enhancing health outcomes in real estate developments. Developers, owners, property managers, designers, investors, and others involved in real estate decision making can use the report's recommendations and strategies to create places that contribute to healthier people and communities, and to enhance and preserve value by meeting growing desires for health-promoting places.

URBAN STREET DESIGN GUIDE

The National Association of City Transportation Officials released its Urban Street Design Guide in 2013. This guide identifies the principles that cities can use to design streets for all modes of transportation—walking, biking, transit, and driving. Ensuring that streets are safe and inviting creates real spaces for all people.



City of
**MOUNT
VERNON**

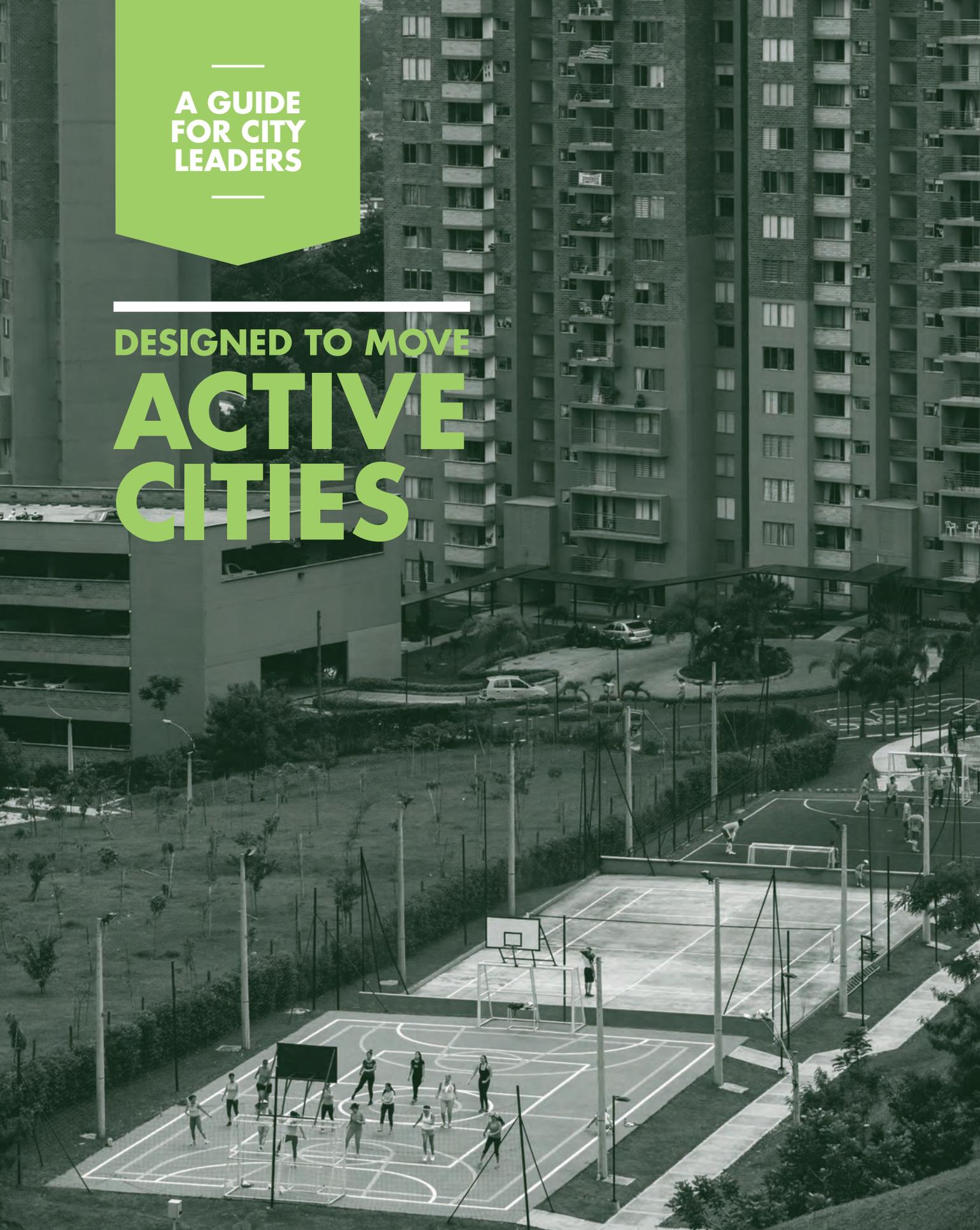
Appendix E

“DESIGNED TO MOVE ACTIVE CITIES - A GUIDE FOR CITY LEADERS”

**A GUIDE
FOR CITY
LEADERS**

DESIGNED TO MOVE

ACTIVE CITIES





SPORT EVENTS CREATE A CULTURE OF PHYSICAL ACTIVITY AND CAN BOOST A CITY'S GLOBAL PROFILE



ASK KIDS AND FAMILIES WHAT KINDS OF ACTIVE SPACES THEY WANT MOST



LAWS THAT SUPPORT ALL TYPES OF WHEELS CREATE A GREAT ENVIRONMENT FOR ACTIVITY



NO-CAR ZONES ARE SAFER, MORE FUN AND INCREASE ACTIVE TRANSPORT AND PARK USERSHIP



CITY PROGRAMS THAT PROVIDE DIVERSE OPTIONS GIVE MORE PEOPLE CHANCES TO BE ACTIVE

THIS IS ABOUT MAKING OUR CITIES MORE COMPETITIVE

A CITY'S ABILITY TO COMPETE DEPENDS ON AN ACTIVE POPULATION. THE RESEARCH IS CLEAR ON THIS. INTEGRATING PHYSICAL ACTIVITY INTO THE PLACES WE WORK, LIVE, LEARN, TRAVEL AND PLAY IS THE ONLY WAY TO ENSURE WE MOVE ENOUGH TO THRIVE.

PHYSICAL INACTIVITY IS BANKRUPTING ECONOMIES AT THE NATIONAL LEVEL, BUT IT IS FELT MOST ACUTELY BY THE WORLD'S CITIES - OFTEN THROUGH NEGATIVE IMPACTS ON THE HEALTH OF PEOPLE, ECONOMIES AND THE ENVIRONMENT. THIS IS BAD NEWS FOR CITIES AND THEIR CITIZENS. THE GOOD NEWS IS THERE'S A SOLUTION.

OUR BODIES ARE DESIGNED TO MOVE. OUR CITIES SHOULD BE TOO.

HIGHER LEVELS OF PHYSICAL ACTIVITY ARE ASSOCIATED WITH POSITIVE OUTCOMES FOR MOST OF THE THINGS THAT MATTER TO CITY LEADERS. WHEN PEOPLE MOVE MORE, CRIME, POLLUTION AND TRAFFIC GO DOWN. PRODUCTIVITY, SCHOOL PERFORMANCE, PROPERTY VALUES, HEALTH AND WELL-BEING IMPROVE DRASTICALLY.

CITIES THAT MAKE PHYSICAL ACTIVITY A PRIORITY, CONVERT EXISTING SPACES INTO ACTIVE SPACES, AND DESIGN ENVIRONMENTS FOR PEOPLE TO BE ACTIVE WILL CREATE A LEGACY OF PHYSICAL ACTIVITY. THESE ACTIVE CITIES WILL BE BETTER OFF BY ALMOST EVERY POSSIBLE MEASURE.

OUR PURPOSE HERE IS TO PROVIDE A BLUEPRINT FOR CREATING ACTIVE CITIES, WHATEVER THEIR SIZE AND WHEREVER IN THE WORLD THEY MAY BE.

Designed to Move: Active Cities reflects the insights and contributions of over 80 individuals and organizations from around the world. For a complete list of acknowledgments, please see pg. 79

WHAT'S INCLUDED HERE

1 THE CASE IS CLEAR

PAGE 7

2 MAKING CITIES ACTIVE

PAGE 17

3 WHO IS DOING THIS WELL?

PAGE 37

4 TOOLS & RESOURCES

PAGE 61

5 CITATIONS & ACKNOWLEDGMENTS

PAGE 71

The research shows how an active city can be a low-cost, high-return investment that impacts a lot more than just health. Here, we break down the evidence and demonstrate how a physically active city thrives.

Active cities typically do four things really well. 1) They make physical activity a priority, 2) Use existing resources, 3) Design for people and 4) Create a legacy of lasting change. This section offers practical steps, sample metrics and bright spots from around the world. It provides a starting point for cities to adapt to local context and needs.

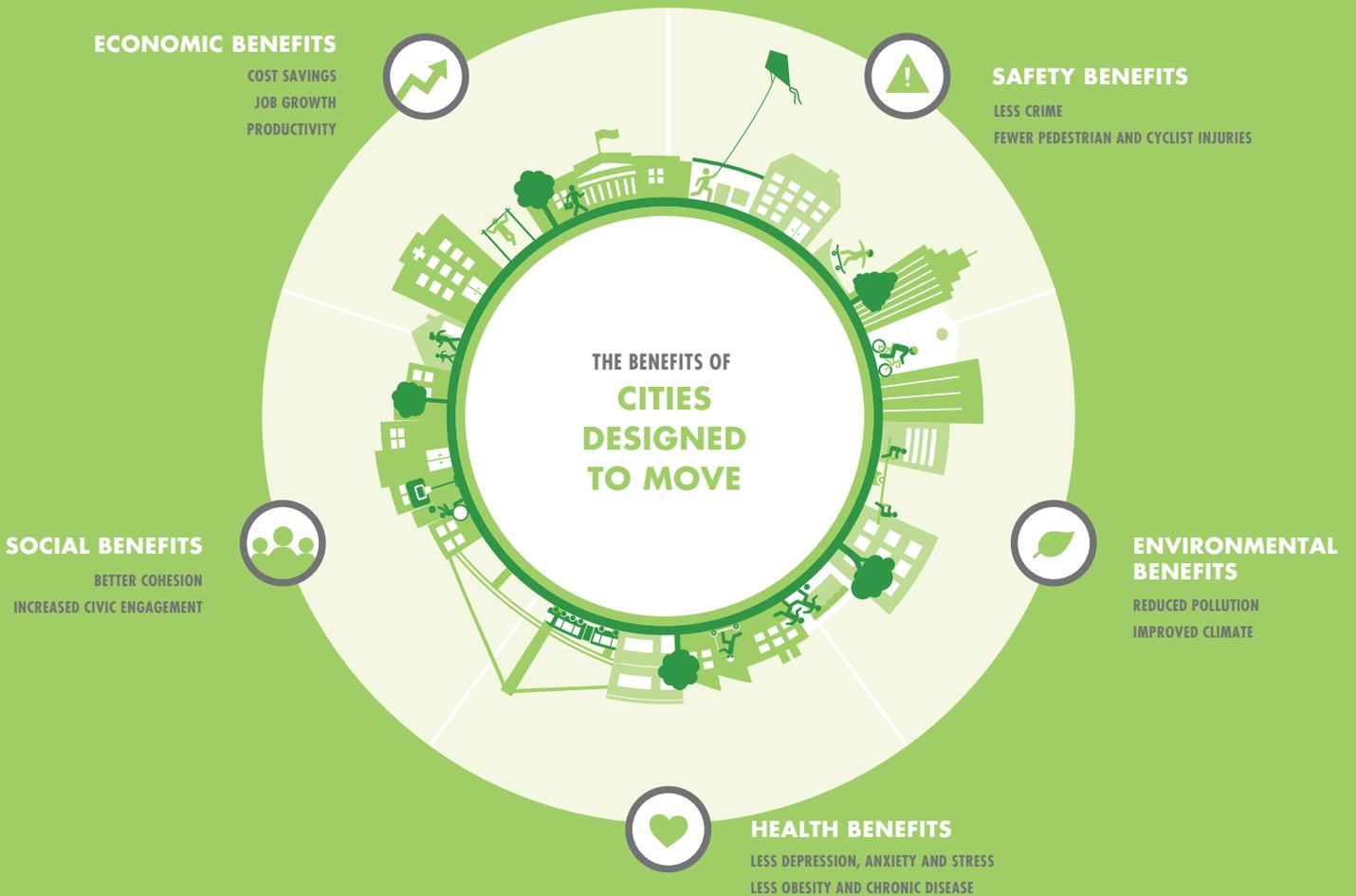
Here are nine cities—large and small, from economies of all sizes—whose leaders realized action must be taken. The best news is that they've already come up with replicable solutions.

Many experts have created great tools that offer guidance and technical expertise. We've compiled them here so cities everywhere can get started faster.

This work draws on an established evidence base and the contributions of many experts. Learn about them here.

fig 1

AN ACTIVE CITY IS A COMPETITIVE CITY





THE CASE IS CLEAR

Active cities are an investment in developing greater human, economic, social and environmental capital. The returns across nearly every dimension of civic life are so impressive they simply can't be ignored. This is for those who say that they can't justify the expense of doing something. They're wrong. What they can't possibly justify is the cost of doing nothing.

A SOLUTION ANY CITY CAN AFFORD

Inactive cities will lose billions to traffic congestion (US \$4.5 billion in Canada and \$7.1 billion in Australia, for example¹). They'll give up the substantial tax revenue associated with walkable, bikable cities. Physical inactivity will also cost one week per person per year in lost productivity.² Most tragically, physical inactivity will kill some 9 percent of the overall population—as many people as smoking.³ These are costs no city can afford.

There is no sense in taking on the cost of inactivity when the alternative delivers such a significant return. This section offers a quick glimpse of just a few of the benefits that can be realized when cities are designed to be active. Looking at the health benefits, for example, studies show that consistent stair use can be linked to a 12 to 20 percent reduction in all-cause mortality, including reductions in cardiovascular disease.⁴ Other studies have found that redeveloping business areas to promote mixed use and walkability increased employment by 300 percent.⁵

From a city planning standpoint, the evidence presents a strong case to design cities to be more active. In some instances, that can simply be a matter of making the most of existing space—opening up school grounds for public use, for example. Other solutions will involve more substantial changes to urban design and public policy.

HIGHLIGHTS FROM THE FACT BASE

When we set out to do this, we knew we'd find a lot of benefits to active cities. After all, physical activity is good for people. What we didn't know is that there's no resource that compiles a holistic set of the benefits. And very little attention is paid to anything outside of physical health. This is likely why the burden of helping people to be active seems to be placed on those responsible for public health. This turns out to be a narrow point of view.

The evidence is clear. Study after study has shown how cities that implement design solutions that enable physical activity (e.g., parks, active transport, mixed use development, etc.) experience far-reaching benefits. This section offers some of the highlights from among the 521 academic findings we reviewed from 17 different countries.

Put simply, the research shows active cities are healthier, wealthier, safer, greener and more cohesive. Not surprisingly, the people who live in them are happier. Changemakers around the world are already beginning to respond to the evidence base. The evidence is strong enough that it should mobilize many more.

THE BENEFITS ARE BIGGER THAN YOU THINK



ECONOMIC BENEFITS

Research shows that designing cities to be active can have a significant impact on the bottom line. From increased investment and higher property values to greater tax revenue, everyone does better when people move more.

WALKING IS GREAT FOR BUSINESS AND SO IS CYCLING

Multiple studies have shown that making places better for walking can boost footfall and trading by up to 40 percent and raise retail rents by 20 percent.⁶ Projects in the United Kingdom were shown to increase employment and the number of visitors—each by 300 percent.⁷ In another study, a higher Walk

Score® ranking was associated with a 42 percent increase in net operating income.⁸

A conservative estimate of the annual economic impact of cycling in one metropolitan area was \$60 million. The annual economic impact of cyclists is almost nine times as much as the one-time expenditure of public funds used to construct special bicycle facilities.⁹ Among 20 different studies on the economic benefits of walking and bicycling interventions, the average benefit-to-cost ratio was 13:1.¹⁰

INVESTMENTS IN TRAILS DRIVE ECONOMIC DEVELOPMENT

In one U.S. city, a \$70 million investment to revitalize a river greenway stimulated

\$2.5 billion in residential, commercial, retail, sports and entertainment projects along the corridor.¹¹ Likewise, businesses along a trail on the Atlantic coast of the United States attributed 30 percent of their gross revenues to being located along the trail.¹²

ACTIVE DESIGN BOOSTS PROPERTY VALUES

In one study, retail properties with a Walk Score® ranking of 80 were valued 54 percent higher than properties with a Walk Score® ranking of 20.¹³ Similar findings have been observed across all types of properties. Those with a Walk Score® of 80 were worth 29 percent to 49 percent more than properties with a score of 20.¹⁴ A study

of 15 U.S. cities found homes in more walkable neighborhoods to be worth \$4,000 to \$34,000 more than those in less walkable neighborhoods.¹⁵

CYCLING FACILITIES LOWER HEALTH CARE COSTS

A modeling study of Portland, Oregon (USA) estimated that by 2040, investments in bike facilities (costing from \$138 to \$605 million) will result in health care cost savings of \$388 million to \$594 million, fuel savings of \$143 million to \$218 million, and savings in the value of statistical lives of \$7 million to \$12 billion.¹⁶

LOCATING SCHOOLS IN NEIGHBORHOODS DELIVERS MASSIVE RETURNS

The list of economic benefits associated with locating schools in local neighborhoods is exhaustive. For example, the presence of a local school supports higher property values¹⁷ and saves on construction and operating costs.¹⁸ In addition, using the public school as the location for community health centers, swimming pools, libraries or other public services can reduce overall cost of public land assets, capital funds and total operating expenses required.¹⁹

HEALTHY, ACTIVE WORKPLACES ARE BETTER FOR THE BOTTOM LINE

A review of workplace health programs shows that such programs saved at least \$3 for every \$1 invested.²⁰ Employees who participate in workplace health programs have lower absentee rates,²¹ improved productivity and fewer health-related work limitations.²² Employers would also be well advised to support active transportation options such as walking and cycling given their relationship to improved productivity. For example, time spent in traffic in Australia's eight capital cities cost nearly US\$ 2.8 billion in lost "business time" or productivity.²³

SAFETY BENEFITS

Environments that are conducive to physical activity have been shown to be safer in terms of crime rates as well as collisions and injuries.

CRIME DROPS ON CAR-FREE STREETS

In one city, crime decreased by 74 percent when a street running through a park was

converted into a car-free space on weekends.²⁴ This is consistent with a separate finding that 6 of the first 7 reasons burglars stated for selecting a particular property were related to access routes.²⁵

GARDENS AND GREEN SPACES DETER CRIME

In one urban area, apartment buildings with more vegetation were associated with lower rates of homicide, assault, robbery, theft, burglary and arson. Buildings with high levels of vegetation had 52 percent fewer total crimes than buildings with low levels of vegetation.²⁶ Similarly, eight separate studies found that community gardens increase community cohesion, and reduce graffiti and violence.²⁷

PEDESTRIAN AND CYCLIST-FRIENDLY DESIGN SAVES LIVES

Want to reduce the risk of pedestrian-vehicle crashes? Try single-lane roundabouts, sidewalks, exclusive pedestrian signal phasing, pedestrian refuge islands and increased roadway lighting. All of these have been proven to decrease crash rates.²⁸ Traffic calming typically reduces crash rates by 47 percent on major highways through small urban areas, by 19 percent on corridors in larger suburban areas, and 29 percent overall.²⁹ There is consistent data showing that marked bike lanes on roads reduce motor vehicle-bicycle collisions by as much as 50 percent.³⁰

The news is good for kids, too. In areas where Safe Routes to School are implemented, the annual rate of school-aged pedestrian injury during school-travel hours decreased by 44 percent. Areas without Safe Routes to School saw no such reduction.³¹

ENVIRONMENTAL BENEFITS

Public transportation options have a significant impact on the environment, as do parks and open spaces.

URBAN TREES REMOVE POLLUTION AND REDUCE ENERGY DEPENDENCE

In the United States, trees in urban areas have been estimated to remove 783,000 tons of pollutants every year.³² Another study estimated that increasing tree cover by 10 percent may reduce the total

energy needed for heating and cooling by 5 to 10 percent.³³

MIXED USE, HIGH-DENSITY DEVELOPMENT CUTS DRIVE TIMES, REDUCING POLLUTION AND FUEL CONSUMPTION

More compact development can reduce drive times by as much as 40 percent. One study estimated that this could reduce carbon dioxide emissions by as much as 10 percent.³⁴

WALKABILITY AND BIKEABILITY DRASTICALLY REDUCE DRIVING AND RELATED POLLUTANTS

In one study, a 5 percent increase in walkability was associated with a 6.5 percent decrease in vehicle miles traveled. This equates to a 5.6 percent decrease in emissions of oxides of nitrogen.³⁵ In a study of a county in the United States, it was determined that the addition of sidewalks to all roadways would lead to a reduction of vehicle miles traveled equal to 183 million miles, resulting in an annual air pollution cost saving of \$8 million.³⁶

PUBLIC TRANSPORT IS GREENER TRANSPORT

Public transportation has been found to produce 95 percent less carbon monoxide, 90 percent less volatile organic compounds, and about half as much carbon dioxide and nitrogen oxide per passenger mile as private vehicles.³⁷

ACTIVE TRANSPORT TO SCHOOL IS BETTER FOR KIDS AND BETTER FOR THE ENVIRONMENT

Neighborhood schools produce less emissions than schools located on the outskirts of town. In fact, they can produce a 13 percent increase in walking and biking, and lead to a reduction of at least 15 percent in emissions.³⁸ A Safe Routes to School program resulted in a 13 percentage point reduction in vehicle drop-offs, and an annual reduction of roughly 1,000 tons of carbon dioxide emissions and 70 tons of other environmental pollutants.³⁹

PHYSICAL AND MENTAL HEALTH

It should come as little surprise that physical activity is good for people's overall physical health. The bigger revelation is the fact that

the ways our cities are designed have an enormous impact on people's overall mental health as well.

