

SUSTAINABLE DECISIONS FOR HEALTHY COMMUNITIES:

Public Health and Urban Planning: Past and Future

While the story of John Snow and the Broad Street Pump is often used to illustrate the birth of the science of epidemiology, it can also be used to illustrate the crucial link between public health and urban planning. In fact, there are numerous historical accounts depicting the overlap of these two fields. In 1872, a preliminary meeting of the founders of the American Public Health Association included an architect, with the focus of the meeting on forming a national sanitary association.¹ Also in the mid-1800's, Frederick Law Olmsted, a planner serving as Secretary of President Lincoln's U.S. Sanitary Commissions in urban planning and public health could be characterized by three areas: creation of green space to promote physical activity, social integration & improved mental health status; prevention of infectious diseases via strengthened community infrastructure, such as drinking water and sewage systems; and protection of persons from hazardous industrial exposures and injury risks through various land-use and zoning ordinances.²

The rapid industrialization and urbanization at the end of the 19th century brought many new public health challenges, including an increase in infectious diseases due to poor housing conditions, inadequate sanitation, and dangerous working conditions.³ In 1900, the leading causes of death included pneumonia, diphtheria, tuberculosis, and various gastrointestinal infections, accounting for one third of all deaths combined.⁴ Today, this rate has decreased dramatically as a result of improved sanitation and other forms of control.

In the mid-20th century the fields of urban planning and public health began to drift apart. Presently, however, the disciplines are reintegrating to address contemporary challenges (see box).

Today, chronic diseases (e.g. heart disease, diabetes, and cancer) are the leading cause of US death and disability, accounting for 70% of all deaths, or 1.7 million deaths each year.⁵ They are also among the most preventable—the adoption of healthy and active lifestyles can significantly reduce the likelihood of developing chronic diseases, as well as contribute to a variety of other positive health outcomes. Urban planning can assist by providing opportunities at the local level to access nutritious foods and preventative healthcare services; ensure neighborhoods that are safe and encourage increased physical activity levels; limit exposure to hazardous wastes and other environmental risks; add to the aesthetic value of communities; and otherwise contribute to the overall health and well-being of today's society.

Relatively recently, urban planning has begun looking at the effects of community design on energy use and greenhouse gas emissions to address the growing concern of climate change. For example, the CDC utilized the unique "natural experiment" surrounding the Atlanta Olympics to document a 42% decrease in acute asthma events among children that were attributed to reductions in automobile traffic and associated air pollution.² Transportation planners can design communities that favor safer pedestrian,



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bike, and public transportation options over mega highways, ultimately improving public health and environmental status of the community. In addition, new green building techniques that minimize exposure to toxic chemicals, reduce wasteful practices, and promote conservation of energy and our natural resources can positively impact public health.

For example, the High Point Community is Seattle's first and only Built Green™ neighborhood, which employs numerous green building techniques and materials.⁶ The High Point team included the University of Washington School of Public Health, Neighborhood House, Public Health Seattle and King County and the American Lung Association of Washington, who worked together to implement a long-range program designed to improve indoor air quality and ultimately reduce the occurrence of asthma attacks in children living in their Breathe-Easy Homes.⁷

Despite challenges to reconnecting the fields of Urban Planning and Public Health, many professionals in the two fields are taking steps towards moving in that direction. It is our hope that you, as health education and promotion specialists, will also see the link and use the information presented in this document to better collaborate in designing healthy communities.

Common Goals Among Urban Planners & Public Health Professionals

Both Urban Planners and Public Health Professionals work at the population-level and encourage community based participatory methods to address a variety of goals such as:

- Prevent outbreaks of infectious disease
- Encourage increased physical activity
- Reduce chronic disease rates
- Prevent injuries (both intentional and unintentional)
- Improve mental health status
- Improve air quality
- Improve water quality
- Prepare for and respond to emergency events
- Provide access to health care
- Provide access to other goods and services that promoted health
- Prevent or eliminate unequal distribution of negative health burdens (such as exposure to environmental hazards)
- Promote overall wellness

References:

