



HEALTHY PLAN MAKING

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

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American Planning Association

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*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		

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Advisory Committee

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*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

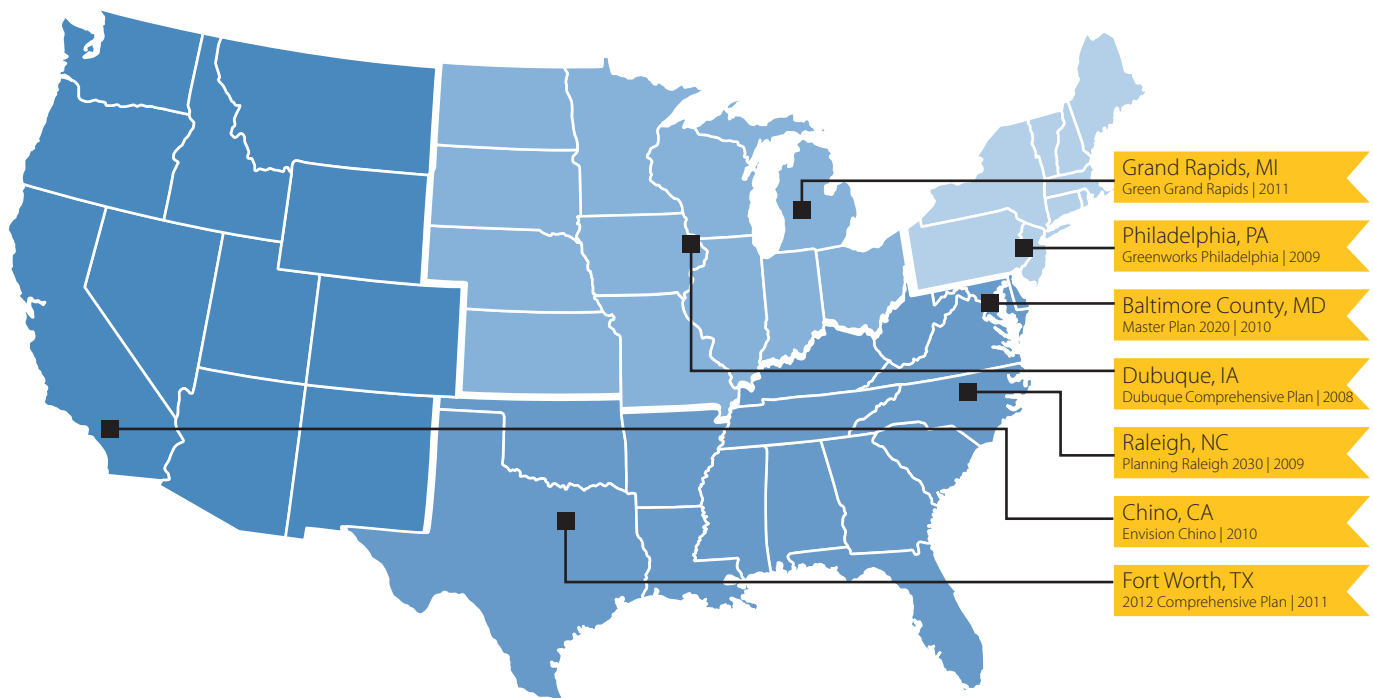


TABLE 2. CASE STUDY SITES WITH BASIC DEMOGRAPHIC DATA

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 	<i>Food and Nutrition, Environmental Health, Social Cohesion and Mental Health</i> <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 	<i>Food & Nutrition, Active Living, Environmental Health, Health and Human Services</i> <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 years 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	<i>City partnered with:</i> <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

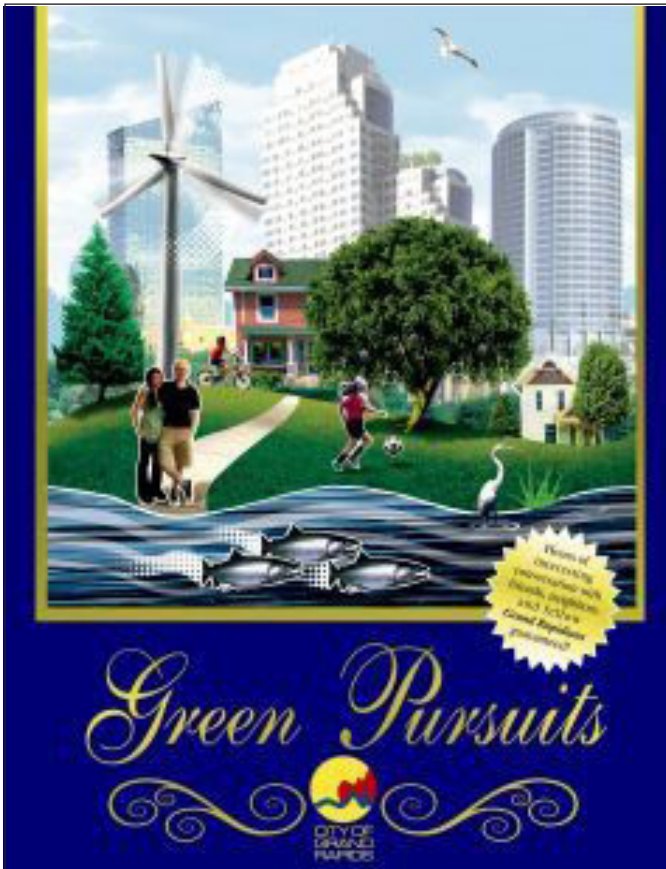
corresponded with an initiative at the county level to create a Health Improvement Plan entitled Healthy Dubuque. The outreach, goals, and policies of both of these efforts fed off one another and helped make public health a pillar of Dubuque's comprehensive planning. This process also served to create 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)

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.