PEOPLE WHO LIVE CLOSER TO PARKS ARE HEALTHIER

In the case of access to parks and open spaces, the strongest evidence is related to the simple presence of parks and people's proximity to them. Residents who live closer to green space feel healthier,⁴⁰ less stressed^{41 42} and less lonely.⁴³ They also experience less anxiety⁴⁴ and children diagnosed with ADHD receive as much benefit from walking in a park as they do from leading medication therapies.⁴⁵ Living closer to green space is also associated with decreased cardiovascular and respiratory disease mortality in men.⁴⁶ Considering the human and economic costs of these diseases, parks begin to look like a particularly attractive investment.

WALKABLE/BIKEABLE/GREEN URBAN COMMUNITIES MAKE FOR HEALTHIER, SAFER CITIZENS

Walkability is associated with a decrease in body mass index (BMI),⁴⁷ while urban greenery is associated with less stress,⁴⁸ speedier hospital recoveries⁴⁹ and improved mental health.⁵⁰

ACCESS TO SCHOOL GROUNDS GIVES PEOPLE A CHANCE TO BE MORE ACTIVE

One of the most impactful things that cities can do to get people moving is to

open up existing spaces. Schools present a great opportunity, but only if people can access the grounds. One study found that schools represented 44 percent of potential neighborhood sites for physical activity. However, the number of locked schools was associated with significantly higher BMI.⁵¹

SOCIAL BENEFITS

Active environments strengthen communities. They give people a greater sense of cohesion and lead people to have more positive attitudes about their cities.

PARKS AND PLAYSPACES STRENGTHEN COMMUNITY TIES AND GIVE KIDS A PLACE TO PLAY

Parks and playspaces offer enormous social benefits, including decreased feelings of loneliness⁵² and a stronger sense of social integration.⁵³ Moreover, when New York City reconstructed its playgrounds, a 25 percent increase in structured play and a 240 percent increase in unstructured play were observed in children.⁵⁴ Given decreasing physical activity levels among young people, this is an especially significant finding.

PEOPLE LIKE THEIR CITIES MORE WHEN THEY HAVE ACTIVE TRANSPORT OPTIONS

Ciclovias (cycling events that close streets to cars for a full day) are great community builders. In fact, nearly 9 out of 10 people

agree that the events cause them to look more favorably on their city.⁵⁵ Public transport options also impact how people feel about their cities. One survey found that half of residents who lack access to mass transit are dissatisfied with the lack of availability.⁵⁶

CAR-FREE PARKS INCREASE PARK USERSHIP

Automobile traffic has actually been shown to decrease park use. On the other hand, closing a park road to auto traffic just once a week increased the number of annual visitors to San Francisco's Golden Gate Park (USA) by 2.7 million. Estimates suggest that a park-adjacent road closure in New York City could increase usership by 69 percent.⁵⁷

SHARED USE AGREEMENTS MAKE SCHOOLS A NATURAL PLACE TO PLAY AND MOVE

After a Hawaii (USA) school implemented far-reaching shared use agreements—agreements that allow outside organizations to use school facilities—faculty unanimously reported that it was beneficial to students. They reported that the program provided needed opportunities for physical activity, incurred social benefits (e.g., making new friends), kept students out of trouble and promoted healthy lifestyles.⁵⁸

BEST OF ALL, IT'S WHAT THE PEOPLE WANT

It turns out that people want to live in cities that are walkable, bikeable and playable. From the surveys and consumer research available, it appears the public is already very much in favor of activity-friendly options. For example:

- Many people are “mismatched” and do not live in their preferred neighborhood type—specifically, people who do not live in walkable neighborhoods would prefer to.⁵⁹
- Nine of ten people prefer that more local government funds be devoted to walking/jogging trails, recreation centers and bike paths.⁶⁰
- If bicycling were made safer from motor vehicle traffic, bicycle riding at least once per week could increase from 8 percent to 40 percent of adults.⁶¹
- In the United States, 59 percent of people surveyed support walkable communities.⁶²
- More than half of Americans prefer neighborhoods that are close to shops, have a mix of incomes and provides public transportation.⁶³

HOW THE RESEARCH WAS GATHERED AND ASSESSED

U.S.-based Active Living Research (ALR) was commissioned to compile the available evidence on the multiple benefits of designing built environments to support physical activity. Since it is already known that physical activity is hugely beneficial to an individual, ALR's work focused on co-benefits—the economic, safety, health, social and environmental benefits of an active city.

With input from a network of experts, ALR identified several “features” or interventions in several key settings that

provide the most support for physical activity based on their presence within any city. These settings include parks, urban design, transport, schools and workplaces.

ALR staff compiled peer-reviewed and gray literature, and created summaries of all studies reviewed to catalogue each study's design and major research findings. With the exception of public opinion polls (which were included due to their relevance to city leaders' decision-making), studies were graded based on their quality.

To establish the total strength of available evidence and association, ALR created summary scores by summing the weight of evidence from all of the resources reviewed. These were then categorized along a scale ranging from “strong evidence of a negative effect” to “strong evidence of a positive effect.” Practically speaking, this provides an indication of the highest potential areas of investment and related returns.

THE EVIDENCE IS STRONG – REALLY STRONG

In all, researchers looked at 521 pieces of evidence. The highest possible evidence score was achieved in 80 percent (24 out of 30) of the areas reviewed compared to only one negative finding. The researchers looked at co-benefits: economic, safety, social, environmental, physical health and mental health. It is worth noting that while there are 6 co-benefits called out in the research, the findings reported here often refer to 5 co-benefits. This is because physical and mental health have been added together for a more streamlined presentation of facts.

A surprising amount of evidence was found. The evidence suggests that activity-friendly design contributes to an increase in physical activity, as well as other health, environmental and economic benefits. Here's how it breaks down by setting:

- Each setting had strong evidence of at least 3 of the 6 co-benefits. **Parks and trails had good to strong evidence of all 6 co-benefits.**
- **Places built for activity have good to strong evidence of economic benefits**—things like increased home value, greater retail activity, reduced health care costs and improved productivity.
- **Every setting observed had strong evidence of environmental co-benefits** based on reduced pollution and carbon emissions.
- **Schools and workplace settings had the most gaps in research**, because active design of these settings has not been studied extensively.
- **Active travel is currently short on evidence of health benefits.** The researchers theorize that this may be because the focus of studies in the

transport field tends to skew toward environmental impacts.

- **There is very little evidence of negative consequences, and a preponderance of positive benefits.** In the urban design setting there was some evidence of negative physical health and injury outcomes, mainly related to high residential density.

For a detailed description of the methodology, please see the report [Co-benefits of designing communities for active living: an exploration of literature](#) published in IJBNPA.

THERE'S PLENTY OF EVIDENCE

OVER 500 FINDINGS FROM 17 COUNTRIES HIGHLIGHT THE BENEFITS OF CITIES DESIGNED TO MOVE



WHERE TO START

Designing communities, transportation systems, schools, parks and buildings that make physical activity attractive and convenient produces a wide range of benefits for communities. The research on the benefits of designing for physical activity in these five settings suggests that they are promising areas for any city. The bottom line: More parks and trails,

walkable community designs, more sidewalks and bike paths, better public transit, and schools and workplaces within walking and biking distance of students and workers improve some of the most significant dimensions of city life. It's important to understand that there's no magic formula. No single environmental feature will solve the problem of

physical inactivity. Some cities support active transportation and active occupations. Others support active recreation and education. An active city supports all of it. All of these things work best when they work together.

PROVEN INTERVENTIONS

Through a combination of research and consensus, academic experts identified five “settings” in any city that relate to physical activity. These are: parks, urban design, transportation, schools and workplaces. Focusing investments on activity in these settings have been shown to deliver a solid return and have the best evidence of co-occurring benefits. Here’s what some of the biggest needle-movers look like in each:



PRESENCE/PROXIMITY: Within a 10-20 minute walk of every resident.

PROGRAMS: Community sports, classes and events are available and promoted to all.

PUBLIC GARDENS: Green space exists throughout the city, especially in urban areas.



MIXED USE: Areas with a mix of destinations (residential, commercial, cultural, etc.) in close proximity to where people live and work.

GREENERY: The presence of street trees, shrubbery, gardens and other natural landscaping features within an urban environment.

STREET SCALE DESIGN: The pedestrian experience is enjoyable and safe. Features include landscaping between streets and sidewalks, buildings that open onto sidewalks (instead of parking lots) and street lights.

CONNECTIVITY: A street network with short block lengths and many intersections that provide direct routes between destinations, often in a grid-like pattern. This contrasts to winding streets with few intersections and many cul-de-sacs.



PEDESTRIAN AND BICYCLE FACILITIES: Facilities designed for walking and bicycling, including sidewalks, cycle paths, protected bicycle facilities, safe street crossings and bike parking.

TRAFFIC CALMING: Street design features that reduce the volume and speed of traffic to improve safety for pedestrians and bicyclists. This includes things like signage, speed bumps, curb-cuts and road diets (reduction in number of street lanes to add pedestrian and bicycle facilities).

PUBLIC TRANSPORT: All residents have access to a reliable, safe, and convenient public transportation system. Stops are located near people's homes and workplaces.



LOCATING SCHOOLS NEAR HOMES OF STUDENTS: Placing schools near homes gives more students the option of walking or cycling to school.

RECREATION FACILITIES AT SCHOOL: Schools have facilities and budgets for things like gymnasiums, playgrounds, and play equipment.

SHARED USE AGREEMENTS: Formal or informal agreements between a school district and city or private organizations allowing the community use of school facilities outside of school time can significantly expand a community's options for physical activity.



BUILDING SITE DESIGN: Property and building location are designed to promote physical activity through the use of walking/jogging paths, outdoor recreational areas, gardens and connections to public transportation.

BUILDING DESIGN: Buildings include stairs that are open and visible from building entrances, exercise equipment, shower and lockers, bicycle parking, and skip-stop elevators (elevators that don't stop on every floor).

PHYSICAL ACTIVITY PROGRAMS/POLICIES: Employers promote physical activity through exercise classes, discounted gym membership, active transportation incentives, non-parking cash-out programs and point-of-decision prompts (e.g., signs encouraging stair use and walking meetings).



ACTIVE DESIGN MAKES MOVING THROUGHOUT THE CITY EASIER AND MORE ACCESSIBLE TO EVERYONE



MAKING CITIES ACTIVE

An active city is a city with a chance. It's a city with a future. It's a place that's designed for people to move throughout their day-to-day lives. Not just here or there, but everywhere. This requires an audaciously bold vision, completely rethinking the way things are done and an intentional course of action. Here's a blueprint to help city leaders get it done. It is intended for mayors, city managers, transport and public health officials, business community, private citizens, and urban planners, NGOs and anyone who's working to make cities thriving places to live.

HOW TO BECOME AN ACTIVE CITY

The case for active cities is strong. Based on the evidence and the experiences of thriving active cities around the world, we've identified four things active cities do really well: prioritize physical activity, use existing resources, design for people to be active and plan on movement for the long-term.

Whether you're looking to take the first step or launch a complete transformation, this section offers up the resources to get started. Keep in mind that these aren't in priority order, nor are they sequential. All four are critical success factors, but they'll require different levels of effort and resources.

Certain aspects will cost more or take more time than others. In some cases, there are relatively low-cost, simple solutions with big impact. These are a great place to start. And from there, establish your goals. We've suggested some metrics here, which can be adapted to local context and linked to measurable, achievable, realistic improvements over time.

fig 4

FOUR CALLS TO ACTION FOR ACTIVE CITIES



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

BUILD PHYSICAL ACTIVITY INTO MASTER PLANS, ADMINISTRATIVE ACTIONS AND INCENTIVES.

MAKE EXISTING RESOURCES ACTIVE RESOURCES

LOOK AT EXISTING RESOURCES FOR LOW-COST, HIGH-GAIN INTERVENTIONS LIKE ABANDONED SPACE AND AFTER-HOURS ACCESS TO FACILITIES.

DESIGN FOR PEOPLE TO BE ACTIVE

CITIES SHOULD BE BUILT FOR PEOPLE, NOT JUST CARS. RETHINK HOW YOU MEASURE WHERE, WHY AND HOW PEOPLE MOVE.

BUILD A LEGACY OF MOVEMENT

CREATE CHANGES THAT WILL LIVE BEYOND THE CURRENT ADMINISTRATION SUCH AS INFRASTRUCTURE AND POLICIES.



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

Designing a physically active city starts at the top, because ambitious plans need ambitious leaders. Championing an active city will require a few key commitments:

VISIBLE LEADERSHIP: Talk about it in speeches, walk or bike to work, make family time active time, make the Mayor’s Office an active workplace, work with other employers and business leaders, celebrate success.

PLAN FOR IT: Build physical activity into the city’s master plans, administrative actions and incentives across all policy areas; hold people accountable.

ALIGN CITY DEPARTMENTS: This isn’t just a job for public health or the parks department. It’s also the role of (and in the interest of) transport, planning, education, culture, safety, economic development and many others. The most effective active cities get these departments working together.

CHECKLIST

VISIBLE LEADERSHIP:

The mayor and other city leaders talk about physical activity publicly



VISIBLE LEADERSHIP:

The people who work for the city have the chance to be active



PRACTICAL STEPS & IDEAS

REGULARLY MAKE THE CASE FOR PHYSICAL ACTIVITY:

People need to hear about why and how their city is physically active. The case needs to be made from the highest levels of leadership including city-specific activity levels and their impacts, and what the city is doing to combat the problem.

MAKE CITY WORKPLACES ACTIVE WORKPLACES:

One of the most effective ways to provide people with an opportunity to be active is to create workplaces that enable physical activity. City workplaces are no exception. Start with walking meetings, time and space for exercise, health insurance credits for physical activity and wellness programs, accessible stairs, standing desks, treadmill desks, incentives for active transport, etc. Employees will be happier and healthier, and an increase in productivity and a decrease in absenteeism are likely.

SAMPLE METRICS

- Frequency in which physical activity is mentioned or committed to in mayor’s or other city leaders’ speeches
- # of physical activity public awareness campaigns that are supported by the city
- Changes in expectation/demand by the people around physical activity
- % of employees who walk, bike or ride public transport to work
- % of people who get 30 minutes of moderate-to-vigorous physical activity daily (60 minutes for children)
- Fitness or recreation facilities usage rates
- Health care spending trends—e.g., reduction in costs for diseases associated with physical inactivity

PLAN FOR IT:

Physical activity goals are part of a broader vision. Implementation steps are built into the city's plans.



BUILD PHYSICAL ACTIVITY INTO THE MASTER PLAN:

Whatever it might be called (corporate priorities, development plan, city plan, municipal strategy, etc.), nearly all cities have some version of a master plan. This is a framework that is updated every decade or so to guide the growth and direction of a city. It typically includes goals, policy considerations and budgets for the various city agencies. In addition, cities typically have ordinances and guidelines for construction, contracting, permitting, etc. Physical activity goals and policies such as Complete Streets that consider the needs of all users and places to play can be built into all of these at minimal cost relative to the return. To take the next step, check out [How to Create and Implement Healthy General Plans](#) by Changelab Solutions.

- % of city budget dedicated to efforts that increase physical activity levels
- # of built environment elements related to physical activity included in general plans, transportation and development plans (cycling paths, sidewalks, etc.)
- # of studies measuring the impact of physical activity (e.g., economic impact for city)
- Increase in the percentage of transport investments allocated to active travel

ALIGN CITY DEPARTMENTS:

There is a coordinated approach for integrating physical activity across sectors with accountability and incentives built in



ENGAGE A CROSS-AGENCY COORDINATOR:

Cities have dozens of separate departments and it's unrealistic to think they'll be able to collaborate without a little support. Dedicated staff are needed to bring multiple departments together to promote city-wide physical activity goals. Several cities throughout the world have already done this, with remarkable results. Better yet, it doesn't have to cost that much.

- # of cross sector task force meetings to move activity-friendly built environment projects forward
- # of physical activity-related milestones reached overall and by department
- % of resources dedicated to cross agency coordination around physical activity

BRIGHT SPOTS



OKLAHOMA CITY (USA)

In 2007, Mayor Mick Cornett realized he was obese. After making his own lifestyle changes including regular exercise, he realized many of his fellow citizens would do well to do the same. In a bold statement of visible leadership, Mayor Cornett announced a goal for the city to lose one million pounds. He launched [thiscityisgoingonadiet.com](#), a resource that allows users to access information and monitor and register their progress as a group.

With public support growing, a 2009 referendum approved a one-cent sales tax to fund a 70-acre urban park, hundreds of miles of sidewalks and trails, a streetcar system, and health and

wellness centers. Private businesses have also provided loans to create more walkable downtown streets and add bike lanes and recreation facilities. In total, the effort marks a \$777 million, 10-year effort to redesign infrastructure to encourage even more activity.

By 2012, the city met its goal of losing one million pounds, and the changes that have been made are set to last. As Cornett says, "The culture of the community has shifted."⁶⁴

SOROCABA (BRAZIL)

A four-year, city-led effort focused on increasing physical activity rates in the city of Sorocaba has had a significant positive effect on citizens' physical

health. The plan includes infrastructure changes like walking and cycling tracks, parks and recreation facilities that are accessible to all, along with a public awareness campaign called *Agita* (Move).

THE RESULTS ARE ASTOUNDING:⁶⁵

- Hospitalizations for stroke were reduced by 50 percent
- Hospitalizations for type 2 diabetes were reduced by 57 percent
- Physical inactivity was reduced by more than two-thirds (from 9.6 percent to 2.7 percent)
- Sao Paulo, the state in which Sorocaba is located, is estimated to have saved US\$310 million a year from its health care budget

TOOLS ANY CITY CAN USE: WHAT TO LOOK FOR IN A CROSS-AGENCY COORDINATOR

The type of staff and their scope of responsibility will depend greatly on the size and set-up of an individual city. In some cities, staff are located within the health department. In others, they are situated in the mayor's office or planning departments. Typically these individuals have backgrounds in public health, transportation or urban planning—and occasionally all three. Here's how a few cities have approached the role.

NEW YORK CITY'S (USA) health department hired a Built Environment Director to coordinate with different city government departments on projects to improve physical activity. The Built Environment Director is a physician and epidemiologist with previous experience working with the US Centers for Disease Control and Prevention, and state health departments on built environment and physical activity issues.

As New York's efforts to become an active city expanded, additional staff were brought in for coordination and implementation. Each project was assigned one junior staff (most often a recent Master's graduate in public health or planning) reporting to the Director.

In **NASHVILLE, TENNESSEE (USA)** the Mayor's Office hired a Director of Healthy Living with a background in urban planning and transportation. As a former multi-modal transportation coordinator and staffer for the Mayor's Bicycle and Pedestrian Advisory Committee, the Director of Healthy Living brings together various departments on livability, active transport and health and wellness.

In **HALIFAX (CANADA)** an urban planner was hired by the Capital District Health Office, to coordinate with planning and transportation professionals who work with the Halifax Regional Municipality to develop policies that support and foster walking, cycling and other forms of physical activity. Across several Canadian municipalities just starting this work, junior staff (with backgrounds in public health or planning or both subjects) are being hired by the regional public health office, with additional support being provided by an existing senior manager in-house and a senior-level expert consultant.

TOOLS ANY CITY CAN USE: TALKING POINTS FOR CITY LEADERS

The following points are a quick summary of the problem and solutions, along with brief facts and actions. They can be used as part of a supportive argument to be built into talking points and speeches as necessary.

01 THE PROBLEM: PHYSICAL INACTIVITY

PHYSICAL INACTIVITY COSTS CITIES

MILLIONS FINANCIALLY: Physical inactivity is connected to lost productivity, higher rates of absenteeism and higher health care costs.

PHYSICAL INACTIVITY COSTS CITIES

MILLIONS OF LIVES: Physical inactivity is linked to a variety of chronic diseases—everything from diabetes and heart disease to cancer and stroke. Today, it kills more people than smoking.

02 THE SOLUTION: AN ACTIVE CITY

Creating every possible opportunity for people to move actively throughout our city makes this a better place to live, work, travel and play.

AN ACTIVE CITY IS A SAFER CITY

- Crime drops 74 percent when a street goes car-free on weekends.⁶⁶
- Marked bike lanes reduce vehicle-bike collisions up to 50 percent.⁶⁷

AN ACTIVE CITY IS A MORE PROSPEROUS CITY

- Active city design increases property values, tourism, business revenue and economic investment.
- Creating more walkable environments has been shown to boost employment and visitors up to 300 percent; it increases trading as much as 40 percent and retail rents as much as 20 percent.⁶⁸

AN ACTIVE CITY IS A MORE SUSTAINABLE CITY

- \$46 million in sidewalks returns health & air quality benefits of \$846 million.⁶⁹
- Public transport produces 95 percent less carbon monoxide as cars.⁷⁰
- Bogota (Columbia), Johannesburg (South Africa), Mexico City (Mexico): massive reductions in pollutants are associated with with bus rapid transit investments.⁷¹

AN ACTIVE CITY IS A MORE APPEALING CITY

- Going car-free could increase park usership 69 percent.⁷²
- Nearly 9 in 10 people say cycling events make them look more positively on their city.⁷³
- Every 10 minutes of commuting cuts involvement in community by 10 percent.⁷⁴

AN ACTIVE CITY IS A HEALTHIER CITY

- Living near green space decreases the odds of stress by 30 percent.^{75 76}
- Stair use can result in a 12-20 percent reduction in all-cause mortality.⁷⁷
- Children with ADHD receive as much benefit from walking in a park as they do from leading medication therapies.⁷⁸

03

HOW WE'RE GOING TO GET IT DONE

WE'RE GOING TO MAKE PHYSICAL ACTIVITY A PRIORITY

- That means building it into city plans and ordinances.
- It also means creating opportunities for our city workers to get moving so they can set the example for everyone else.

WE'RE GOING TO LOOK AROUND OUR CITY AND SEE IF THERE ARE PLACES WE CAN MAKE MORE ACTIVE

- Things like keeping parks open later and unlocking stairwells.
- Let's rethink the rules. When signs tell people not to play, we'll ask why.

WHEN WE DESIGN, WE'LL DESIGN FOR YOU

- We'll ask you what you want and need to choose more active options. Better bike parking? More sidewalks in a particular neighborhood? Different transit connections?

WE'RE GOING TO MAKE CHANGES THAT LAST

- This isn't about me, it's about you. And it's about making changes to policy and infrastructure for generations to come.
- We'll take a good look and see where the most need is—places where people have the fewest opportunities to get moving—and start there.



ACTIVITY FRIENDLY TRAFFIC LAWS MAKE MOVING SAFER FOR EVERYONE



OPENING UP WATERWAYS TO DIFFERENT KINDS OF MOVEMENT EXPANDS PEOPLE'S WAYS THEY CAN GET ACTIVE



MAKING RECREATION A PRIORITY ENGAGES MORE CITIZENS



WALKING AND CYCLING PATHS ALONG WATERWAYS BOOSTS TRADING, RETAIL REVENUE AND PROPERTY VALUE



SAFE, ACCESSIBLE, BUS RAPID TRANSPORT, INCREASE OPPORTUNITIES FOR ACTIVE TRANSPORT

10 QUICK WINS



01 TURN THE LIGHTS ON AND KEEP PARKS AND SPORT SPACES OPEN LATE

Phoenix, Arizona (USA) saw a drastic reduction in juvenile crime when they introduced late-night basketball in the summer.⁷⁹ Of course, open spaces need to be well-lit and offer appropriate security presence. Phoenix achieved this for a cost of just 60 cents per participant.

02 OPEN UP SCHOOL RUNNING TRACKS, COURTS AND FIELDS TO THE PUBLIC

Making these tax-supported resources available to the public provides more opportunities for community members to get active. A secondary school in the city of Palm Springs, California (USA) makes the running track, sports field and stadium stairs available throughout the day. To accommodate student use, clear guidelines are posted regarding which areas (e.g., outside running lanes) are available for the public.

03 BE A ROLE MODEL. WALK OR BIKE TO WORK, TAKE THE STAIRS, WORK OUT AND HAVE ACTIVE MEETINGS

City leaders can be high-profile champions and encourage citizens to be active. All of the case studies in Active Cities feature mayors who are active themselves. In addition, Oklahoma City, Oklahoma (USA) features a mayor whose personal health goals became the catalyst for citywide transformation.

04 HAVE ACTIVE MEETINGS

People get sluggish and distracted when sitting for long periods of time. Whenever possible, make meetings active by taking a walk during the discussion or encouraging people to stand up and move around.

05 REDUCE SPEED LIMITS TO 20 MPH

There is no debate that lower speed limits in urban areas and residential zones are safer for pedestrians and cyclists. Studies have shown that serious injuries or death resulting from automobile-pedestrian accidents are up to nine times higher in areas with 30 mph speed limits versus 20 mph.⁸⁰ Bristol (UK) has measured attitudes about lower speed limits and found that far more motorists support them than oppose them.⁸¹

06 REQUIRE STAIRS IN PUBLIC BUILDINGS AND NEW CONSTRUCTION TO BE OPENED UP FOR PUBLIC USE

Stairs are more than a fire escape. They're a great, healthy way to get from one floor to another, but many buildings don't require them to be opened up for daily use. This could have a major health benefit. Studies show that consistent stair use can be linked to a 12-20 percent reduction in all-cause mortality, including cardiovascular disease.⁸²

07 MAKE EXISTING RESOURCES LIKE TRAILS AVAILABLE FOR USE IN ALL KINDS OF WEATHER

Red Deer (Canada) plows portions of its walking trails in winter and allows the snowshoeing club to maintain other sections to ensure people are able to use the trails during snowy winters.

08 ASK CITIZENS WHAT THEY NEED TO BE MORE PHYSICALLY ACTIVE

Many of the cities profiled here have asked people for their opinions. For example, in Buenos Aires (Argentina), people were asked what would encourage them to cycle more. They wanted protected lanes and safe bicycle parking. The city responded and now far more people choose biking for their commutes.

09 PUT CYCLING AND WALKING ROUTE MAPS ON YOUR WEBSITE AND IN CITY APPS

Many cities offer information about walking, running and cycling routes on their websites. Make these available as mobile apps for residents and visitors to use in real time. For example, Sydney (Australia) has created "curated walks" to guide people through a walking tour of the city's cultural attractions.⁸³

10 LET PEOPLE EASILY APPLY FOR STREET-CLOSING PERMITS FOR NEIGHBORHOOD PLAY EVENTS

Active cities are often fun cities and street-play events are one more way to make physical activity enjoyable. For example, Bristol (UK) has a system in place to allow ordinary citizens to apply for a "Temporary Play Street Order" that closes streets to play on a one-time or regular basis. Families love the option and it's helped to strengthen the city's reputation as a playable city.

SOLUTIONS TO REPLICATE FROM AROUND THE WORLD

Cities of all sizes are learning from each other and adopting some of the same solutions to thrive. Following are a few of the most widely implemented solutions:

BIKE SHARES

Public access to bikes—rentable by subscription or by the day or hour—can boost active transport opportunities for all.



MOTOR-FREE STREETS

Want to increase activity, safety and retail traffic? Open the streets to non-motorized transport exclusively.



FITNESS IN PUBLIC PARKS

Providing public spaces to work out can be inexpensive, fun and accessible to all.



MARKED BIKE LANES AND VISIBLE LANE DIVISIONS

Clearly marked lanes help everyone to share the road and makes the transport experience better for everyone. To make things even safer, install dividers between cycle and automobile lanes.



OPEN STREET EVENTS

Events that open streets up once a week to motor-less fun—walkers, cyclists, skaters and runners—improve people’s outlook on their city.



INTEGRATING ACTIVE TRANSIT TO CITY SYSTEMS

To encourage even more cycling, connect transit stops to trails and bike paths, ensure sidewalk availability and make room for bikes on public transport.



POCKET PARKS

Small, unused pieces of land in urban areas can make ideal recreational spaces in urban environments.





MAKE EXISTING RESOURCES ACTIVE RESOURCES

We hear a lot about mixed use areas that combine residential, retail, natural, industrial and cultural functions. Studies show these areas are safer, more desirable, environmentally friendlier, more highly valued and more conducive to physical activity. But this isn't just about where people live.

Not everything has to be created from scratch. Every city has existing resources that can be maximized to encourage and enable physical activity. These include physical spaces, as well as the people and organizations that influence citizens.

RETHINK RESOURCES: There are plenty of places throughout any city that can be opened up to activity. Maybe it's a town square that can host group events. Perhaps the traffic lanes are already being repainted so bike lanes would be a negligible-cost addition. Or open up schools with a field and running track for public use.

INNOVATE AND INTEGRATE: Physical activity isn't just about parks and gyms. Look for the unexpected solutions and places to provide options in the community. Cities have re-purposed everything from abandoned parking lots and farm fields to

industrial buildings. Clean up and paint a dilapidated street corner to create a pocket park. Install swing sets at bus stops. Repurpose underground throughways beneath freeways to be used for bicycles and pedestrians.

USE LOCAL INFLUENCERS: Doctors, local athletes, teachers and principals, community leaders, business leaders, police and firefighters ... all of these community influencers are people who can inspire physical activity and speak in favor of creating more active spaces.

CHECKLIST

RETHINK RESOURCES:

Parks are open late to accommodate different user groups



RETHINK RESOURCES:

Take a look at existing traffic laws



PRACTICAL STEPS & IDEAS

UNLOCK THE GATES, TURN ON THE LIGHTS:

Parks, playgrounds and exercise facilities are waiting to be used for an extremely low cost.

SLOW DOWN AND SHARE THE ROAD:

Reduced traffic speeds make physical activity safer and more enjoyable for everyone. Laws that give rights to pedestrians and cyclists create an environment that supports active transport.

SAMPLE METRICS

- % of public parks open to public after the workday (6 p.m.)
- % of public parks open to public after sundown

- % of roadways with 20 mph speed limits
- Levels of driver compliance with 20 mph
- # of roadways where traffic calming has been introduced

CHECKLIST

RETHINK RESOURCES:

Schools can be used by students, teachers AND the community



RETHINK RESOURCES:

Stairwells in buildings are typically open and aesthetically pleasing



INNOVATE AND INTEGRATE:

Abandoned areas such as parking lots or once industrial zones are converted and maximized for physical activity opportunities



INNOVATE AND INTEGRATE:

There is a plan and efforts in place for Complete Streets



USE LOCAL INFLUENCERS:

Partnerships with key influencers are put in place to raise awareness and encourage physical activity



PRACTICAL STEPS & IDEAS

CHAMPION SHARED USE:

When public spaces like schools are available for multiple uses, cost savings are realized and the entire community benefits. ChangeLab Solutions has a set of resources available to get started.

A LITTLE BIT OF PAINT AND STAIR PROMPTS CAN GO A LONG WAY:

One of the biggest deterrents to stair use is their visibility—either that they have none or they aren't appealing. Opening up the stairwells, adding painted markers to guide people's eyes toward them and signage pointing out the location of stairs and encouraging their use can make a huge difference. For example, signs that say "Burn calories, not electricity. Take the stairs!" can be distributed by the city and have been shown to significantly increase stair use.⁸⁴

INCENTIVIZE BUSINESSES AND OTHER STAKEHOLDERS TO MAXIMIZE USE OF SPACE:

Planning for the city includes mixing different types of land uses in an area so that people live close – and can walk – to schools, work, parks, food premises and other shops. Consider how codes, guidelines and policies can be used to maximize use. Include built environment factors that consider physical activity in revitalization projects.

IMPLEMENT COMPLETE STREETS POLICIES:

More and more cities are prioritizing streets that safely address the needs of all users including pedestrians, bicyclists and transit riders. Complete Streets policies consider the needs of the local community in all development—e.g., speed limits, placement of crosswalks and traffic lights, sidewalk and protected bike path construction, etc.

ENGAGE LOCAL HEROES, CELEBRITIES AND RESPECTED VOICES:

Local athletes and sports teams, television personalities and community voices like school principals, local coaches and business owners can be powerful voices to champion physical activity. In addition, doctors can be engaged to speak about the importance of physical activity, as well as prescribe it.

SAMPLE METRICS

- # of districts/ schools that have shared use agreements
- Rating of shared use policies/mandates for each school district within city
- # of people who access physical activity options governed by shared use agreements

- Changes in stair usage before and after interventions
- # of stair prompts distributed
- # of buildings posting stair prompts

- # of codes/ ordinances that incentivize mixed use
- % of low-activity-supportive areas with a (funded) plan for improvement
- # of construction guidelines designed to encourage maximum use

- Funding to convert key transportation routes to multi-modal streets
- Rating of complete street policies/ laws/ mandates
- Miles of Complete Streets planned and built

- # of partnerships developed
- # of initiatives/campaigns launched by partners
- # of local physicians who prescribe physical activity

BRIGHT SPOTS

NEW DELHI (INDIA)

Taking a page from the much smaller city of Gurgaon, New Delhi and its population of 22 million recently began to host Raahgiri Day. This is a weekly event that closes city streets to cars, making them available for walking, biking, dancing, skating and any other activity residents endeavor to take up. In a city with massive traffic congestion and air pollution, Raahgiri Days are a welcome addition to the civic calendar and cost very little to implement.⁸⁵

PHOENIX (USA)

In Phoenix, Arizona, basketball courts and other recreation facilities are kept open late (until 2 a.m.) in the summertime. When this happens, reports of juvenile crime drop by up to 55 percent. In the fall, these facilities revert back to their regular hours and crime reports go up again. At a cost of sixty cents per youth, late night recreation seems like a great option for expanded programming throughout the year.⁸⁶

SOUTH KOREA

In South Korea, parks have exercise equipment—everything from weights to manually operated stair climbers. They're free and open to the public 24 hours a day, 7 days a week. Once established, they cost virtually nothing to maintain and they create a visible signal of physical activity as a cultural expectation.

CINCINNATI (USA)

A public-private partnership led by civic leaders, local businesses, nonprofits, and Procter & Gamble creates a play-like environment and experiences for children and adults throughout the city. The initiative, led by go Vibrant, a nonprofit established solely for the purpose of making an active, energetic lifestyle irresistible, has created the largest network of urban walking routes in the United States, a 4.5 acre park – the P&G go Vibrantscape – on the riverfront where movement causes things to happen and a Borrow-Play-Return program called go Vibrant Play Now in local parks where residents can use sports equipment for free. To ensure widespread awareness and access, activities and new features are promoted regularly on the govibrant.org website and through an enthusiastic Facebook community.





DESIGN FOR PEOPLE TO BE ACTIVE

It's time to take a fresh look at how we design our cities. Why? Because people are designed to move. Instead of looking at things like vehicle miles traveled or square meters of park per 1,000 people, design specifically for people's needs. Decisions are made based on goals to increase meters and decrease miles, for example, while neither of these measures actually considers people. Are those meters of park close to the poorest neighborhoods? Are vehicle miles reduced because people have active alternatives that are safe and accessible? When people become the focus of a city's design, their cities become safer, healthier, more productive places. And those are the cities people want to live in.

FIND OUT WHAT PEOPLE WANT: When it comes to the changes that would make people more physically active, it's essential to understand what people want and need. Are a lack of safe bicycle parking or dedicated bicycle lanes barriers? Do people need better connections between public transport and trails?

MAKE PHYSICAL ACTIVITY A GIVEN: Expect policies, infrastructure and all city efforts to increase levels of physical activity. Activity—and the fact that people are designed to move—is not something that should be added as an afterthought. It should be embedded in every policy from the beginning.

INCLUDE EVERYONE: Some people are more vulnerable to physical inactivity than others—often because options are not as available or appealing to them. These include girls and women, the elderly, those with low incomes, those with disabilities, etc. Options need to be developed for all.

CHECKLIST

FIND OUT WHAT THE PEOPLE WANT:

City leaders know what the people want when it comes to physical activity; public opinion polls (at a city or community level) on physical activity options is captured at regular intervals



PRACTICAL STEPS & IDEAS

CONDUCT SURVEYS AND TOWN MEETINGS:

To determine the specific interventions that would encourage/enable them to be physically active, people need to be asked.

SAMPLE METRICS

- # of questions regarding designing for physical activity in public opinion polls
- Satisfaction levels of citizens regarding physical activity opportunities and infrastructure
- Measurable increase in awareness and/or interest in physical activity design options

CHECKLIST

INCLUDE EVERYONE:

There is a plan in place to address accessibility (e.g. cost, safety, socio-economic access, access for people with disabilities, etc.)



MAKE PHYSICAL ACTIVITY A GIVEN:

Infrastructure supports active transportation



MAKE ACTIVE POLICY A PRIORITY:

Policies are updated to incentivize and maximize walkability, bikeability and playability



PRACTICAL STEPS & IDEAS

DETERMINE THE BIGGEST BARRIERS TO PHYSICAL ACTIVITY IN YOUR CITY AND FOCUS THERE:

Strategies need to be in place to ensure that communities and people with more limited incomes benefit without getting priced out; equity should be one of the specific goals.

TREAT SUSTAINABLE TRANSPORTATION AS ACTIVE TRANSPORTATION:

Look at existing plans for sustainable transport through a lens of physical activity by considering how cyclists and pedestrians can safely and easily move throughout the city.

INTEGRATE ACTIVE TRANSPORT AND PUBLIC TRANSPORT:

Consider how options to bike, walk and play are connected to public transport. For example, connect bike lanes, trails, parks and streets with sidewalks to transportation systems.

TAKE A FRESH LOOK AT POLICIES:

Look at how incentives or policies support or challenge physical activity as the norm. Consider something like minimum parking requirements, for example. In dense cities, they've unintentionally encroached on sidewalks and public spaces, inhibiting physical activity. A more effective idea would be to establish them for bicycles instead.

SAMPLE METRICS

- Types of recreational facilities offered proximate to residents across all neighborhoods
- Proximity, access to public space, such as parks, plazas and amount and types of public space/usage of parks, plazas and trails across all neighborhoods

- # of km/miles of bicycle lanes
- % of walking and cycling rates
- Frequency, mode shares and demographics for walking, cycling, mass transit usage
- Amount of high-quality pedestrian infrastructure (e.g., pedestrianized streets and sidewalks) in high volume areas
- # of traffic fatalities and injuries per 100,000; injuries prevented/lives saved from increase in physical activity infrastructure
- Walk scores of routes to recreational facilities/parks
- # of blocks measured for pedestrian quality
- Access/proximity to mass transit service
- Access/proximity to parks, rec, greenspace & parks/greenspace per 100,000 residents
- # of people using parks and public spaces
- Bike parking spaces at transit stations
- % of buses that allow bicycles
- # of hours/week during which bicycles are allowed in public transit vehicles

- # of policies focusing on new infrastructure that consider physical activity
- Existence of a formal Complete Streets policy and identification of funding to implement the policy

BRIGHT SPOTS



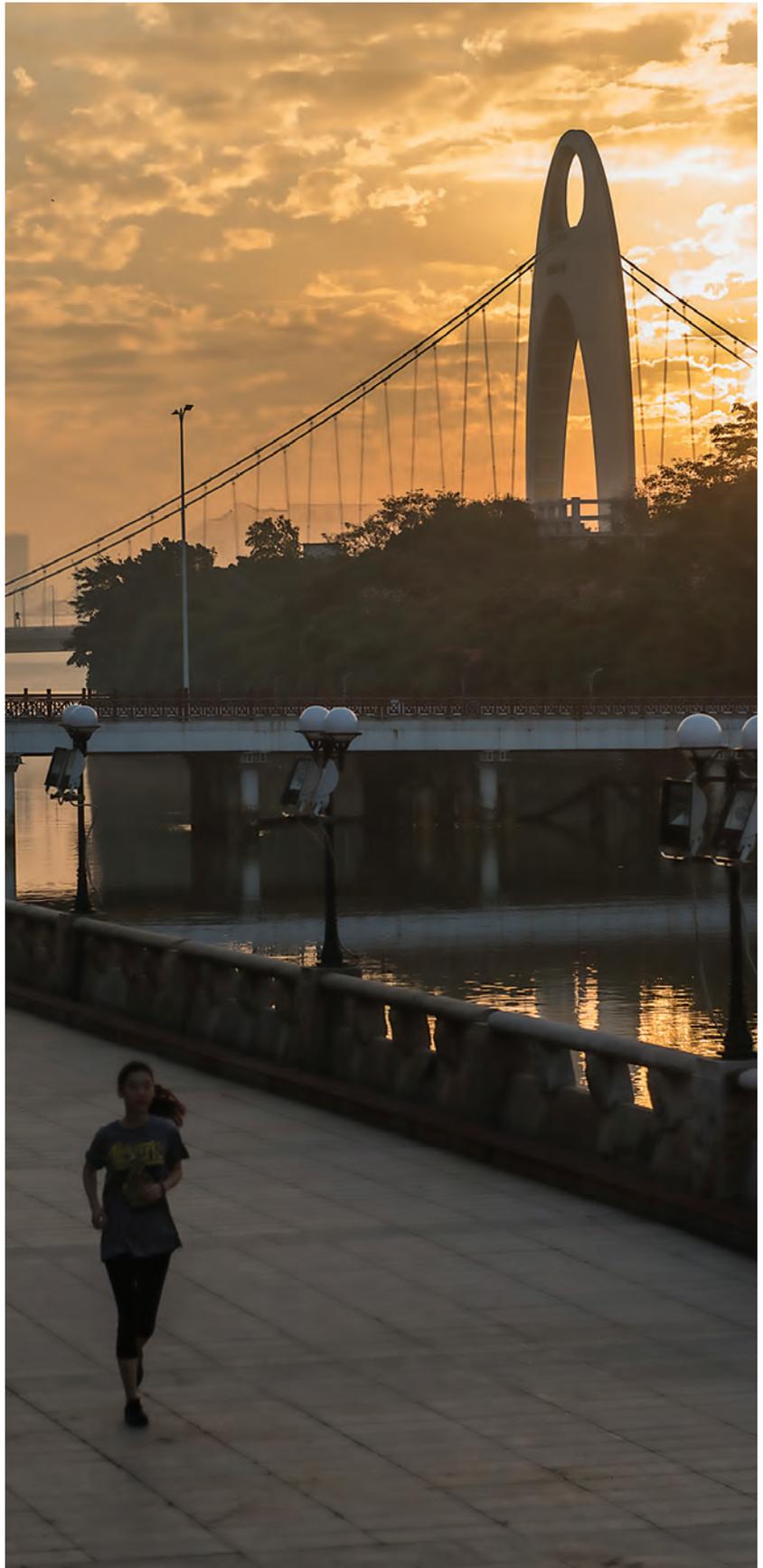
GUANGZHOU (CHINA)

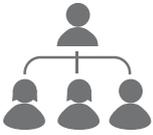
With the city of 12.8 million already built along the Pearl River – an ecological river corridor – city leaders saw an opportunity to transform Guangzhou into a livable city, gateway to China, and national and international economic hub. The plan centers on transforming the riverway. Guangzhou's transformation was the centerpiece of two important development plans: The Guangzhou Edition of Pearl River Delta Reform and Development Plan (2008-2020) and the Guangzhou Modern Industrial System Development Plan. Both of these plans specifically outline livable design priorities, which also happen to be active design priorities.