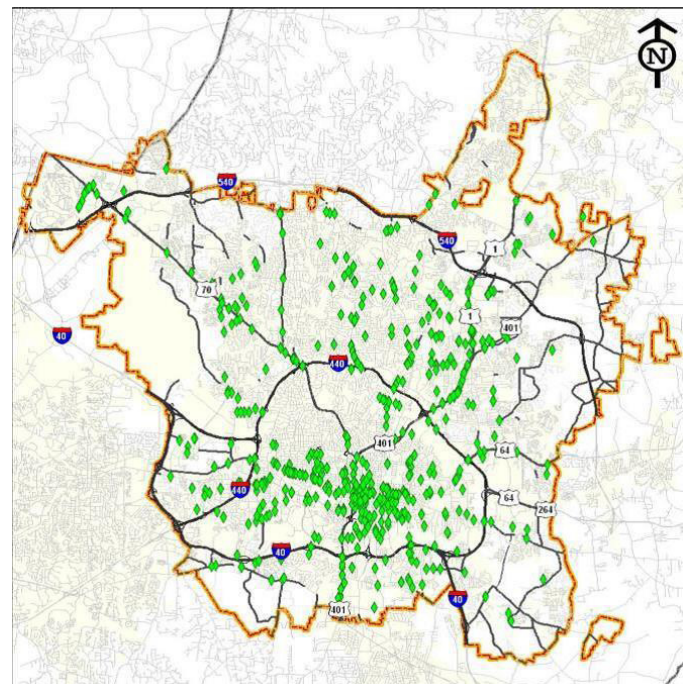
The outreach phase of planning is a great time to collaborate with other departments and engage the community to identify existing gaps in data and data gathering opportunities. Community groups can help organize outreach meetings and promote the plan if they feel engaged in a meaningful way. There are 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.

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



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

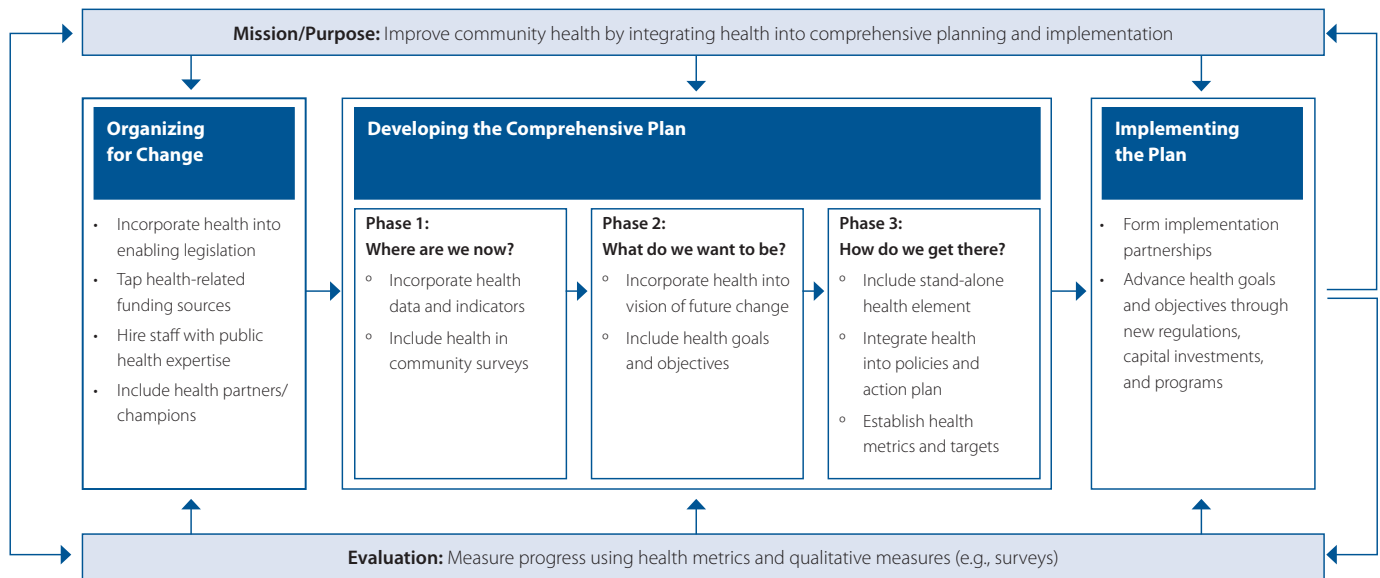
- Allow departments to explain why they think a goal, objective, or action should be changed
- Adjust actions, indicators, or numerical targets based on progress and feedback

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.

A photograph of a person walking on a path covered in fallen autumn leaves. The path is dark and wet, reflecting the surrounding trees. The person is wearing a light-colored long-sleeved shirt and dark pants. The background is a dense forest with trees showing vibrant autumn foliage in shades of yellow, orange, and green. Sunlight filters through the trees, creating dappled light on the ground.

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

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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

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