The idea was to redevelop the river region around a series of interconnected greenways that actively protect the ecological resources, while improving public access to the natural environment. Today, that translates to six connected paths making up 1,060 kilometers of greenway that connects 234 tourist attractions, 98 streets, 42 Asian Game venues and serves 7 million people.⁸⁷

STOCKHOLM (SWEDEN)

Sweden's Vision Zero road policy is rooted in the belief that road fatalities are not a given in transportation planning. Vision Zero assumes system design—not people—is at fault for accidents. Design, infrastructure, technology and enforcement are modified accordingly. The result? Sweden has one of the lowest annual rates of road deaths in the world and fatalities have dropped nearly 50 percent in five years.⁸⁸





CREATE A LEGACY OF PHYSICAL ACTIVITY

Physical activity is not a short-term solution. When administrations change, there is no guarantee that active design will stick around, but the right infrastructure and policies will increase the odds significantly, especially if people have already taken to them. That's when a culture of physical activity takes shape, making it politically disadvantageous to backslide.

ACTIVATE STAKEHOLDER DEMAND:

If people, businesses and other key stakeholder groups already support the plans that are in place, a new mayor will have a difficult time changing them.

CHANGE THE INFRASTRUCTURE:

Once new infrastructure is in place, it becomes sustainable and difficult to change. Especially if it's what people want.

CHANGE THE POLICY:

Changing public policies, codes and ordinances to enable more physical activity is an essential step in creating a cultural expectation of activity within a city.

CHECKLIST

ACTIVATE STAKEHOLDER DEMAND:

Efforts are in place to build support among various stakeholder groups including citizens and the private sector



ACTIVE STAKEHOLDER DEMAND:

Plan has short-term and long-term components that multiple stakeholders are behind



PRACTICAL STEPS & IDEAS

GIVE PEOPLE WHAT THEY WANT:

The best physical activity solutions are the things people want. In New York City, people love the renovated playgrounds and pedestrian-friendly street design. In Bogota (Columbia) Ciclovias has given people a sense of ownership over their streets. In Amsterdam, an uproar would ensue if there were reductions to cycling paths.

TRACK PROGRESS AND PROMOTE SUCCESS:

Most cities will probably track progress anyway. Cities that are successfully making their citizens active should celebrate and make public their success. When a city is better off thanks to an active citizenry, it's hard to dispute.

SAMPLE METRICS

- # of public awareness campaigns and success of implementation
- Levels of interest, engagement and satisfaction levels with physical activity interventions

- Cost savings or growth from various interventions
- Reduced cost of government infrastructure—both building it and operating it

CHECKLIST

CHANGE THE INFRASTRUCTURE:

Infrastructure improvements that support physical activity, once completed, are less likely to be reversed



CHANGE THE POLICY:

Policies are in place to ensure longevity of plans



PRACTICAL STEPS & IDEAS

BUILD FOR ACTIVITY:

Infrastructure is not likely to change once it exists—especially if the only purpose is to make people less active. So make those stairwells more visible, aesthetically pleasant and accessible. Mark those bike lanes and add parking facilities for bicycles. Add pedestrian islands and calm the traffic. Open up the parks and playfields. Build sidewalks. Add street lights and traffic lights. For more ideas and practical guidance, download the [Active Design Guidelines - Promoting Physical Activity and Health in Design](#) by the City of New York.

CREATE ACTIVE POLICIES:

There are plenty of policies that can be easily modified to encourage more movement. To name a few: policies around development, zoning, school siting, affordable housing, cycling paths, traffic calming, pedestrian-friendly zones, Complete Streets, park availability, etc. For specific guidelines and recommendations, see [How to Create and Implement Healthy General Plans](#) by Changelab Solutions.

SAMPLE METRICS

- Increase in neighborhoods with active living infrastructure
- # of parks by area
- % of the population with access to park within certain distance
- Km/miles of bicycle lanes, off-street trails
- Amount of space in area of pedestrian-only space
- Km/miles of bus rapid transit, metro, light rail transit, high frequency bus corridors, etc.
- Share of city spending on active city capital infrastructure projects (bicycle, pedestrians, mass transport in road projects; parks and public space, recreation programs, etc.)
- % of stairs that are visible
- % of stairs that are accessible
- Connectivity of bicycle lanes and walking routes to public transport
- Ratio of parks to people across neighborhoods
- # of policies that support/consider physical activity within development, schools, housing and transportation

BRIGHT SPOTS

BOGOTA (COLOMBIA)

Unlike many cities in South America, Bogota's levels of physical activity have actually increased over the past decade.⁸⁹ Why? Because of innovative city planning and transportation projects. For example, parking on sidewalks was banned. Reclaiming sidewalks as public domain not only helped to discourage car use by removing "parking spaces" but increased the safety and accessibility of space for everyone (not just wealthier car owners), and improved opportunities for walking.⁹⁰

Ciclovía, on Sundays from 7am to 2pm and on holidays, 75 miles of streets in Bogota are closed to cars. Pedestrians, cyclists, skaters come out to enjoy the open streets free of traffic.

BOSTON (USA)

In Boston, Massachusetts, 14 city agencies have come together to implement Complete Streets—an initiative that gives pedestrians, bicyclists and transit users the same priority as car users. The initiative was launched in 2009 to develop new street design guidelines and implement projects that take a Complete Streets approach. This includes multi-modal roadway design, green design elements, and smart design like intelligent signals, smart meters, electric vehicle sharing, car and bicycle-sharing, way-finding and social network tools.

These design guidelines have been implemented in at least 20 city construction projects.⁹¹



PROVIDING SPORT SPACES IN URBAN AREAS AND MAKING THEM AVAILABLE TO ALL AT DIFFERENT TIMES THROUGHOUT THE DAY AND EVENING GIVES EVERYONE A CHANCE FOR FUN PHYSICAL ACTIVITY

3

WHO IS DOING THIS WELL?

Cities don't have to invent something entirely new. We found examples of cities from all around the world that are already doing a great job, and much can be learned from them. In fact, these active cities and many others are what helped us identify the common ingredients for success.

1

HERNANDO
UNITED STATES

2

BUENOS AIRES
ARGENTINA

3

NEW YORK CITY
UNITED STATES

4

COPENHAGEN
DENMARK

5

RIO DE JANEIRO
BRAZIL

6

MEDELLIN
COLOMBIA

7

RED DEER
CANADA

8

BRISTOL
UNITED KINGDOM

9

ADELAIDE
AUSTRALIA

HERNANDO (UNITED STATES)

MOVING FROM A CULTURE OF
INACTIVITY TO A CULTURE OF HEALTH

POPULATION

15,000

MAYOR

CHIP JOHNSON

CATALYST

MISSISSIPPI (WHERE HERNANDO IS
LOCATED) HAS THE HIGHEST OBESITY
RATE IN THE UNITED STATES ⁹²



“All of the work we’re doing adds up to creating a culture of health. People in our town are proud of that and it’s important to our long term viability. People are looking to locate in healthy towns, and so are businesses.”

- Mayor Chip Johnson

When Chip Johnson ran for mayor of Hernando in 2005, he did so on a walkability and parks platform. At the time, the city had very few safe sidewalks, no bicycle lanes and limited opportunities for recreation. Johnson saw this as a serious issue in a state with the nation’s highest obesity rate.

With very limited resources—the total town budget is \$15 million and raising taxes is not a practical option—Mayor Johnson had to get creative. One of the first things he did was establish a parks department. “We had three guys who were mowing grass,” Johnson says. “We turned

them into the Parks Department.” From borrowed land and re-purposed spaces to seeking out grants for health tourism and learning lessons from other towns, Hernando has literally become the Healthiest Hometown in Mississippi.

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

- The Mayor's Office is a healthy workplace that encourages walking meetings. In addition, police officers and firemen can attend the local gym during work hours.
- The Mayor and the town host high-profile events such as a 10k run, bike-to-work days, the ride of silence and a rest stop for an annual 150-mile FedEx Rock 'n Roll Mississippi Bike Ride supporting the National Multiple Sclerosis Society.
- With little funding available, the city seeks out alternate sources of funding. For example, they were able to obtain a \$10,000 grant to host their first 10k run after convincing the Mississippi Development Authority "that health tourism exists."
- Mayor Johnson championed the development of a master parks plan that lays out the specific plans and locations for a new skate park, dog park, soccer complex and other resources. With specific plans in place and locations locked in, private citizens are now raising the money that's needed.



MAKE EXISTING RESOURCES ACTIVE RESOURCES

- With no city-owned gymnasiums, Hernando negotiated joint use agreements with the town's schools to provide a place for youth basketball.
- The city partnered with Hernando Bicycle Club to support beginning cyclists.
- The city uses an empty pasture to operate its soccer programs for 900 youth.

- A box culvert (a highway underpass designed to move cattle in the '60s) was transformed into a safe way for pedestrians and cyclists to cross from one side of the freeway to another.



DESIGN FOR PEOPLE

- To ensure equal access, the Farmers' Market was intentionally located within walking distance of one of the town's poorest neighborhoods.
- A Complete Streets policy requires that pedestrian and cycling options be factored into all road construction.
- The city identified streets that were wider than necessary (typically in subdivisions built decades ago) and painted cycling lanes to make active transport safer.



CREATE A LEGACY OF PHYSICAL ACTIVITY

- Public policy changes were incorporated, such as standard to require sidewalks in all new development and a Complete Streets policy that allows for all modes of transportation.
- Developers are required to set aside 10 percent of their space for open space.
- Repairing the busiest downtown sidewalks was prioritized.
- Improving the city's physical environment has fostered a culture of health. For example, in 2005 a parks program was created with new athletic facilities, a community garden and existing parks were renovated. Home to one of the largest farmers markets in the state, Hernando is a "Let's Move" city that promotes the Healthy Eating, Active Living program.

THE RETURN

- After implementing healthy workplace efforts, the City's health insurance premiums were reduced by 15 percent, saving taxpayers approximately \$130,000.
- In 2005, 35 percent of downtown buildings were vacant. Today, none are.
- In 2010, Blue Cross & Blue Shield of Mississippi named Hernando the "Healthiest Hometown in Mississippi."
- The town went from having no Parks Department in 2005 to having 23 programs serving thousands of people by 2014.
- The town has gone from being ranked 15th in the state in median income to being ranked 5th. Mayor Johnson attributes this to people moving to Hernando simply because it is healthier.
- When a large company in an adjacent town looked to expand, they located in Hernando despite receiving fewer tax incentives. They did so because their employees wanted to live in Hernando.

BUENOS AIRES (ARGENTINA)

TRANSFORMING A CITY OF CARS
INTO A CITY FOR CYCLISTS

POPULATION
3 MILLION (METRO)

MAYOR
MAURICIO MACRI

CATALYST
TRAFFIC CONGESTION, ENVIRONMENTAL
CONCERNS AND A CITY FULL OF UNUSED
BIKES SPARK CHANGE



“Five years ago Buenos Aires did not have Bus Rapid Transit (BRT), there were only two pedestrian streets and few people commuted by bicycle. Once we developed the infrastructure, cultural changes took place and it changed the way we move in Buenos Aires.”

- Guillermo Dietrich, Head of Transport and Traffic for Buenos Aires

With heavy traffic congestion and a car-reliant infrastructure that neglected the needs of 60 percent of its commuters, Buenos Aires set out to change the culture of transport in the city. With 1 million unused bikes in Buenos Aires, the city’s Secretary of Transportation sought to understand what would inspire people to take up cycling as a mode of transport.

The answer was simple: Safer roads and safer parking.

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

City leaders knew they'd face some opposition in the beginning. Although only 40 percent of the city's commutes are taken by private vehicle, those taking them tend to be among the more politically influential.

The mayor knew he needed a clear plan and the conviction to see it through.

City leaders began with a long-term vision for bicycle and pedestrian transport. Then they started small and built demand.

The ambitious four-year plan aims to have 90 percent of central district streets with pedestrian and cyclist priority by 2015, alongside a 90 percent reduction in motor vehicle traffic.



MAKE EXISTING RESOURCES ACTIVE RESOURCES

To raise awareness, city leaders invited journalists to cycle the city.

Partnerships with private employers encourage sustainable transit and safe parking options for employees.

In exchange for city-provided bicycle parking, retail partners provide incentives to customers who arrive by bicycle.



DESIGN FOR PEOPLE

Road markings, bike traffic lights, physical dividers between car lanes and bicycle lanes, two-way bike lanes and traffic calming measures have been implemented to create a safe cycling and pedestrian environment.

Slower speed limits, redesigned crosswalks, and expanded pedestrian zones are being developed at 100 of the city's busiest intersections to ensure a safer, friendlier experience for walkers.

The city has added 8,704 safe parking spaces for bicycles.

The bike sharing system is in the process of expansion, by the end of this year it will have 200 stations that will serve 6.5 million trips/year.



CREATE A LEGACY OF PHYSICAL ACTIVITY

Public policy mandates that the parking rate for bicycles cannot exceed 10 percent of the price of car parking.

Each year, 25-30 kilometers of new bicycle lanes are added.

In 2013, the city launched a bus rapid transit corridor on the 9 de Julio Avenue, its busiest and widest street. The corridor goes across the city's central area and represents a landmark of great significance to porteños (the people of Buenos Aires) as well as other Argentineans. The entire infrastructure on the avenue was changed and the reorganization of traffic flows generated a positive impact for everyone along the avenue.

2015 will finish with 56km of a BRT network connecting the main transport hubs of the city. 1.2 million people will benefit.

THE RETURN

- Noise and gasoline emissions have been cut in half.
- In the city's central area, vehicle traffic was reduced by 80 percent between 2009 and 2014 and 50 percent of streets have pedestrian and cyclist priority.
- The percentage of bicycle trips increased by more than 7 times (from 0.4 percent to 3.5 percent) between 2009 and 2014.
- The popularity of cycling has spawned hundreds of new enterprises including bicycle accessories, clothing and "fashion bikes."

NEW YORK CITY (UNITED STATES)

BOLD LEADERSHIP AND CROSS-SECTOR COLLABORATION TRANSFORM THE UNITED STATES' MOST POPULOUS CITY

POPULATION

8.2 MILLION

MAYOR

BILL DE BLASIO (CURRENT)
MICHAEL BLOOMBERG (FORMER)

CATALYST

ANTICIPATED GROWTH OF NEARLY
1 MILLION NEW RESIDENTS BY 2030



AN ABANDONED SECTION OF ELEVATED RAILROAD TRACK IS NOW A PARK WITH REPURPOSED SPACE ALL NEW YORKERS CAN USE TO GET ACTIVE



STREETS THAT ARE DESIGNED FOR SAFE ACTIVE COMMUTING ARE MORE ACCESSIBLE TO ALL

Under current Mayor Bill de Blasio, as well as former Mayor Michael Bloomberg, New York City is a model active city.

In 2007, Mayor Bloomberg's administration launched PlaNYC, New York City's master plan for addressing the anticipated population growth from 8.2 million to 9 million residents by 2030.

The plan became a blueprint to manage growth while incorporating considerations for environmental sustainability and ensuring quality of life for city residents. Goals were set to increase non-automobile modes of transportation including walking, cycling and transit, and to create parks, plazas and playgrounds within a 10-minute walk of all residents.

New York has consistently demonstrated a commitment to integrating physical activity into city life.

Building on the yearly interdisciplinary Fit City conferences since 2006, the City of New York collaborated across 12 city

departments to develop and implement the Active Design Guidelines in 2010 to promote inclusion of physical activity factors into design and construction. Such processes helped to pave the way for a Mayoral Obesity Task Force to accelerate reversing childhood obesity trends and for PlaNYC version 2 to include public health explicitly as a goal in 2011. The result is a comprehensive approach to physical activity and healthier eating that is visible in every facet of city life.

Much of this work continues today and is being further expanded under the current administration of Mayor de Blasio. This includes the addition of 50 miles of bike lanes annually and more than doubling the number of bikes and bike stations for the hugely successful Citi Bike bike-sharing system. Mayor de Blasio is also addressing equity and equitable access issues as a cornerstone of his administration, including plans to renovate playgrounds across neighborhoods of high need.

"Streets are now safer by design. We are putting every tool we have—engineering, enforcement and education—to use in reaching Vision Zero. This is about more than numbers. Vision Zero means parents can more safely cross the streets with their children, and seniors can walk their neighborhoods more easily. We're approaching this second year of work with proof these methods work and expanding them to even more neighborhoods."⁹³

- Mayor Bill de Blasio

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

Public health was a core issue throughout Mayor Bloomberg's tenure. Mayor de Blasio is continuing and building upon New York City's role as an international voice in support of integrating physical activity into everyday life.

To ensure widespread impact city staff coordinate multiple groups—within and outside of City government—on projects to improve the environment and public health, particularly physical activity and healthy eating.

Physical activity and active living issues are included in planning and other city documents that affect how the city grows.



MAKE EXISTING RESOURCES ACTIVE RESOURCES

New York is a leader in innovative approaches to leveraging its resources. For example:

- Yearly Fit City conferences bring together different groups – including government departments, developers, architects, planners, nonprofit groups and city residents – to learn from experts and to align multiple stakeholders.
- School construction guidelines now include “gymnatoriums” (auditoriums that offer space for physical activity when the auditorium is not needed) in addition to a gymnasium and secure bicycle storage.
- City-owned buildings are required to promote stair use through stairway access and posting of signage encouraging stair use.



DESIGN FOR PEOPLE

Citi Bike, one of the world's largest bike-sharing systems, includes 6,000 bicycles and 330 docking stations. The system is expanding and by 2017 will include 12,000 bikes and over 700 stations—the largest system in North America. People using the bikes can return them to any station, creating an efficient network offering a huge number of possible trips. Citi Bike comes at no cost to taxpayers, and Citibank's sponsorship covers the cost of the equipment.

New York has also made a priority of bicycle infrastructure with 960 miles of bike lanes; 650 miles of on-street lanes (including 50 miles of protected lanes including on bridges) and 310 lane-miles on greenways, and through parks. The city also has 23,000 bike racks and 46 bike corrals (5-6 racks taking over one vehicular parking space) with great demand by small businesses for more.

To ensure widespread access, bike routes are being extended throughout New York's boroughs, including restoration of the Highbridge over the Harlem river which will connect Harlem to the Bronx.

Increasing pedestrian access is also a high priority and in many areas of the city, unused or underutilized spaces are being transformed to plazas and other open spaces that invite people to walk.

Currently there are 49 plazas that are publicly accessible throughout the city. An additional 22 are either in planning, design or construction. The Department of Transportation (DOT) has created a public/private partnership program in the design, development and operation of these plazas.

THE RETURN

- Bicycle travel increased 126 percent (since 2007)
- Transit ridership into the Central Business District increased 11.3 percent (2003-2012)
- Traffic fatalities citywide decreased almost 30 percent since 2001
- Childhood obesity trends reversed
- Retail sales increased around pedestrian plazas
- 217 publicly accessible waterfront spaces constructed
- Life expectancy is 2.2 years longer than in the rest of the United States, and is rising faster than in the rest of the country approaches⁹⁴
- Summer Streets participants engage in the equivalent of 72-86 minutes of moderate-intensity physical activity on the Summer Streets route, about half the total recommended weekly physical activity⁹⁵
- The city is seeing record numbers of tourists (over 50 million annually) and the figure continues to increase

“This year [2011] our city saw a record decrease in the number of New Yorkers who smoke, and now we have even more good news about New Yorkers’ health. Even as childhood obesity in the rest of the nation has remained flat or gotten worse, in New York City, it is declining. Children who are more physically fit have fewer health problems – and fewer trips to the hospital. That’s great news for kids and their families, and for taxpayers too. Over the past decade our administration has pioneered two new health intervention strategies, and that work is clearly paying off.”⁹⁶

- Former Mayor Michael Bloomberg

To further encourage walking, the DOT inaugurated the WalkNYC wayfinding program to make New York City more navigable to residents and visitors. Easy-to-read maps are being installed on identifiable totems on streets and all bike share stations, and will be installed in the subway and on bus rapid transit stations on structures that provide real-time bus information.

In addition to cycling and walking, New York has made a priority of recreation and play. Over the last decade, New York City added 850 acres of parks and public spaces, many located on the waterfront.

The city also converted more than 300 asphalt schoolyards to public playgrounds and synthetic turf fields by working with the Department of Education and the Trust for Public Land. In addition, they increased the number of fields and play areas in five regional parks and the restoration of a major public pool that had been closed for 30 years. Finally, field lights were added to existing ballfields to extend playable hours.



CREATE A LEGACY OF PHYSICAL ACTIVITY

Public policy and planning goals support physical activity over the long term. For example, in 2010, the city published the Active Design Guidelines (ADGs),⁹⁷ a set of strategies that designers, developers, and policy makers can use to increase opportunities for physical activity in the built environment. The ADGs help to address obesity by encouraging and enabling people to move more actively through the city’s neighborhoods, streets and buildings.

In 2013, in partnership with the Health

Department, the Department of City Planning (DCP) published Active Design: Shaping the Sidewalk Experience,^{98,99} a study focusing on the sidewalk as a critical public space network with recommendations on how to create better sidewalks and, in turn, a more walkable city. Additional ADG supplements have also been published.^{100,101}

Some of the city’s other early active design innovations include:

- A collaboration with the U.S. Green Building Council to create a new Leadership in Energy and Environmental Design (LEED) green building certification Pilot Credit known as “Design for Active Occupants”, using one of its health department buildings as the first project. The credit has now been registered for use in over 250 buildings in and outside NYC.^{102,103}
- An Executive Order signed by Mayor Bloomberg requiring City agencies to review the design of all new construction and major renovation projects for opportunities to implement strategies in the ADGs as well as the LEED Pilot Credit. This requirement applies to the construction and renovation of City buildings and streets.
- A zoning ordinance passed by DCP in 2009 to require indoor, secure bicycle parking in new buildings. Approximately 350 buildings now allow bike access for over 6,500 bikes.
- DCP also updated old waterfront regulations in 2009 to ensure the city’s waterfront spaces are accessible and inviting to the public, feature high-quality design elements and promote passive and active recreational uses.

- Since taking office, Mayor de Blasio’s administration has promoted active policies and programs. For example:
- de Blasio launched Vision Zero to make city streets even safer for pedestrians. Slowing traffic to 25 mph will make it safer for people to walk.
- A majority of students walk or take public transit to school, but many use buses to travel short distances. DOT’s “We’re Walking Here” program encourages walking at 200 schools annually and provides curriculum support on the benefits of active living.
- DOT’s “Beat the Street” program encourages students to walk by using transponders and key cards to count trips taken. Students compete against other schools to see who can rack up the most trips.
- Bike to School is a collaborative project between DOT, Recycle-a-Bicycle and Bike New York, working with 12 schools to foster biking as a mode of transportation.
- Over the past seven years, DOT has organized three Saturday weekends in August as Summer Streets. The main artery, from the Brooklyn Bridge up to 72nd Street is closed to traffic. People run and ride bikes from 7 am to 1 pm. Along the route are activities, such as fitness classes. In 2014, over 300,000 people came out for Summer Streets, which is now a NYC institution.
- Under Mayor de Blasio, DCP is also partnering with the Health Department, other city agencies and community partners, to bring a further health and well-being focus to its planning efforts in specific neighborhoods with high health needs.



PUBLIC SPACES ARE IDEAL FOR PHYSICAL ACTIVITY PROGRAMS AND CLASSES LED BY LOCAL INSTRUCTORS AND PARKS & REC STAFF

COPENHAGEN (DENMARK)

WHERE IT'S NEVER ENOUGH—
MAKING AN ACTIVE CITY MORE ACTIVE

POPULATION

2 MILLION (METRO)

MAYOR

LORD MAYOR FRANK JENSEN
TECHNICAL & ENVIRONMENTAL
MAYOR MORTEN KABELL

CATALYST

RECOGNIZING THE BENEFITS OF
PHYSICAL ACTIVITY TO THE CITY AND
THE CITIZENS SPARKED A COMMITMENT
TO BECOMING EVEN MORE ACTIVE



"It is a privilege for me to represent a city with such a high international acclaim. However, it is at the same time a challenge, and my vision to ensure that the City of Copenhagen retains and develops this position by continuously rethinking and improving the way in which we solve problems as a city and as a community."¹⁰⁴

- Lord Mayor Frank Jensen

In many ways, physical activity is already part of Copenhagen's culture. It is one of the most cycle-friendly cities in the world. Public swimming areas and accessible parks are the norm. But there's still plenty of work to be done.

In Denmark, most 11-year-olds move enough (meaning they meet recommended levels of physical activity). By age 15, this is no longer true.¹⁰⁵

City leaders realized there is no room for complacency. The result is a series of innovative approaches to the development of parks and public spaces.

For example, in the city's most ethnically and economically diverse neighborhood (Nørrebro), architects and city planners worked with neighborhood residents to design a 1km-long park called Superkilen in the center of the neighborhood. This was an effort championed by the city and it features a cycling track, running/walking lanes, traffic connections to public transport and a sport square.

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

Copenhagen's Lord Mayor, Frank Jensen, knew the best way to make physical activity a reality throughout the city would be to engage the city's six Mayors (or department heads). These include the heads of Culture and Leisure, Technical and Environmental (including transport), Finance, Children and Youth, Health and Care, Social and Employment.

Copenhagen's planning processes are typically on 4-year cycles and include goals with 12-year outlooks. This allows targets to be regularly updated and progress to be measured.



MAKE EXISTING RESOURCES ACTIVE RESOURCES

Creative ways to encourage physical activity are found throughout the city. For example, an artist was commissioned to create "Free Zone Signs" that comment on the way people use public space. They look like traffic signs, but show people running, jumping and dancing.



DESIGN FOR PEOPLE

The people have a say. For example, Superkilen is a celebration of the neighborhood's diversity and residents were engaged throughout the process to provide input on elements that would reflect their needs and interests.

In Copenhagen, it's never enough. Even in a place where 41 percent of people cycle to work, they've instituted a goal to make it 50 percent by 2015. That is why they are widening the cycle tracks in the busiest streets. In some cases, where the amount of cycle traffic is highest, the city is making the cycling lanes even wider than the roads they're adjacent to.

City planning prioritizes walking and cycling higher than private motorized transport. For example the city's pedestrian strategy aims for significant increases in walking and planning is driven by surveys of citizens' interests.



CREATE A LEGACY OF PHYSICAL ACTIVITY

Implementing activity-friendly public policy is one of the key ways Copenhagen ensures the sustainability of its efforts. For example, a municipal policy goal in place aims for all Copenhagen citizens to be able to reach a park or beach in less than 15 minutes on foot. Once in place, it would be impractical for a new administration to remove these solutions.

THE RETURN

More than half of Copenhageners choose walking or cycling as their preferred transport options. Between 1996 and 2012:

- Distance cycled increased 37% (from .93 million km/day to 1.27 million km/day)¹⁰⁶
- Satisfaction with Copenhagen as a cycling city increased 24 percentage points (from 71% to 95%)¹⁰⁷
- The number of kilometers cycled between serious injuries has nearly quadrupled¹⁰⁸

RIO DE JANEIRO (BRAZIL)

IN A COUNTRY FACED WITH RISING OBESITY RATES AND HOME TO THE LEAST ACTIVE CHILDREN IN LATIN AMERICA, RIO SEEKS TO TRANSFORM ITSELF

POPULATION

12 MILLION (METRO)

MAYOR

EDUARDO PAES

CATALYST

BRAZIL'S RISING INACTIVITY RATES RUN COUNTER TO THE IMAGE OF A COUNTRY THAT JUST HOSTED THE WORLD CUP AND WILL SOON PLAY HOST TO THE 2016 OLYMPIC GAMES



REPURPOSING EXISTING SPACES CAN EASILY MAKE MOVING FUN



MANY CITIES PROVE THAT CREATING SPACE FOR ACTIVITY WILL DRAW CROWDS

“Rio has an opportunity to be a leader in the fight against physical inactivity. As the world turns its attention toward our city once again, they will see programs, policies and infrastructure designed for an active city. We believe the returns in terms of health, quality of life and economic payoff will be well worth the cost of our large infrastructure investments.”

-Rodrigo Rosa, Special Advisor to the Mayor

Brazil is a country that is already facing an epidemic of physical inactivity and the problem is only expected to get worse. If things don't change, activity levels by 2030 are projected to drop 34 percent from 2002 levels. Rio, the city known for playing host to the world's most elite athletes in the 2014 World Cup and 2016 Olympic Games, is demonstrating a serious commitment to getting everyday citizens moving in every possible way—from revitalized transport policy and parks to more opportunities for everyone to engage in sport.

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

Under the leadership of Mayor Eduardo Paes, Rio is hosting the 2016 Olympic Summer Games, and is investing in a number of projects that can foster more physical activity, including an integrated transport system, improving public space around the city's port, car-free days, new parks, bicycle lanes and a bicycle share system.



MAKE EXISTING RESOURCES ACTIVE RESOURCES

On Sundays, one side of the city's main beachfront boulevards are closed to cars to allow bikers, joggers, pedestrians and skateboarders to use the space more freely.

In Rio's favelas, investments have been made to improve public spaces such as staircases and streets, as well as recreational offerings for children's play.



DESIGN FOR PEOPLE

Since 2012, Rio has opened two new Bus Rapid Transit (BRT) corridors, TransOeste and TransCarioca, that provide more options to commuters who might otherwise choose to ride motorcycles or drive cars. In addition, two other BRT corridors— TransOlímpica and TransBrasil—are under planning and construction.

Parque Madureira, a new 26-acre/11-hectare park, provides cycling paths, skateboard ramps, weight training equipment, and multi-purpose sports courts, is located adjacent to a new BRT station, providing even more access to activity options.



CREATE A LEGACY OF PHYSICAL ACTIVITY

Rio has installed new protected bikeways and Bike Rio, a bikeshare program with 600 bikes at 60 stations.

THE RETURN

- The Rio Bike bikeshare program has over 70,000 registered users and 5,000 trips per day.
- As many as 25,000 people use Parque Madureira daily.
- 93 percent of riders of the new BRT TransOeste are satisfied with the new system, helping prevent shifts to more sedentary modes such as private vehicles.
- Once completed, the BRT network will include 4 corridors and serve 1.4 million passengers per day.

MEDELLIN (COLOMBIA)

RECLAIMING PUBLIC SPACES GIVES A CITY BACK TO ITS PEOPLE

POPULATION

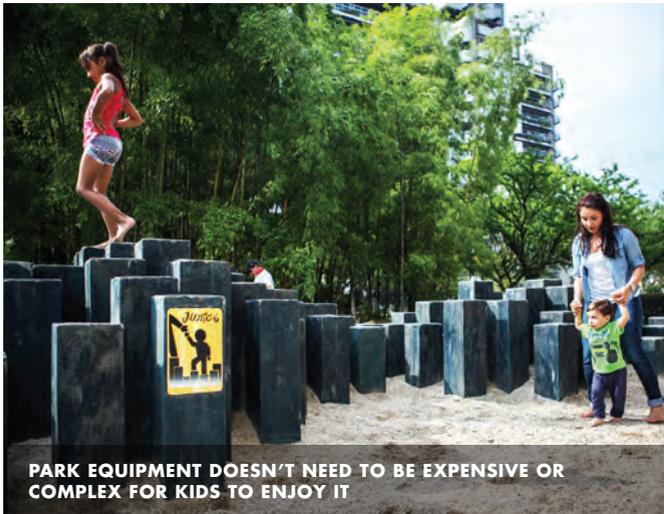
3.7 MILLION

MAYOR

ANÍBAL GAVIRIA

CATALYST

DECADES OF CRIME AND CORRUPTION, AND A STARK DIVISION BETWEEN THE RICH AND POOR PROMPT NEW LEADERSHIP TO REINVENT THE CITY



PARK EQUIPMENT DOESN'T NEED TO BE EXPENSIVE OR COMPLEX FOR KIDS TO ENJOY IT



OUTDOOR GYMS MAKE WORKING OUT ACCESSIBLE TO ALL

“A small group began to think in terms not of top-down policy, but of one that would begin with the poorest neighborhoods and re-conquer spaces that had been lost to the violence; it was both a concept and a physical strategy, a mixture of ideas and bricks.”¹⁰⁹

- Alejandro Echeverri, former Director of Urban Projects

Medellín used to be synonymous with violence and its association with drug production. Everything changed when Mayor Sergio Fajardo (2003-2007) set out on a mission to bring new life to the public spaces in Medellín that had been neglected or destroyed by poverty and crime. Fajardo sought to make a safer, more connected place for people to live. In doing so, he happened to make a place for people to be more active.

Mayor Fajardo worked alongside the city's former Director of Urban Projects, Alejandro Echeverri, to implement a public works plan that helped to connect the city's poor and wealthy neighborhoods through the addition of new transportation, libraries, and parks, to name a few. This work completely changed the way people move, largely because options are now safe and accessible.

Medellín's current mayor, Aníbal Gaviria, sees his role as continuing a larger effort. “What is being done here has to be committed to by successive administrators or else you lose momentum. None of this can be achieved in a single term - it needs me to take on what Fajardo started, and for whoever follows me to share these principles and values.”¹¹⁰

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

Echeverri worked with the Director of Urban Projects to connect the city's poor and wealthy neighborhoods through new transportation and parks.

Leaders speak openly and regularly about their efforts—which is how they've been named Wall Street Journal and Urban Land Institute's City of the Year (2012) and won the Curry Stone Design Prize for transformative public works (2009).



MAKE EXISTING RESOURCES ACTIVE RESOURCES

Re-inventing existing public spaces—such as narrowing streets and expanding sidewalks—enables physical activity.

As part of the city's Integral Urban Project, five 'library parks' were designed and built with the aim of facilitating improved education, providing community centers, and uniting different parts of the city.



DESIGN FOR PEOPLE

Design focuses first and foremost on reaching the poorest residents.

A major shift for Medellín came with the introduction of MetroCable, a cable car that connects different neighborhoods to the local metro system. As a result, people who previously didn't have access to safe public parks or even the central metro area are now able to travel freely. The cable car has also improved people's access to jobs¹¹¹, highlighting another way designing for physical activity brings economic outcomes to a city and its people.



CREATE A LEGACY OF PHYSICAL ACTIVITY

Medellín is partnering with organizations such as the Society of Architects and Engineers of Antioquia and the Colombian Chamber of Infrastructure helps build an ongoing commitment to active design.

Infrastructure changes including the addition of the Bus Rapid Transit (BRT) metroplus and a bicycle share program have created lasting options for active transport.

THE RETURN

- The health benefit from physical activity of the Ciclovía program returns a cost-benefit ratio of 1.83¹¹²
- Library parks are used by 7,500 people every day¹¹³
- 60,000 daily passengers use the BRT corridor launched in 2011¹¹⁴
- Since 1991, Medellín's murder rate has fallen 80 percent¹¹⁵
- Medellín created 1.6 million square meters of new park space through 25 parks and 11 urban promenades¹¹⁶

RED DEER (CANADA)

A CITY PLANS FOR GROWTH WHILE MAINTAINING ITS REPUTATION AS A GREAT PLACE TO LIVE

POPULATION

100,000

MAYOR

TARA VEER

CATALYST

ANTICIPATED POPULATION GROWTH RATE PROMPTS REFLECTION ON HOW NEIGHBORHOODS AND TRANSIT ARE DESIGNED



OUTDOOR EXERCISE EQUIPMENT IS JUST AS POPULAR IN COLD CLIMATES AS WARM ONES



CITIES LIKE RED DEER MAKE THE MOST OF THEIR NATURAL RESOURCES—IN THIS CASE ENCOURAGING KIDS TO FULLY ENJOY SNOW-COVERED HILLS

“Like other cities, we live in a new economic normal. By better utilizing the existing infrastructure and assets that we already have and making a few small changes, we’ve actually been able to make substantive change to better serve our citizens.

The critical shift was identifying the need to move from a siloed approach to movement to an integrated approach so all modes of mobility throughout the community are integrated with each other.”

- Mayor Tara Veer

The City of Red Deer is getting a real-time look at how economic progress can impact physical activity. As a major center of Canada’s booming oil and gas industry, the city is expecting rapid growth in the coming decades. With expansion already taking shape, stress on existing resources and sprawl could fundamentally shift the way Red Deerians move. Realizing this, the City of Red Deer saw an opportunity to rethink their city’s design.

Red Deer partnered with Gehl Architects, consultants on improving the quality of urban life, and 8-80 Cities, a nonprofit focused on transforming cities into physically active places to work, move and play. The organizations conducted an Integrated Movement Study to better understand Red Deerians’ perspectives on driving, public transit, walking, and cycling.

When they asked 2,000 community members how they felt about Red Deer, they reported being highly satisfied. The reason? A major one is Red Deer’s trail system. That became the centerpiece of the city’s approach to planning. The outcome is the Mobility Playbook—a detailed document that lays out the City’s plan to: 1) Put pedestrians first, 2) Create a balanced network of streets that prioritizes different modes of transportation and uses, 3) Manage urban growth and maintain the natural landscape, and 4) Integrate active transportation and recreation within the existing infrastructure.

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

- Mayor Veer is a champion for physical activity and encourages her communities to do the same. “If we’re going to talk about it, we have to live it.”
- The city sees itself as having a strong role to play in terms of grassroots influence to inspire change. For example, the city recently bid for and won the 2019 Canada Winter Games, the country’s largest multi-sport competition.
- The city’s strategic plan prioritizes making active transit and commuting options safer, more enjoyable and more accessible.
- An integrated transportation framework takes each area of design (roads, neighborhood design, sidewalks, trails and transit stops) and ensures they are designed to function together to support cyclists, pedestrians, transit users and motorists.



MAKE EXISTING RESOURCES ACTIVE RESOURCES

- Red Deer’s 144 kilometers of trails were once difficult to use in winter. Now 21

kilometers of them are plowed and an additional 25 kilometers are maintained by the local cross-country ski club for skiing.

- A new sidewalk clearing policy standard ensures that sidewalks are usable to pedestrians throughout the year.
- The internal trail systems that run through neighborhoods used to be built independent of the existing trail system. Priority is being placed on connecting neighbourhood trails to the larger community trail network to ensure accessibility.
- Transit stops are now connected to existing sidewalks and trails. In some cases it is as simple as adding a few meters of new sidewalk and ensuring snow removal to maintain their accessibility in winter.



DESIGN FOR PEOPLE

- Red Deer regularly invites citizens’ input on what they need and want as it relates to commuting and recreation options.
- Red Deer saw an opportunity to engage the public in its plans. They brought in international experts to speak on the subject and asked people, “What moves you?”
- People wanted safe alternatives to car travel, but the existing trail network didn’t maximize connections to on-street cycling opportunities. Adding those connections was piloted.

- Red Deer has programs in place to make physical activity programs accessible to those who can’t afford it.
- As part of an official charter, the city has made a priority of considering active transport in trail design, transit design and transportation design.



CREATE A LEGACY OF PHYSICAL ACTIVITY

- As part of a triad of cities that make up the strongest economic growth corridor in North America, Red Deer is beginning to partner with Edmonton and Calgary to think through how people move in between the three cities.
- Public policy changes have been implemented that enable physical activity, such as snow and ice control for sidewalk clearing, which now requires a three-day turnaround for the City. It was previously 10 days.
- The path has been eased for private-sector volunteers to improve options for physical activity (e.g. the cross-country club’s maintenance of trails during winter.)
- New neighborhoods must connect to existing trails.
- Securing the 2019 Canada Winter Games bid means new recreation infrastructure for Red Deer from grants from other orders of Government.

THE RETURN

- The City is shifting the way it will do transportation planning in the future. People-oriented metrics will be determined to measure how safe, accessible and enjoyable their transportation choices are.

- Their investment in a complete and interconnected network that is safe, well-maintained, and well-designed for the diversity of ages and skill levels, and that will contribute to improved physical health and social well-being. They will measure Red Deer’s network to understand the connection between the investment and the potential

increase in transit ridership, and the use of the network to walk or cycle to school and work.

- The shift is already visible. Red Deer is an active city and is positioned to become even more so.

BRISTOL (U.K.)

ONE OF THE GREENEST CITIES IN
EUROPE AIMS TO BE THE MOST LIVABLE

POPULATION

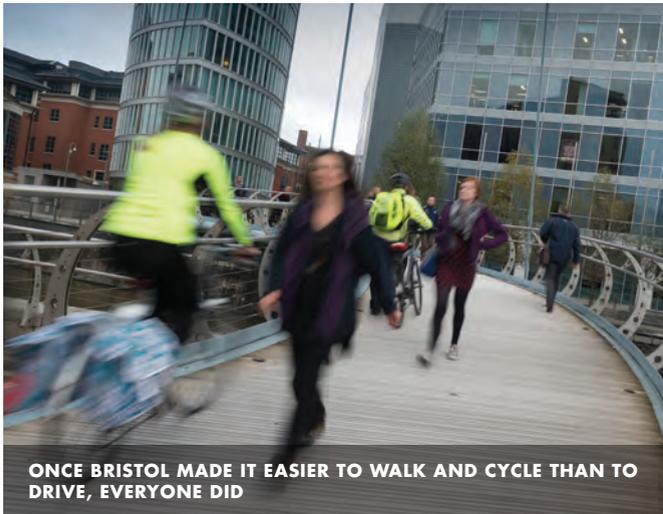
437,000

MAYOR

GEORGE FERGUSON

CATALYST

ANTICIPATED POPULATION GROWTH
RATE PROMPTS REFLECTION ON HOW
NEIGHBORHOODS AND TRANSIT
ARE DESIGNED



ONCE BRISTOL MADE IT EASIER TO WALK AND CYCLE THAN TO DRIVE, EVERYONE DID



WHEN PHYSICAL ACTIVITY BECOMES PART OF THE CULTURE, PEOPLE DON'T SEE ANY REASON TO AVOID IT

“Bristol is growing. People move here because they are attracted by what they see as a better quality of life. I want Bristol to continue to be a place where living healthy, happy and safe lives is the shared aspiration for every citizen.”

- Mayor George Ferguson

In 2012, the citizens of Bristol did something they had never done before. They voted in the first democratically elected mayor in the city's history. In taking on the role, Mayor George Ferguson secured Bristol's designation as European Green Capital for 2015. At the same time, he knew more could be done.

An architect by trade, Mayor Ferguson has a unique understanding about the role of the built environment on people's lives. He also knew that Bristol faced significant problems with congestion, contributing to lost productivity and high pollution costs. Continued growth exacerbates the problem. He also saw that people in the city's wealthiest neighborhoods were expected to live 10 years longer than people in the city's poorest neighborhoods.

His solution is to create a vision for Bristol that is healthier for all citizens. When it comes to building physical activity into daily life, Bristol has some opportunities that other cities do not. To start, one-third of Bristol's area is dedicated to green or blue open space. This presents tremendous opportunities for recreation and active transport. Bristol also has a passion for fun, which creates an environment that is well-suited for innovation in developing its activity options. Finally, Bristol was already well on its way to becoming an active transport leader with a heavy focus on walking and cycling at the time Mayor Ferguson was elected.

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

- Mayor Ferguson has publicly announced his commitment to “significant investment in the urban environment” to promote active travel choices.
- The mayor cycles for recreation and rides to work daily.
- A 10-year plan aims to make “walking in the city easier, safer and more pleasant for everyone.”
- The city council’s website publicizes walking routes that are already available.
- The Mayor’s team is conscious about the importance of language, saying, for example, “We don’t close roads. We open streets to people.”
- City staff includes a team of public health experts (one with a transport background) who are responsible for embedding physical activity and other health impacts into various city departments.
- Public health experts were engaged in the development of Bristol’s transport strategy, ensuring that activity is built in from the beginning. This includes the city’s first cycling strategy (launched in 2014), which aims to make cycling a safer, simpler, more attractive option.
- To build awareness of the evidence base, the Bristol City Council publishes one-page, user-friendly summaries of academic research related to active cities and distributes them to all transport planning staff and subscribers from other departments.



MAKE EXISTING RESOURCES ACTIVE RESOURCES

- A highway running through the middle

of a town square was restored to walking and cycling paths.

- The city is rolling out 20 mph speed limits on all residential streets and a significant percentage of business district streets.
- Bristol Health Partners is a collaboration of researchers, health care providers and city officials to evaluate city planning and proposals through a health lens. The partnership also ensure that information on health-related issues like physical activity is delivered by physicians and public influencers.
- Cycling is heavily promoted and route maps, events, bike recycling, and cycling clubs are widely available on the city’s Better By Bike website.
- Volunteers are invited to lead public walks and cycling events, which are promoted by the city.
- Resources for safe walking routes are readily available.
- Bristol has a formal Exercise Referral Programme through which physicians refer patients with moderate to serious conditions to appropriate physical activity programs that are hosted at various fitness centers throughout the city.



DESIGN FOR PEOPLE

- Bristol’s citizens are encouraged to lead public-private collaborations to identify design solutions that work best for people.
- The “Make Sunday Special” program closes streets in the city center to vehicles and opens them up to various forms of play—from cycling festivals to a 95-meter public water slide for anyone to use.
- Bristol commissions research on the attitudes and behaviors of citizens, particularly as they relate to new interventions such as 20 mph speed limit.



CREATE A LEGACY OF PHYSICAL ACTIVITY

- The city is investing in a low-emission metrobus system and plans for lower-emission automobile use.
- With an aim to double the number of cyclists by 2020, Bristol is creating new cycling infrastructure and providing safe cycling training to those who need it.
- Bristol has a permit system in place to allow ordinary citizens to apply for a “Temporary Play Street Order” that closes streets to play on a one-time or regular basis.
- The city has installed 27 “trim trail exercise stations” in city parks. These include simple equipment like pull-up bars, hurdles and sit-up bars that anyone can use free of charge.

THE RETURN

- More people in Bristol commute to work by bicycle or on foot than in any other Local Authority in England and Wales
- The Bristol-Bath path boasts approximately 2 million users/year
- Cycling increased 94 percent between 2001 and 2011 as the city boosted cycling infrastructure
- Walking to work increased by 40 percent between 2001 and 2011
- Cost-benefit analysis (based on WHO Health Economic Assessment Tool) shows a 4:1 ratio for walking and cycling schemes—considered very high value for money

ADELAIDE (AUSTRALIA)

BY 2038, THE NUMBER OF TRIPS TO AND AROUND ADELAIDE IS EXPECTED TO INCREASE BY 42 PERCENT

POPULATION

CITY: 22,200
STATE: 1,685,700

MAYOR

LORD MAYOR MARTIN HAESE

CATALYST

THE POPULATION IS EXPECTED TO MORE THAN DOUBLE TO 50,000, AND AN ADDITIONAL 50,000 WORKERS ARE EXPECTED TO MAKE A LIVING IN ADELAIDE. THE CITY SEES THE NEED TO MANAGE THE INCREASED GROWTH, AND ACTIVE TRANSPORTATION IS SEEN AS A CRITICAL SOLUTION.



VISIBLE SIGNAGE PROMOTES PHYSICAL ACTIVITY THROUGHOUT THE CITY



MAKE PUBLIC SPACES AVAILABLE TO COMMUNITY CLASSES AND PROGRAMS THAT ENCOURAGE PHYSICAL ACTIVITY

Adelaide has consistently been ranked one of the world's most livable cities. However, recent sustained growth and its role as Australia's most car-reliant city make Adelaide particularly susceptible to physical inactivity. The city's leadership intends to make sure that doesn't happen. Adelaide's growth strategy revolves around making the city safer, more enjoyable and a healthier place to live, work and play. The approach to transport and mobility is focused on providing alternative modes of transport to the private car - walking, cycling, and improved public transport. The result is Adelaide's *Smart Move Strategy*, a ten-year plan (2012-2022) to create a more enjoyable, accessible city that moves.

Adelaide is an ideal city for walking, running and cycling. It's relatively flat, has a strong street grid system, is easy to navigate, and has a semi-arid climate

which provides warm weather throughout most of the year. To maximize these existing assets, Adelaide City Council ("Council") has undertaken several projects to understand how public space is used now and how it can be increased in the future. For example, the internationally renowned Gehl Architects was commissioned to undertake the *Public Spaces and Public Life* study in 2011. The study focused on the city's public spaces—their strengths and weaknesses—and provided ideas to be considered and tested as part of future projects.

The Gehl Architects study investigated the usage of city streets, counting both vehicle activity and foot traffic. Council was able to compare this data with similar data collected in 2002 to track movement hotspots in the city.

Comparing 2002 to 2011 overall there was:

- An increase of 15 percent daytime (weekday) pedestrian traffic
- An increase of 20 percent pedestrians on Saturdays
- An increase of 43 percent "staying activity" - that is, people staying longer in the city for recreation and play.

The Urban Design Framework—a partnership project between the State Government and Adelaide City Council—has been in progress since late 2013 and will result in a design guide for the City of Adelaide that covers all public spaces. The Urban Design Framework includes considering the design of everything from footpath materials to trees and greening, and how to transform public spaces into accessible, attractive and easy to get around on foot or by bike.

HOW THEY'RE DOING IT



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

Physical activity and active design are prioritized across multiple city design and planning documents including the transport and urban design frameworks. Since *Smart Move* was developed in 2012, the Council has worked closely with the State Government on several projects to make Adelaide more active, vibrant and accessible by bike and walking. Projects have included both infrastructure and travel behavior-change initiatives.

The Council also makes a priority of fun activity programs to engage the private sectors. For example, Tour De Work (which is now known as Love to Ride) is a three week long competition to see which work place can encourage the most staff to cycle for 10 minutes whether it be for recreation or commute.



MAKE EXISTING RESOURCES ACTIVE RESOURCES

Many of Adelaide's solutions focus on making it easier and more enjoyable for people to engage in active transport. Some of these solutions include the addition of countdown timers at cross-walks, contra-flow bike lanes, bike boxes, reduced pedestrian waiting times at intersections and pedestrianization of busy streets.

To encourage people to explore Adelaide by foot, the City Council is rolling out wayfinding signage throughout the city and Park Lands to provide detailed information on walking distances and routes around the city.

An important part of the active travel strategy has been to improve bicycle safety. In 2014, Adelaide opened its first protected bicycle paths along the Frome Street thoroughfare. The paths are well-lit and include improved road crossings and landscaping. In addition, the city has improved 6km of new or improved bike lanes and installed 19 bike boxes (painted bicycle-only areas at intersections designed to improve visibility and awareness).

One of Adelaide's most effective strategies involves working in partnership with the community to create physical activity opportunities within the city through the Active Ambassador program. #ActiveAmbassador gets people moving by providing support and incentives for sporting organizations and individuals to deliver free and low cost exercise and fitness activities in the city. Examples include the Women's Recreational Running Network which boasts around 300 member and utilizes the city's beautiful Park Lands; and partnerships with established city fitness providers to hold fitness events in the city squares and surrounding Park Lands. In addition, local celebrities are encouraged to become active ambassadors by promoting these activities in the City through social media channels such as Facebook and twitter using #activeambassador.



DESIGN FOR PEOPLE

Adelaide's *Urban Design Framework* and *Smart Move Strategy* focus on making it easier to move through the city. This includes better opportunities for walking and cycling, as well as more accessible public transport. Streets are being designed with non-drivers in mind. One high-impact solution has been to provide the free City Connector bus service, in

collaboration with State Government, that loops around the CBD every 15 minutes and North Adelaide every 30 minutes.

Adelaide's Free Bike program allows anyone to hire a free bicycle and helmet during daylight hours from any of the 20 nodes and participating public and private organizations throughout the city.

The Splash Adelaide website connects residents to public events and activities, and provides social networking options to share physical activity experiences, as well as financial and other support to people with ideas on how to activate under used spaces in the city and North Adelaide. Splash Adelaide offers the opportunity to try out new ideas before undertaking the costly investment of a bricks and mortar business.

Other programs designed to encourage public engagement include the Be Active Corporate Cup (an event designed to improve workplace fitness over 16 weeks), the Access Adelaide Guide, which publicizes services and events for people with disabilities, and events such as Tour de Work which encourages city workers to give cycling a go in a fun, safe and interactive way by offering free bike skill courses and prizes and incentives for participation.



CREATE A LEGACY OF PHYSICAL ACTIVITY

The *Smart Move Strategy* offers the opportunity to create real and lasting change in the city. If the key directions of Smart Move are achieved (that is, creating great streets and places for people; and making the City safer and easier to access for all users), a healthier and more physically active community are the result.

“For Adelaide to continue to be seen as one of the most livable cities in the world, it is essential that we continue to work towards an integrated transport system that considers the needs of all city users. We believe that the ability for residents, businesses, students, workers and recreational visitors to have access to a range of transport options will help to ensure that the city is a thriving hub of activity and creativity well into the future.”

- Lord Mayor Martin Haese

THE RETURN

- Tour de Work participation increased 74% between 2012 and 2014
- 2014 Tour de Work resulted in a reduction of 36 tons of CO2 emissions in just three weeks
- Currently about 5,200 cyclists per week use the Frome Bikeway
- 20,250 bikes were hired in 2014 using Adelaide's Free Bike bike-share program
- 17,650 weekly passengers use the city's free City Connector bus services – a 38 percent increase over 2013
- The number of people cycling into and around the city each day has doubled over the last 10 years
- Adelaide won the 2013-14 State and National Heart Foundation Community Award in recognition of the Smart Move Strategy, the Bike Art Trail and the Bonython Park hub
- Currently over 10,000 cycle trips to and from the city take place by bicycle



KEEPING FACILITIES OPEN LATE EXPANDS ACCESS TO PHYSICAL ACTIVITY AND HAS BEEN ASSOCIATED WITH CRIME REDUCTIONS IN SOME CITIES



FUN, VISIBLE OPTIONS FOR EXERCISE AND PLAY CAN BE INEXPENSIVE WAYS TO CREATE A CULTURE OF PHYSICAL ACTIVITY

4

TOOLS & RESOURCES

Fortunately, there's no shortage of guidelines and recommendations available to people who are interested in designing an active city. This section brings together some of the best resources.

We selected these particular tools and resources based on their ease of use, relevance across multiple geographies, fresh or innovative content and availability of practical recommendations.



PRIORITIZE PHYSICAL ACTIVITY AS A SOLUTION

Practical guidance on integrating physical activity into overall city plans and being a visible champion.

WORKING ACROSS SECTORS FOR HEALTH EQUITY

By Dr. Karen Lee, Health+Built Environment Consulting, 2014

WHAT IT IS: A report for the World Health Organization and Metropolis World Congress 2014 on what cities need to do to address 21st Century health needs and health care costs, including and especially creating healthy active cities, and how to do it effectively and equitably. From her experience as the inaugural and former Built Environment Director for NYC's Health Department, and her work with 40 cities globally to advance this work, Dr. Karen Lee shares lessons learned from the successful initiatives undertaken by health and non-health departments working together in cities such as New York.

WHO IT'S FOR: Mayors' offices, local state and national government departments in health, planning, transportation, parks, housing, aging, environmental sustainability, buildings and economic development, as well as private and community sector professionals working with cities and government departments.

WHAT YOU'LL GET: More examples of initiatives your cities can undertake now to create healthy and active cities, and details to help you start implementing them successfully.

HOW TO CREATE AND IMPLEMENT HEALTHY GENERAL PLANS

By Changelab Solutions, 2012

WHAT IT IS: A toolkit that shows how public health advocates and urban planners can work together to integrate health promotion goals and strategies into master plans. While the document is written for city leaders in California, it is relevant to anyone responsible for overall city planning.

WHO IT'S FOR: Public health advocates and urban planners.

WHAT YOU'LL GET: Tools and sample questions to establish

your baseline, strategies for writing a healthy general plan, zoning and design recommendations, policies and standards and examples of project review checklists.

ALSO CHECK OUT: [Move This Way: Making Neighborhoods More Walkable and Bikeable](#) and [How to Use Redevelopment to Create Healthier Communities](#)—two guidebooks to help communities rethink and redesign for physically active citizens.

TURNING THE TIDE OF PHYSICAL INACTIVITY

By UK Active, 2014

WHAT IT IS: A report on the scale and impact of the physical inactivity crisis in the UK. The report's findings contribute to a practical set of key recommendations for action by all sectors leading to the development of a national strategy on physical activity.

WHO IT'S FOR: National and local government authorities.

WHAT YOU'LL GET: UK data on the case for urgent action including analyses and rankings by region and high-level recommendations for national and local governments.

ALSO CHECK OUT: [Turning the Tide](#) webinar with an overview of the findings and recommendations included in the Turning the Tide report.

TAFISA 3AC (ACTIVE CITIES, ACTIVE COMMUNITIES, ACTIVE CITIZENS)

By TAFISA

WHAT IT IS: An online resource that provides a wide range of information to become an active city or an active citizen.

WHO IT'S FOR: City leaders looking to make their community more active.

WHAT YOU'LL GET: Practical tools for communities to assess their baseline, recommendations and strategies for action, a place for networking and sharing of best practices and a certification process to become a TAFISA Triple AC Active City.

ALSO CHECK OUT: [SportCityNet](#), a partnership of 11 organizations and cities in the European Union that has released a toolkit with best practices and guidelines for creating an Active City strategy. Another great source of inspiration is TAFISA 3AC's [Good Practices](#) collection of case studies from holistic active cities of all sizes from around the world.

MOBILITY PLAYBOOK

By The City of Red Deer, Gehl Architects, and 8-80 Cities, 2013

WHAT IT IS: The written outcome of Red Deer's Integrated Movement Study, a quantitative and qualitative effort to understand the type of city residents want to live in as the city grows.

WHO IT'S FOR: Though written as an informational resource for Red Deer residents and planners, the Playbook is a useful guide for anyone interested in how a smaller city is transforming itself in anticipation of rapid growth.

WHAT YOU'LL GET: A summary in "Ready, Set, Go" format that explains why Red Deer needs to become more mobile, opportunities and challenges and calls to action for existing players.

COMMUNITY WELLNESS COMPREHENSIVE CITY-SCHOOL STRATEGIES TO REDUCE CHILDHOOD OBESITY

By the National League of Cities, Institute for Youth, Education, and Families, and the American Association of School Administrators, 2010

WHAT IT IS: A toolkit to support high-impact collaboration between city leaders and school districts on health issues that impact children.

WHO IT'S FOR: City leaders and school officials.

WHAT YOU'LL GET: A description of six cities' approaches to health and wellness initiatives in school districts, including descriptions of how these cities have promoted active travel, physical activity during and out-of-school and city-school coalitions to engage a broader group of residents. The report summarizes key success factors and lessons learned that can be replicated by cities around the world.



UNLOCK EXISTING RESOURCES

How to make the most of what you already have. Ways to get an entire city moving.

IMPROVING THE HEALTH OF LONDONERS TRANSPORT ACTION PLAN, EXECUTIVE SUMMARY

By Transport for London, 2014

WHAT IT IS: An overview of how London's transportation strategy aligns with core health objectives, including physical activity.

WHO IT'S FOR: Anyone with an interest in better understanding how a major city undertakes a citywide approach to healthier transportation planning.

WHAT YOU'LL GET: A detailed summary of the health-related actions and impacts (goals) set forth in London's transport plan.

ALSO CHECK OUT: [**Better Streets Delivered**](#), a book of case studies on street improvement projects implemented by Transport for London.

A HEALTHY CITY IS AN ACTIVE CITY, A PHYSICAL ACTIVITY PLANNING GUIDE

By the World Health Organization - Europe, 2008

WHAT IT IS: A planning guide for creating healthier, more active cities by integrating physical activity into the urban environment.

WHO IT'S FOR: City leaders.

WHAT YOU'LL GET: A step-by-step guide to creating a physical activity plan at the city level, tools for assessing a city's current state, checklists, case studies and external resources.

LIVERPOOL ACTIVE CITY STRATEGY 2012-2017

By the Public Health Department of Liverpool

WHAT IT IS: A roadmap for engaging the people of Liverpool in the city's physical activity efforts.

WHO IT'S FOR: Developed for Liverpool agencies, private sector partners, program deliverers and the public, the Active City Strategy is also relevant to planners in other cities who are seeking program ideas, sample strategies and best practices.

WHAT YOU'LL GET: An update—following on the 2005-2010 strategy—on the state of physical activity in Liverpool, a summary of the city's priority areas of focus, goals and tactics, detailed descriptions of existing programs and roles and responsibilities of key stakeholders.

ALSO CHECK OUT: The WHO's [Intersectoral Action on Health in Urban Settings–Liverpool](#), a brief analysis of Liverpool's cross-sector approach.

SHARED USE

By *Changelab Solutions*

WHAT IT IS: A primer on shared use and portal to specific resources.

WHO IT'S FOR: Government agencies, schools, faith-based organizations and program planners. Although designed for a U.S. audience, the resources are general enough to be relevant to other country contexts.

WHAT YOU'LL GET: A clear understanding of the basic concept of shared use, creative ideas for shared use and a connection to practical resources on creating agreements, liability and other resources.

ALSO CHECK OUT: In the United States, shared use opportunities are often influenced by local and state policy. Check out [ChangeLab's state-specific resources](#) to access guidance for specific states.

MANUAL OF PROJECTS AND PROGRAMS FOR ENCOURAGING CYCLING IN COMMUNITIES

By *EMBARQ Brasil with the Institute of Architects of Brazil*, 2014

WHAT IT IS: A manual with concepts for infrastructure projects and support programs to make cycling safer, more accessible and enjoyable in communities.

WHO IT'S FOR: City leaders and transportation professionals.

WHAT YOU'LL GET: A summary of best practices and lessons learned to inform.



DESIGN FOR PEOPLE TO BE ACTIVE

Tools and advice to design urban environments in ways that are certified on making people's lives better.

HOW TO INCREASE BICYCLING FOR DAILY TRAVEL

By *Active Living Research*, 2013

WHAT IT IS: A Brief written in non-technical language summarizing the available evidence about strategies for increasing bicycling levels.

WHO IT'S FOR: Anyone with an interest in the development of bicycle facilities and increasing physical activity.

WHAT YOU'LL GET: Key research findings and recommendations on how to increase biking using on-street bike lanes, off-street bike paths, and other bicycling infrastructure and educational programs as well as related policy implications.

ALSO CHECK OUT: The [Active Living Research](#) program website, which features additional briefs, infographics and other resources summarizing the evidence base on active cities.

INTERSECTIONS HEALTH AND THE BUILT ENVIRONMENT

By *the Urban Land Institute*, 2013

WHAT IT IS: A globally relevant reference book for designing for and building healthy spaces that are available and accessible to all.

WHO IT'S FOR: Anyone with an interest in land use and development (e.g., investors, developers, planners, public officials).

WHAT YOU'LL GET: The global case for action, best practices from around the world and a summary of the benefits and opportunities associated with smarter design. The report also includes a section on "Adding it All Up," a quick list/ summary of design considerations.

ALSO CHECK OUT: [Ten Principles for Building Healthy Places](#) and [Planning and Public Health: Creating Healthier Communities Through Integrative Practice](#) are two additional tools from ULI that provide insights on creating healthier environments.

ACTIVE DESIGN GUIDELINES PROMOTING PHYSICAL ACTIVITY & HEALTH IN DESIGN

By the City of New York, 2010

WHAT IT IS: New York City's leadership believes the design of the built environment can either promote or prevent physical activity.

The Active Design Guidelines draw on academic research and best practice examples to provide architects and urban designers with strategies to create more active buildings, streets and spaces.

WHO IT'S FOR: Architects, urban designers and urban planners; city departments and policymakers.

WHAT YOU'LL GET: Practical strategies, checklists and recommendations for designing cities/ buildings for activity. The document also provides examples and lessons learned from New York's experience.

ALSO CHECK OUT: [The Urban Design Checklist](#) and the [Building Design Checklist](#) are at-a-glance summaries of design recommendations for an active city.

CITY HEALTH CHECK

By the Royal Institute of British Architects, 2013

WHAT IT IS: A report with design guidance for healthier cities.

WHO IT'S FOR: Local authorities and developers.

WHAT YOU'LL GET: Practical recommendations on healthy city design based on a survey of residents of major English cities, along with case studies of successful built environment interventions.

HEALTHY BY DESIGN SA, A GUIDE TO PLANNING ENVIRONMENTS FOR ACTIVE LIVING IN SOUTH AUSTRALIA

By the National Heart Foundation of Australia, 2012

WHAT IT IS: A summary of active design objectives and active design considerations by setting (e.g., walking/cycling, streets, open spaces, parks, etc.)

WHO IT'S FOR: City planners, engineers, developers, architects, health planners and local government. While the resource was developed for those working in South Australia, it is a useful template for planners in other cities as well.

WHAT YOU'LL GET: Design considerations by setting and a matrix of design considerations in an at-a-glance format.

ALSO CHECK OUT: Healthy By Design's guide to planning environments for active living in [Victoria, Tasmania, and Western Australia](#), and [Healthy Spaces and Places](#), a resource

for local government, planning, design and health professionals, and developers.

ACTIVE BY DESIGN, DESIGNING PLACES FOR HEALTHY LIVES

By Design Council, 2014

WHAT IT IS: An introduction to a program in the UK on creating places in which physical activity is an integral part of everyday life.

WHO IT'S FOR: Planners, designers, city managers, health professionals and anyone looking to help make buildings, streets and neighborhoods more active.

WHAT YOU'LL GET: Quick "killer facts," reasons for optimism and changes that can be made today.

ALSO CHECK OUT: The [Active by Design](#) program website, which features news and opinion, facts, ways to get involved and additional resources.

PHYSICAL ACTIVITY AND THE ENVIRONMENT: NICE GUIDELINES

By the National Institute for Health and Care Excellence (NICE), 2008

WHAT IT IS: A written resource on how to improve the built environment to encourage physical activity.

WHO IT'S FOR: UK National Health Service and other professionals who are responsible for the built or natural environment.

WHAT YOU'LL GET: A summary of the evidence base and rationale; specific recommendations for strategy, planning, policy and implementation of priorities in an active built environment.

ALSO CHECK OUT: [Walking and Cycling: Local Measures to Promote Walking and Cycling as Forms of Travel or Recreation](#) and [Promoting Physical Activity in the Workplace](#)—practical, evidence-based guidance for city planners and practitioners.

ECONOMIC BENEFITS OF OPEN SPACE, RECREATION FACILITIES AND WALKABLE COMMUNITY DESIGN

By Active Living Research

WHAT IT IS: A brief written in non-technical language summarizing research on the different ways that walkability, parks, and open spaces can bring economic benefits to a community.

WHO IT'S FOR: Policymakers, developers and advocates.

WHAT YOU'LL GET: Key research findings and recommendations on how compact, walkable developments and recreation areas and parks located in metropolitan areas provide economic benefits to residents, municipal governments and private real estate developers.

MOVE THIS WAY, MAKING NEIGHBORHOODS MORE WALKABLE AND BIKEABLE

By ChangeLab Solutions

WHAT IT IS: A guidebook for developing city codes that enable more active cities and towns.

WHO IT'S FOR: Anyone who influences city policy, primarily in the United States.

WHAT YOU'LL GET: Specific examples of pedestrian and cycle-friendly city zoning and subdivision codes/policy and tangible guidance on how to update existing codes.

ALSO CHECK OUT: [This Land Is Our Land: A Primer on Public Land Ownership and Opportunities for Recreational Access.](#)

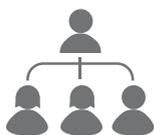
SOCIAL, ENVIRONMENTAL AND ECONOMIC IMPACTS OF BRT SYSTEMS

By Embarq

WHAT IT IS: A synthesis of existing literature and data supporting the expansion of BRT in transport solutions.

WHO IT'S FOR: The transport sector globally.

WHAT YOU'LL GET: The economic case for BRT systems in cities as a cost-effective and sustainable form of mass transit, practical examples and outcomes of four diverse case studies.



BUILD A LEGACY OF MOVEMENT

How to make changes that last from one administration to the next.

FROM HERE TO THERE

By Embarq

WHAT IT IS: A guidebook on how to use market research and the principles of consumer marketing to encourage increased use of public transport.

WHO IT'S FOR: Primarily the transportation sector, but it's also a unique point of view that leaders from other sectors can benefit from.

WHAT YOU'LL GET: A primer on marketing and communications for the transportation sector and practical recommendations for rethinking the competition, branding, marketing, communications, public relations and consumer education.

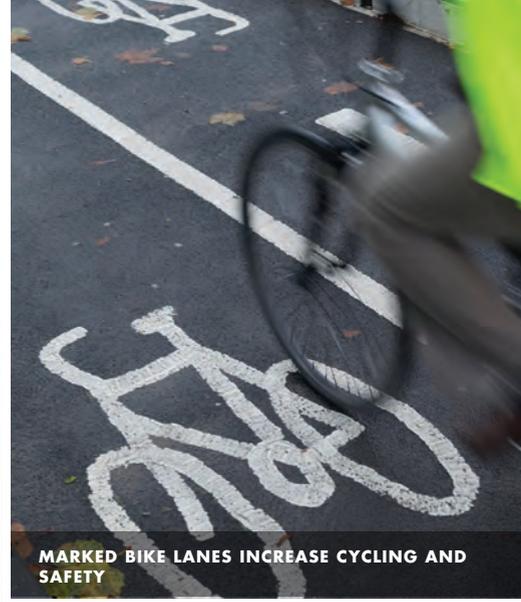
ALSO CHECK OUT: [Embarq's](#) varied projects around the world related to issues like finance, rapid transit, fuel efficiency, pollution reduction and bicycle safety. For up-to-the-minute ideas and stories about work being done in cities around the world, check out [The City Fix](#) (a collaboration of Embarq and the World Resources Institute).



WHEN ACTIVE DESIGN IS A PRIORITY, PHYSICAL ACTIVITY CAN BE BUILT INTO NEARLY ANY TYPE OF CITY INFRASTRUCTURE OR TOPOGRAPHY



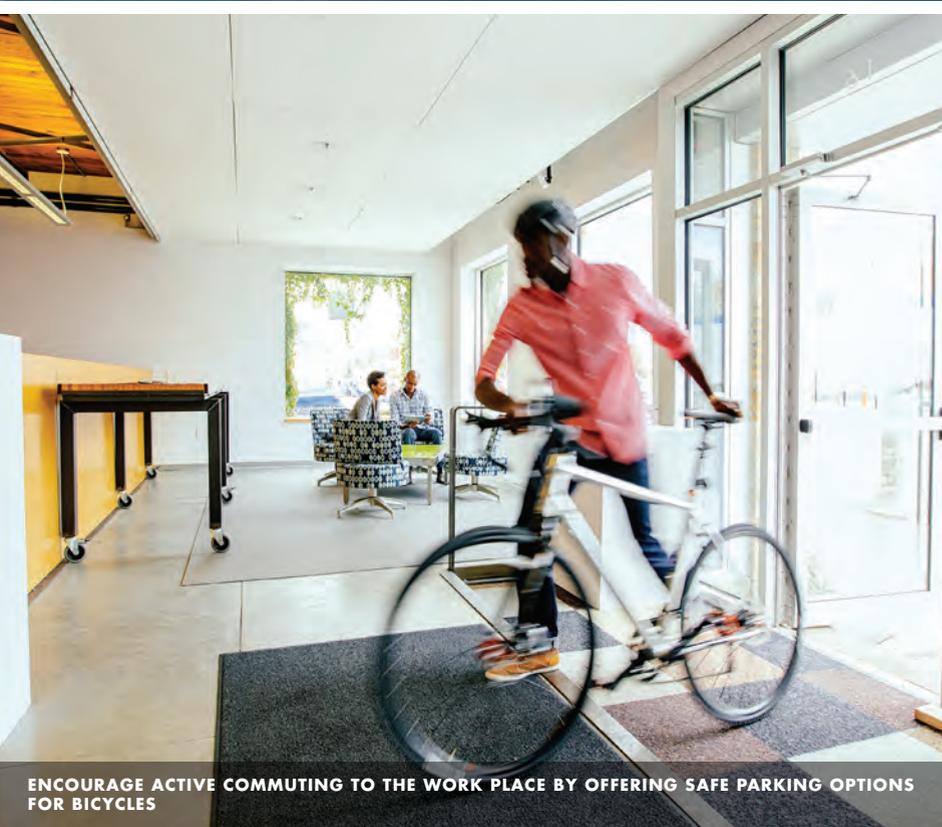
RECREATION OPTIONS SHOULD BE AVAILABLE TO PEOPLE OF ALL AGES



MARKED BIKE LANES INCREASE CYCLING AND SAFETY



SAFE SIDEWALKS ENABLE PEOPLE TO WALK AS A PRIMARY MODE OF TRANSPORTATION



ENCOURAGE ACTIVE COMMUTING TO THE WORK PLACE BY OFFERING SAFE PARKING OPTIONS FOR BICYCLES



PROVIDING A VARIETY OF COMMUNITY PROGRAMS CREATES BETTER EXPERIENCES FOR ALL

ONE VISION, TWO ASKS

WE ARE DESIGNED TO MOVE

More than 80 organizations from around the world have come together in support of Designed to Move, a collaborative framework for action that outlines an approach to increasing physical activity levels globally. The framework is oriented around two simple **ASKS** that any individual, organization, company or government can take on to significantly alter social, economic and health outcomes for the better.

VISION

FUTURE GENERATIONS RUNNING, JUMPING AND KICKING TO REACH THEIR GREATEST POTENTIAL

ASK 1

CREATE EARLY POSITIVE EXPERIENCES FOR CHILDREN

There are plenty of places throughout any city that can be opened up to activity, for kids along with everyone else. Maybe it's a town square that can host group events. Perhaps the traffic lanes are already being repainted so bike lanes would be a negligible-cost addition. Or open up the school with a field and running track.

ASK 2

INTEGRATE PHYSICAL ACTIVITY INTO EVERYDAY LIFE

Economies, cities, cultures and norms can be shaped and designed to encourage and enable increased levels of physical movement. To ensure a better future for all, designing for it needs to become the norm.

These two **ASKS** come together by focusing on the large-scale solutions and areas of investment that have the best chance of changing the way people move.

This document focuses on designing active cities. The underlying premise—supported by a substantial base of research—is that an active city is a safer, healthier, more prosperous and environmentally sustainable city. In other words, an active city is a competitive city. The goal here is to encourage investment and focus to deliver as many of them as possible around the world.



OPENING UP WATERWAYS TO DIFFERENT KINDS OF MOVEMENT EXPANDS WAYS PEOPLE CAN GET ACTIVE



5

CITATIONS & ACKNOWLEDGMENTS

This work draws up the scholarly evidence base and insights from experts around the world. Learn more about them here.

CITATIONS

MAIN CONTENT CITATIONS

- ¹United Nations Human Settlements Programme. (2013.) Planning & Design for Sustainable Urban Mobility: Global Report on Human Settlements 2013. New York: Routledge.
- ²Proper, K.I., Van den Heuvel, S.G., De Vroome, E.M., Hildebrandt, V., & Van der Beek, A. (2006.) Dose-response relation between physical activity and sick leave. *British Journal of Sports Medicine*. 40(2), 173-178. doi:10.1136/bjism.2005.022327.
- ³Lee, I., Shiroma, E., Lobelo, P., Puska, P., Blair, S., & Katzmarzyk, P., For the Lancet Physical Activity Series Working Group. (July 2012.) Effect of physical inactivity on major non-communicable diseases worldwide: An analysis of burden of disease and life expectancy. *The Lancet*. 380 (9838), 219-229
- ⁴Meyer, P., Kayser, B., & Mach, F. (2009.) Stair Use for Cardiovascular Disease Prevention. *European Journal of Cardiovascular Prevention & Rehabilitation*, 16(2 suppl), S17-S18.
- ⁵Lawlor, E. (2013.) *The Pedestrian Pound: The Business Case for Better Streets & Places*. United Kingdom: Living Streets & Just Economics Report.
- ⁶Lawlor, E. (2013.) *The Pedestrian Pound: The Business Case for Better Streets & Places*. United Kingdom: Living Streets & Just Economics Report.
- ⁷Lawlor, E. (2013.) *The Pedestrian Pound: The Business Case for Better Streets & Places*. United Kingdom: Living Streets & Just Economics Report.
- ⁸Pivo, G. & Fisher, J. (2010.) *The Walkability Premium in Commercial Real Estate Investments*. Working Paper. Responsible Property Investing Center, University of Arizona & Benecki Center for Real Estate Studies, Indiana University.
- ⁹Lawrie, J., Guenther, J., Cook, T., & Meletioui, MP. (2004.) *The Economic Impact of Investments in Bicycle Facilities: A Case Study of the Northern Outer Banks*. Raleigh, NC: North Carolina Department of Transportation.
- ¹⁰Davis, A. (2010.) *Value for Money: An Economic Assessment of Investment in Walking and Cycling*. Bristol, UK: NHS Bristol.
- ¹¹Harnik, P., & Welle, B. (2011.) *From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health & Wellness*. Washington, D.C.: The Trust for Public Land.
- ¹²Great Allegheny Passage. (2012.) *Trail Town Business Survey Report for The Progress Fund*. Frostburg Maryland: Center for Regional Progress. College of Business, Frostburg State University.
- ¹³Pivo, G. & Fisher, J. (2010.) *The Walkability Premium in Commercial Real Estate Investments*. Working Paper. Responsible Property Investing Center, University of Arizona & Benecki Center for Real Estate Studies, Indiana University.
- ¹⁴Pivo, G. & Fisher, J. (2010.) *The Walkability Premium in Commercial Real Estate Investments*. Working Paper. Responsible Property Investing Center, University of Arizona & Benecki Center for Real Estate Studies, Indiana University.
- ¹⁵Cortright, J. (2009.) *Walking the Walk: How Walkability Raises Housing Values in U.S. Cities*. Washington, D.C.: CEOs for Cities.
- ¹⁶Gotschi, T. (2011.) *Costs & Benefits of Bicycling Investments in Portland, Oregon*. *Journal of Physical Activity & Health*, 8 (Suppl 1), S49-S58.
- ¹⁷Kuhlman, R. (2010.) *Helping Johnny Walk to School: Policy Recommendations for Removing Barriers to Community-centered Schools*. Washington, DC: National Trust for Historic Preservation.
- ¹⁸Kuhlman, R. (2010.) *Helping Johnny Walk to School: Policy Recommendations for Removing Barriers to Community-centered Schools*. Washington, DC: National Trust for Historic Preservation.
- ¹⁹Filardo, M., Vincent, J., Allen, M., & Franklin, J. (2010.) *Joint Use of Public Schools: A Framework for a New Social Contract*. Washington, DC: 21st Century School Fund.
- ²⁰Goetzel, R., & Ozminkowski, R. (2008.) *The Health & Cost Benefits of Work Site Health-promotion Programs*. *Annual Review of Public Health*, (29), 303-323.
- ²¹Aldana, S. & Pronk, N. (2001.) *Health Promotion Programs, Modifiable Health Risks, & Employee Absenteeism*. *Journal of Occupational and Environmental Medicine*, 43(1), 36-46.
- ²²Burton, W., McCalister, K., Chen, C., & Edington, D. (2005.) *The Association of Health Status, Worksite Fitness Center Participation, & Two Measures of Productivity*. *Journal of Occupational & Environmental Medicine*, 47(4), 343-351.

- ²³United Nations Human Settlements Programme. (2013.) *Planning & Design for Sustainable Urban Mobility: Global Report on Human Settlements 2013*. New York: Routledge.
- ²⁴Harnik, P. & Welle, B. (2011.) *From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness*. Washington, D.C.: The Trust for Public Land.
- ²⁵Knowles, P. (2003.) The Cost of Policing New Urbanism. *Safer Communities*, 2(4), 33-37.
- ²⁶National Recreation & Park Association. (2010.) *Synopsis of 2010 Research Papers: The Key Benefits*. Ashburn, VA.
- ²⁷Maller, C., Townsend, M., St. Leger, L., Henderson-Wilson, C., Pryor, A., Prosser, L., & Moore, M. (2008.) *Healthy Parks, Healthy People: The Health Benefits of Contact with Nature in a Park Context: A Review of Relevant Literature*. Melbourne, Victoria, Australia: Deakin University and Parks Victoria, 2.
- ²⁸Retting, R., Ferguson, S., & McCartt, A. (2003.) A Review of Evidence-based Traffic Engineering Measures Designed to Reduce Pedestrian-Motor Vehicle Crashes. *American Journal of Public Health*, 93(9), 1453-1463.
- ²⁹U.S. Department of Transportation, Federal Highway Administration, Highway Safety Information System. (2010.) *Evaluation of Lane Reduction "Road Diet" Measures on Crashes Summary Report*. McLean, VA: Research, Development, & Technology Turner-Fairbank Highway Research Center.
- ³⁰Pollack, K., Keercher, C., Frattaroli, S., Peek-Asa, C., Sleet, D., & Rivara, F.P. (2012.) Toward Environments & Policies that Promote Injury-free Active Living- It Wouldn't Hurt. *Health and Place*, 18) 106-114.
- ³¹Dimaggio, C. & Li, G. (2013.) Effectiveness of a safe routes to school program in preventing school-aged injury. *Pediatrics*, 131(2), 290-296.
- ³²National Recreation & Park Association. (2010.) *Synopsis of 2010 Research Papers: The Key Benefits*. Ashburn, VA.
- ³³Sorensen, M., Smit, J., Barzetti, V., & Williams, J. (1997.) "Good Practices for Urban Greening," Inter-American Development Bank.
- ³⁴Ewing, R., Bartholomew, K., Winkelman, S., Walters J., & Chen D. (2008.) *Growing Cooler: The Evidence on Urban Development and Climate Change*. Washington, DC: Urban Land Institute.
- ³⁵Frank, L., Sallis, J., Conway, T., Chapman, J., Saelens, B., & Bachman, W. (2006.) Many Pathways from Land Use to Health: Associations between Neighborhood Walkability and Active Transportation, Body Mass Index, and Air Quality. *Journal of the American Planning Association*, 72(1):75-87.
- ³⁶Guo, J., & Gandavarapu, S. (2010.) An Economic Evaluation of Health-promotive Built Environment Changes. *Preventive Medicine*, 50(Suppl 1), S44-S49.
- ³⁷Shapiro, R., Hassett, K., & Arnold, F. (2002.) *Conserving Energy and Preserving the Environment: The Role of Public Transportation*. Washington, DC: American Public Transportation Association.
- ³⁸Ewing, R., & Greene, W. (2003.) *Travel and Environmental Implications of School Siting*. U.S. Environmental Protection Agency, EPA 231-R-03-004.
- ³⁹Staunton, C., Hubsmith, D., & Kallins, W. (2003.) Promoting Safe Walking and Biking to School: The Marin County Success Story. *American Journal of Public Health*, 93(9), 1431-1434.
- ⁴⁰Maas, J., Verheij, R., Groenewegen, P., De Vries, S., & Spreeuwenberg, P. (2006.) Green Space, Urbanity, and Health: How Strong is the Relation? *Journal of Epidemiology and Community Health*, 60(7), 587-592.
- ⁴¹Van den Berg, A., Maas, J., Verheij, R., & Groenewegen, P. (2010.) Green Space as a Buffer between Stressful Life Events and Health. *Social Science and Medicine*, 70(8), 1203-10.
- ⁴²Stigsdotter, U., Ekholm, O., Schipperijn, J., Toftager, M., Kamper-Jørgensen, E., & Randrup, T. (2010.) Health Promoting Outdoor Environments: Associations between Green Space, and Health, Health-related Quality of Life and Stress Based on a Danish National Representative Survey. *Scandinavian Journal of Public Health*, 38(4), 411-417.
- ⁴³Maas, J., Van Dillen, S., Verheij, R., & Groenewegen, P. (2009.) Social Contacts as a Possible Mechanism Behind the Relation between Green Space and Health. *Health and Place*, 15(2), 586-95.
- ⁴⁴National Recreation and Park Association. (2010.) *Synopsis of 2010 Research Papers: The Key Benefits*. Ashburn, VA.
- ⁴⁵National Recreation and Park Association. (2010.) *Synopsis of 2010 Research Papers: The Key Benefits*. Ashburn, VA.
- ⁴⁶Richardson, E., & Mitchell, R. (2010.) Gender Differences in Relationships between Urban Green Space and Health in the United Kingdom. *Social Science and Medicine*, 71(3), 568-575.
- ⁴⁷Frank, L., Sallis, J., Conway, T., Chapman, J., Saelens, B., & Bachman, W. (2006.) Many Pathways from Land Use to Health: Associations between Neighborhood Walkability and Active Transportation, Body Mass Index, and Air Quality. *Journal of the American Planning Association*, 72(1), 75-87.
- ⁴⁸Hansmann, R., Hug, S., & Seeland, K. (2007.) Restoration and Stress Relief through Physical Activities in Forests and Parks. *Urban Forestry and Urban Greening*, 6), 213-225.

- ⁴⁹ Bolund, P., & Sven, H. (1999.) Ecological Services in Urban Areas. *Ecological Economics*, (29), 293-301.
- ⁵⁰ Alcock I et al. (2013.) Longitudinal Effects on Mental Health of Moving to Greener and Less Green Urban Areas. *Environmental Science & Technology*. DOI: 10.1021/es403688w.
- ⁵¹ Scott M., Cohen D., Evenson K., Elder J., Catellier D., Ashwood JS., & et al. (2007.) Weekend Schoolyard Accessibility, Physical Activity, and Obesity: The Trial of Activity in Adolescent Girls (TAAG) Study. *Preventive Medicine*, (44), 398-403.
- ⁵² Maas, J., Van Dillen, S., Verheij, R., & Groenewegen, P. (2009.) Social Contacts as a Possible Mechanism Behind the Relation between Green Space and Health. *Health & Place*, 15(2), 586-95.
- ⁵³ Kweon, B., Sullivan, W., & Wiley, A. (1998.) Green Common Spaces and the Social Integration of Inner-city Older Adults. *Environment and Behavior*, 30(6), 832-58.
- ⁵⁴ Harnik, P., & Welle, B. (2011.) From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness. Washington, D.C.: The Trust for Public Land.
- ⁵⁵ Hipp, J., Eyler, A., & Kuhlberg, J. (2013.) Target Population Involvement in Urban Ciclovias: A Preliminary Evaluation of St. Louis Open Streets. *Journal of Urban Health*, 90(6), 1010-1015.
- ⁵⁶ Urban Land Institute. (2013.) America in 2013: A ULI Survey on Views on Housing, Transportation and Community. Washington, D.C.: Urban Land Institute.
- ⁵⁷ Harnik, P., & Welle, B. (2011.) From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness. Washington, D.C.: The Trust for Public Land.
- ⁵⁸ Maddock, J., Choy, L., Nett, B., McGurk, M., & Tamashiro, R. (2008.) Increasing Access to Places for Physical Activity through a Joint Use Agreement: A Case Study in Urban Honolulu, 5(3), 1-8.
- ⁵⁹ Frank, L., Saelens, B., Powell, K., & Chapman, J. (2007.) Stepping Toward Causation: Do Built Environments or Neighborhood and Travel Preferences Explain Physical Activity, Driving, and Obesity? *Social Science and Medicine*, 65(9), 1898-1914.
- ⁶⁰ Brownson, R., Baker, E., Housemann, R., Brennan, L., & Bacak, S. (2001.) Environmental and Policy Determinants of Physical Activity in the United States. *American Journal of Public Health*, 91(12), 1995-2003.
- ⁶¹ Sallis, J., Conway, T., Dillon, L., Frank, L., Adams, M., Cain, K., et al. (2013.) Environmental and Demographic Correlates of Bicycling. *Preventive Medicine*, 57(5), 456-460.
- ⁶² Handy, S., Sallis, J., Weber, D., Maibach, E., & Hollander, M. (2008.) Is Support for Traditionally Designed Communities Growing? Evidence from Two National Surveys. *Journal of the American Planning Association*, 74, 209-221.
- ⁶³ Urban Land Institute. (2013.) America in 2013: A ULI Survey on Views on Housing, Transportation and Community. Washington, DC: Urban Land Institute. Available at <http://www.uli.org/research/centers-initiatives/terwilliger-center-for-housing/research/community-survey/>.
- ⁶⁴ Paynter, B. (August 23, 2012.) "The City That Shed a Million Pounds." *Businessweek*.
- ⁶⁵ Fioravanti, C. H. (2012.) Brazilian fitness programme registers health benefits. *The Lancet*, 380 (9838), 206.
- ⁶⁶ From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness. Washington, D.C.: The Trust for Public Land.
- ⁶⁷ Pollack, K., Keercher, C., Frattaroli, S., Peek-Asa, C., Sleet, D., & Rivara, FP. (2012.) Toward Environments and Policies that Promote Injury-free Active Living It Wouldn't Hurt. *Health and Place*, 18, 106-114.
- ⁶⁸ Lawlor, E. (2013.) The Pedestrian Pound: The Business Case for Better Streets and Places. United Kingdom: Living Streets and Just Economics Report.
- ⁶⁹ Guo, J. & Gandavarapu, S. (2010.) An Economic Evaluation of Health-Promotive Built Environment Changes. *Journal of Preventive Medicine*, 50(Suppl 1): S440-S449.
- ⁷⁰ Shapiro, R., Hassett, K. & Arnold, F. (2002.) Conserving Energy and Preserving the Environment: The Role of Public Transportation. Washington, DC: American Public Transportation Association.
- ⁷¹ Carrigan, A., King, R., Velasquez, J., Raifman, M. & Duduta, N. (2013.) Social, Environmental and Economic Impacts of BRT Systems: Bus Rapid Transit Case Studies from Around the World. Washington, D.C.: EMBARQ.
- ⁷² Harnik, P. & Welle, B. (2011.) From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness. Washington, D.C.: The Trust for Public Land.
- ⁷³ Hipp, J., Eyler, A., & Kuhlberg, J. (2013.) Target Population Involvement in Urban Ciclovias: A Preliminary Evaluation of St. Louis Open Streets. *Journal of Urban Health*, 90(6), 1010-1015.
- ⁷⁴ Putnam, R. *Bowling Alone: The Collapse and Revival of America Community*. Simon & Schuster. New York. 2000.
- ⁷⁵ Van den Berg, A., Maas, J., Verheij, R., Groenewegen, P. (2010.) Green Space as a Buffer between Stressful Life Events and Health. *Social Science and Medicine*, 70(8), 1203-10.

- ⁷⁶ Stigsdotter, U., Ekholm, O., Schipperijn, J., Toftager, M., Kamper-Jørgensen, F. & Randrup, T. (2010.) Health Promoting Outdoor Environments: Associations between Green Space, and Health, Health-related Quality of Life and Stress based on a Danish National Representative Survey. *Scandinavian Journal of Public Health*, 38(4), 411-417.
- ⁷⁷ Meyer, P., Kayser, B., & Mach, F. (2009.) Stair Use for Cardiovascular Disease Prevention. *European Journal of Cardiovascular Prevention and Rehabilitation*, 16(2 suppl), S17-S18.
- ⁷⁸ National Recreation and Park Association. (2010.) Synopsis of 2010 Research Papers: The Key Benefits. Ashburn, VA.
- ⁷⁹ Trust for Public Land. "Healing America's Cities: Why We Must Invest in Urban Parks." Retrieved February 29, 2012 at <http://www.lib.niu.edu/1995/ip950121.html>.
- ⁸⁰ Pilkington, P. (2000.) Reducing the speed limit to 20 mph in urban areas : Child deaths and injuries would be decreased. *BMJ : British Medical Journal*, 320(7243), 1160.
- ⁸¹ Tapp, A. & Nancarrow, C. (2014.) 20mph speed limits: attitudes and behaviours compared for GB, Bristol, established 20 mph cities and towns, and non-20 mph cities and towns. Bristol Social Marketing Centre, University of the West of England.
- ⁸² Meyer, P., Kayser, B., & Mach, F. (2009.) Stair Use for Cardiovascular Disease Prevention. *European Journal of Cardiovascular Prevention and Rehabilitation*, 16(2 suppl), S17-S18.
- ⁸³ City of Sydney. (n.d.) "Curated walks and fascinating works from Sydney's history and public art collection." Retrieved from: <http://www.sydneyculturewalksapp.com/>
- ⁸⁴ Lee, K., et al. (2012.) Promoting routine stair use: Evaluating the impact of a stair prompt across buildings. *American Journal of Preventive Medicine*. 42(2), 136-141.
- ⁸⁵ Jindal, K. (2014, July 10.) Scaling up sustainability: 'Raahgiri Day' comes to New Delhi. Retrieved September 14, 2014, from <http://thecityfix.com/blog/scaling-up-sustainability-raahgiri-day-comes-new-delhi-india-car-free-days-active-transport-embarq-india-gurgaon-kanika-jindal/>.
- ⁸⁶ The Trust for Public Land. (1995.) Healing America's Cities: Why we Must Invest in Urban Parks. Retrieved February 28, 2012, from <http://www.lib.niu.edu/1995/ip950121.html>.
- ⁸⁷ Guangzhou International. (2010.) "Greenways." <http://english.gz.gov.cn/gzgovcn/s5640/201104/800393.shtml>. The People's Government of Guangzhou Municipality.
- ⁸⁸ Flegenheimer, M. (May 12, 2014.) "De Blasio Looks Toward Sweden for Road Safety." *The New York Times*. Retrieved from: http://www.nytimes.com/2014/05/13/nyregion/de-blasio-looks-toward-sweden-for-road-safety.html?_r=0.
- ⁸⁹ Montezuma, R. (2005.) Promoting active lifestyles and healthy urban spaces: the cultural and spatial transformation of Bogotá, Colombia. *SCIENTIFIC AND TECHNICAL PUBLICATION-PAN AMERICAN HEALTH ORGANIZATION*, 612, 161.
- ⁹⁰ Solomon, D. (June 8, 2008.) "Man With a Plan." *The New York Times Magazine*. Retrieved from: http://www.nytimes.com/2008/06/08/magazine/08WWLN-Q4-t.html?_r=1&, April 16, 2015.
- ⁹¹ City of Boston. (2014.) "Boston's Complete Streets." Retrieved from: <http://bostoncompletestreets.org/about/>, April 16, 2015.
- ⁹² The State of Obesity: Better Policies for a Healthier America. (2014, September 1.) Retrieved September 16, 2014, from <http://healthyamericans.org/report/115/>.
- ⁹³ Nyc.gov. (January 14, 2015.) "Mayor de Blasio And Commissioner Trottenberg Announce Completion Of More Than 50 'Vision Zero' Street Design Projects Making NYC Safer."
- ⁹⁴ New York City Department of Health and Mental Hygiene. (March 2013.) "Increased Life Expectancy in New York City: What Accounts for the Gains?" EPI Research Report. Retrieved from: <http://www.nyc.gov/html/doh/downloads/pdf/epi/epiresearch-lifeexpectancy.pdf>.
- ⁹⁵ Wolf, S.A., Grimshaw, V.E., Sacks, R., Maguire, T., Matera, C., & Lee, K.K. (2015) The impact of a temporary recurrent street closure on physical activity in New York City. *Journal of Urban Health*. 92(2):230-41.
- ⁹⁶ New York City. (December 15, 2011.) "Bucking National Trends, Mayor Bloomberg Announces Significant Drop in New York City Childhood Obesity Rates." News from the Blue Room. Retrieved September 17, 2014 from http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2011b%2Fpr440-11.html&cc=unused1978&rc=1194&ndi=1.
- ⁹⁷ City of New York. (2010.) Active Design Guidelines: Promoting Physical Activity and Health Design. City of New York. Retrieved from <http://www.drkarenlee.com/resources/adg>.
- ⁹⁸ City of New York. (2013.) Active Design: Shaping the Sidewalk Experience. City of New York. Retrieved from: http://www.nyc.gov/html/dcp/pdf/sidewalk_experience/active_design.pdf.

- ⁹⁹ Nicoll, G., Lee, K., & DuBose, J. (2013.) Active Design: Affordable Designs for Affordable Housing. Retrieved from: <http://herg.gatech.edu/Files/Publications/Affordable-Designs.pdf>.
- ¹⁰⁰ Johns Hopkins Center for Injury Research and Policy, NYC Department of Health and Mental Hygiene, Society for Public Health Education. (2013.) Active Design Supplement: Promoting Safety, 2. Retrieved from: http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-injury-research-and-policy/publications_resources/CenterPubs/PromotingSafety.html.
- ¹⁰¹ USGBC. (2013.) Design for Active Occupants. Retrieved from <http://www.usgbc.org/node/2648813>.
- ¹⁰² Lee, K. (March 5, 2014.) Developing an Active Design Index for LEED. Green Building Information Gateway. Retrieved from: <http://insight.gbig.org/developing-an-active-design-index-for-leed/>.
- ¹⁰³ Nicoll, G., OCAD University; Lee, K., NYC Department of Health and Mental Hygiene; & Dubose, J., Georgia Institute of Technology (2013.) Active Design: Affordable Designs for Affordable Housing. Retrieved from: <http://herg.gatech.edu/Files/Publications/Affordable-Designs.pdf>.
- ¹⁰⁴ Copenhagen Bangla Barta. Online Edition. (August 19, 2011.) "Wonderful Copenhagen." Retrieved from: <http://www.banglabarta.dk/details.php?cid=40&id=2248>.
- ¹⁰⁵ Schipperijn, J., Klinker, C., Kerr, J. & Troelsen, J. (2011.) "Physical Activity Among Teenagers in a Multi-Ethnic Neighborhood in Copenhagen, Denmark – Combining GPS and Accelerometer Data Using PALMS and ArcGIS." Presented at Active Living Research 2011. Retrieved from: <http://www.actigraphcorp.com/research-database/physical-activity-among-teenagers-in-a-multi-ethnic-neighborhood-in-copenhagen-denmark-combining-gps-and-accelerometer-data-using-palms-and-arcgis/>.
- ¹⁰⁶ City of Copenhagen. (2012.) City of Cyclists: Bicycle Account 2012.
- ¹⁰⁷ City of Copenhagen. (2012.) City of Cyclists: Bicycle Account 2012.
- ¹⁰⁸ City of Copenhagen. (2012.) City of Cyclists: Bicycle Account 2012.
- ¹⁰⁹ Vulliamy, E. (June 9, 2013.) "Medellín, Colombia: Reinventing the world's most dangerous city." The Guardian. Retrieved from: <http://www.theguardian.com/world/2013/jun/09/medellin-colombia-worlds-most-dangerous-city>.
- ¹¹⁰ Vulliamy, E. (June 9, 2013.) "Medellín, Colombia: Reinventing the world's most dangerous city." The Guardian. Retrieved from: <http://www.theguardian.com/world/2013/jun/09/medellin-colombia-worlds-most-dangerous-city>.
- ¹¹¹ Bocarejo, J. P., Portilla, I. J., Velásquez, J. M., Cruz, M. N., Peña, A., & Oviedo, D. R. (2014.) An innovative transit system and its impact on low income users: the case of the Metrocable in Medellín. *Journal of Transport Geography*, 39, 49-61.
- ¹¹² Montes, F., Sarmiento, O., Zarama, R., Pratt, M., Wang, G., Jacoby, E., & Kahlmeier, S. (2012.) Do Health Benefits Outweigh the Costs of Mass Recreational Programs? An Economic Analysis of Four Ciclovia Programs. *Journal of Urban Health*, 89(1), 153-170.
- ¹¹³ Alvarado, P. (June 1, 2011.) "From World's Drug Capital to Green Oasis: The Incredible Story of Medellín, Colombia." Treehugger. Retrieved from: <http://www.treehugger.com/slideshows/urban-design/from-worlds-drug-capital-to-green-oasis-the-incredible-story-of-medellin-colombia/page/2/#slide-top>.
- ¹¹⁴ Global BRT Data. (2015.) Retrieved from: http://brtdata.org/location/latin_america/colombia/medellin.
- ¹¹⁵ Brodzinsky, S. (April 17, 2014.) "From Murder Capital to Model City: Is Medellín's Miracle Show or Substance?" The Guardian. Retrieved from: <http://www.theguardian.com/cities/2014/apr/17/medellin-murder-capital-to-model-city-miracle-un-world-urban-forum>.
- ¹¹⁶ Institute for Transportation and Development Policy. (January 25, 2012.) San Francisco and Medellín win the 2012 Sustainable Transport Award. <https://www.itdp.org/san-francisco-and-medellin-win-the-2012-sustainable-transport-award>.

FIGURE CITATIONS

Figure 2: The Benefits Are Bigger Than You Think

^A Pollack, KM, Keercher, C, Frattaroli, S, Peek-Asa, C, Sleet, D, & Rivara, FP. (2012.) *Toward Environments and Policies that Promote Injury-free Active Living- It Wouldn't Hurt.* *Health & Place*, 18, 106-114.

^B Harnik, P & Welle, B. (2011.) *From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness.* Washington, D.C.: The Trust for Public Land.

^C Dimaggio, C & Li, G. (2013.) Effectiveness of a safe routes to school program in preventing school-aged injury. *Pediatrics*, 131(2), 290-296.

^D Guo, JY & Gandavarapu, S. (2010.) An Economic Evaluation of Health-promotive Built Environment Changes. *Preventive Medicine*, 50(Suppl 1), S44-S49.

^E Shapiro, RJ, Hassett, KA, & Arnold, FS. (2002.) *Conserving Energy and Preserving the Environment: The Role of Public Transportation.* Washington, DC: American Public Transportation Association.

^F Carrigan, A., King, R., Velasquez, J., Raifman, M. & Duduta, N. (2013.) *Social, Environmental and Economic Impacts of BRT Systems: Bus Rapid Transit Case Studies from Around the World.* Washington, DC: EMBARQ.

^G National Recreation and Park Association. (2010.) *Synopsis of 2010 Research Papers: The Key Benefits.* Ashburn, VA.

^H Meyer, P, Kayser, B, & Mach, F. (2009.) Stair Use for Cardiovascular Disease Prevention. *European Journal of Cardiovascular Prevention & Rehabilitation*, 16(2 suppl), S17-S18.

^I Stigsdotter, UK, Ekholm, O, Schipperijn, J, Toftager, M, Kamper-Jørgensen, F, & Randrup, TB. (2010.) Health Promoting Outdoor Environments: Associations between Green Space, and Health, Health-related Quality of Life and Stress based on a Danish National Representative Survey. *Scandinavian Journal of Public Health*, 38(4), 411-417.

^J Harnik, P & Welle, B. (2011.) *From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness.* Washington, D.C.: The Trust for Public Land.

^K Hipp, JA, Eyler, A.A., & Kuhlberg, J.A. (2013.) Target Population Involvement in Urban Ciclovias: A Preliminary Evaluation of St. Louis Open Streets. *Journal of Urban Health*, 90(6), 1010-1015.

^L Putnam, Robert D. *Bowling Alone: The Collapse and Revival of America Community.* Simon & Schuster. New York. 2000.

^M Harnik, P & Welle, B. (2011.) *From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness.* Washington, D.C.: The Trust for Public Land.

^N United Nations Human Settlements Programme. (2013.) *Planning and Design for Sustainable Urban Mobility: Global Report on Human Settlements 2013.* New York: Routledge.

^O Lawlor, Eilis. (2013.) *The Pedestrian Pound: The Business Case for Better Streets and Places.* United Kingdom: Living Streets and Just Economics Report.

KEY CONTRIBUTORS

CONTRIBUTING ORGANIZATIONS



ACTIVE LIVING RESEARCH



ALTA PLANNING + DESIGN



AMERICAN COLLEGE OF SPORTS MEDICINE



DESIGN COUNCIL



DR KAREN LEE HEALTH + BUILT ENVIRONMENT CONSULTING



EMBARQ



EMBARQ BRASIL



KAISER PERMANENTE



KaBOOM!



NATIONAL LEAGUE OF CITIES



NIKE, INC.



PARTNERSHIP FOR A HEALTHIER AMERICA



SUSTRANS



TAFISA



UNDP



URBAN PLANNING SOCIETY OF CHINA

INDIVIDUAL ACKNOWLEDGMENTS

JEOVÁ ANDRADE

Prefeitura de Canaã dos Carajás

LEON ANDREWS

National League of Cities

ORNA BARON-EPEL

University of Haifa

DAVID BENNELL

The Trust for Public Land

EVAN BENNETT

VAMOS Architects

MIA BIRK

Alta Planning + Design

JOSÉ BITTAR

*Cidade Ativa
Fit Cities São Paulo*

SHERRY-LEA BLOODWORTH BOTOP

*American Institute of Architects
Foundation*

JEREMY BOUW

City of Red Deer

SCOTT BRICKER

America Walks

MAURICIO BROINIZI

*Movimento Nossa São Paulo
Movimento
Brasileiro de Cidades Sustentáveis*

REX BURKHOLDER

*Oregon Outdoor Education
Coalition Ciclovias Recreativas*

GABRIELA CALLEJAS

*Cidade Ativa
Fit Cities São Paulo*

MAYKELL CARVALHO

CEPEUSP

MARCIA CASSEB

BID

BRENDA CHAMNESS

American College of Sports Medicine

ALEX CHAN

Clinton Foundation

JORGE CHEDIEK

*United Nations
Development Programme*

JEROME CHOU

Van Alen Institute

LISA CREIGHTON

Partnership for a Healthier America

CARLOS CRESPO

*Portland State University,
School of Community Health
WHO Collaborating Center
Urban Health Sustainability*

CANDACE DAMON

HR&A

ADRIAN DAVIS

City of Bristol

TATIANE DE JESUS

*Confederação Nacional
dos Municípios*

CLARE DEVINE

Design Council

DANA DICKMAN

Alta Planning + Design

GUILLERMO DIETRICH

City of Buenos Aires

JENNIFER DILL

Portland State University

REBECCA DRAYSEY

Adelaide City Council

TINA DUONG

EMBARQ

TED EYTAN

Kaiser Permanente

RAYNE FERRETI MORAES

ONU Habitat

WENDY FEUER

NYC Dept of Transportation

TANIA FIORATTI

*United Nations
Development Programme*

SILVIA FUSTER

SHE Foundation

SILVANA GRANEMANN

*United Nations
Development Programme*

DAVID HILL

Adelaide City Council

PAULA HOOPER

University of Western Australia

NICOLE HOWSON

Wheelhouse

PHIL INSALL

Sustrans

NIELS JENSON

City of Copenhagen

CHIP JOHNSON

Mayor, City of Hernando

IEVA LAZAREVICIUTE

*United Nations
Development Programme*

MARY ALICE LEE

The Trust for Public Land

KAREN LEE

*Dr Karen Lee Health + Built
Environment Consulting*

ANDRÉA LEITE

SESI

CESAR LEYVA

BID

NATALIE LOZANO

Alta Planning + Design

GIA MATHENY

City of Hernando

RACHEL MCCLEERY

Urban Land Institute

MARCY MCINELLY

Congress for New Urbanism

CHARLES MCKINNEY

NYC Parks

RENATO MOYA

*United Nations
Development Program*

TYLER NORRIS

Kaiser Permanente

MARTA OBELHEIRO

EMBARQ Brasil

JEFF OLSON

Alta Planning + Design

FERNANDA PAIVA

Natura

GILBERTO PERRE

Frente Nacional de Prefeitos

MICHAEL PRATT

*Hubert Department of Global
Health, Rollins School of Public
Health, Emory University*

RODRIGO REIS

*Sociedade Brasileira de Atividade
Física e Saúde*

SHARON ROERTY

Robert Wood Johnson Foundation

ANDREW RUNDLE

*Columbia University Mailman
School of Public Health*

JAMES F. SALLIS

*Active Living Research
University of California, San Diego*

DEBORAH SALVO

*National Institute of Public Health of
Mexico; and Michael & Susan Dell
Center for Healthy Living, University
of Texas School of Public Health*

GEAM MEIREY DOS SANTOS

Prefeitura de Canaã dos Carajás

OLGA SARMIENTO

*School of Medicine, Universidad
de los Andes, Bogotá, Columbia*

BAE SCHILLING

TAFISA

JEFFREY SHUMAKER

NYC Dept of City Planning

JAMES SIEGAL

KaBOOM!

TRAVIS SMITH

*National Recreation and
Park Association*

CHAD SPOON

Active Living Research

LETÍCIA TEIXEIRA

*Ministério das Cidades - Secretaria de
Acessibilidade e Planejamento Urbano*

RACHEL TOMS

Design Council

MATTHEW TROWBRIDGE

*University of Virginia
School of Medicine*

EDUARDO UHLE

SESC

DAVID VAN DER LEER

Van Alen Institute

TARA VEER

Mayor, City of Red Deer

PIERO VENTURI

Comissão Europeia

DANIELY VOTTO

EMBARQ, Brasil

CLAIRE WANG

*Columbia University Mailman
School of Public Health*

BENJAMIN WELLE

EMBARQ

JIM WHITEHEAD

*American College
of Sports Medicine*

TRACY WIEDT

National League of Cities

SU YUNSHENG

Tongji University

designedtomove.org

**© Copyright 2015 by NIKE, Inc.
All rights reserved.**