1. Rvenel, M.P. The American Public Health Association: Past, Present, Future. Address Given at the 50th Anniversary Celebration Meeting. Accessed online on 3.17.08 at <http://books.google.com/books?id=ai0JAAAIIAAJ&pg=PA13&lpg=PA13&dq=american+public+health+association+architect&source=web&ots=m1Bnzo1uG7&sig=RjFdqAC0xhOitgdJl-jNhaMLI0g&hl=en#PPA17,M1>.
2. Kochitzky, C.S., Frumkin, H., Rodriguez, R., Dannenberg, A.L., Rayman, J., Rose, K., Gillig, R., Kanter, T. Urban Planning and Public Health at the CDC. *MMWR* 2006; 55(sup02): 34-38.
3. Corburn, J. Confronting the Challenges in Reconnecting Urban Planning and Public Health. *American Journal of Public Health* 2004; 94(4): 541-546.
4. U.S. Centers for Disease Control and Prevention. Achievements in Public Health, 1900-1999: Control of Infectious Diseases. *MMWR* 1999; 48(29): 621-629.
5. U.S. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion Website. Accessed 3.14.08 at <http://www.cdc.gov/nccdphp/>.
6. Seattle's High Point Redevelopment: Great Design, Healthy Community. Accessed 3.17.08 at http://www.seattle.gov/util/stellent/groups/public/@spu/@es/documents/webcontent/spu01_002608.pdf.
7. Seattle Housing Authority. Brining Health Solutions Home. Accessed 3.17.08 at <http://www.thehighpoint.com/breatheasy.html>.

SUSTAINABLE COMMUNITIES ARE HEALTHY COMMUNITIES

"Problems cannot be solved at the same level of awareness that created them" - Albert Einstein

Today's response to global issues, such as climate change, will require a renewed effort at sustainable thought. Public health professionals must begin delivering solutions that will meet the needs of the present, while also protecting the needs of the future. However, enabling consumers to change their habits, lifestyles, and neighborhoods will not be easy, and it will require the public health and planning communities to collaborate like never before.

In Douglas Farr's new book, *Sustainable Urbanism*, he describes the realization that the "same pattern of land use that is cooking the planet is also contributing to the obesity epidemic, land-wasting low-density development, social isolation, heightened levels of pollution, higher taxes, and a shortened lifespan."

We must first recognize that land use decisions are also public health decisions. The benefits of closer professional collaboration will ultimately create dynamic communities and promote better health. To rid ourselves of an over reliance on personal vehicles, there must first be safe alternatives which allow us to walk, ride bikes, or take public transportation. To reduce healthcare costs and reduce the current trends in obesity and other related chronic diseases, communities must incorporate mixed use development that emphasizes safety and encourages increases in physical activity. To decrease the rise in mental illness, our children need neighborhoods where the streets are an extension of the front yard. To reduce increasing rates of incarceration, we need more connected communities with stronger social networks. To decrease our vulnerability to storms and other emergency events, we need resilient communities that are prepared and

able to respond. To increase family time and civic involvement, we have to first reduce long commutes and free up time to reconnect with our families and fellow community members.

To achieve these goals, public health professionals will need to investigate whether the community built environment promotes or hinders health. Planners will need to acknowledge that decades of relying on legal frameworks and mountains of plans have shown no signs towards sustainable success. Many existing communities will need to retrofit their neighborhoods to induce healthy lifestyles and sustainable growth. In essence, we need the greatest of this generation to step up to the challenges facing today's society and do so with a sense of urgency.

INTEGRATING SMART GROWTH AND PUBLIC HEALTH

The U.S. Environmental Protection Agency (EPA) is assisting community efforts to integrate environmental and public health goals through the Smart Growth Program. Smart growth is development that benefits the community, environment, economy and public health. To promote smart growth and its implementation, the EPA and its partners use a variety of tools and programs to ensure public health is integrated into short term and long term land use strategies.



EPA's smart growth programs have two aspects: projects directly focused on public health and projects that incorporate impacts for public health as measurable results. An example of a project with a direct focus includes working with the National Association of City/County Health Officials and the American Planning Association to convene health practitioners and officials to create strategies for connecting smart growth and public health for local, state and national audiences. The initial version of these policy strategies will be released in 2008. A goal of this project is to establish baseline metrics for public health impacts associated with land use development.

The smart growth program also features projects that indirectly focus on health impacts. For instance, removing barriers to smart growth can improve the ability for communities to create walkable, vibrant and distinct places. Revising zoning codes and development regulations to encourage a mixture of land uses, compact building design, and housing and transportation choices will reduce vehicle miles traveled, and therefore produce cleaner air, better water quality, and overall healthier communities.

Public health practitioners need to understand how to become engaged in the smart growth process and affect change in their work. To learn more about how the EPA's Smart Growth Program is working to integrate land use and public health, please visit www.epa.gov/smartgrowth or contact Kevin Nelson at 202-566-2835.

BOOKS ON URBAN DESIGN & PUBLIC HEALTH

Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities

By Howard Frumkin, Lawrence Frank, and Richard Joseph Jackson; Island Press, 2004

This book offers a comprehensive overview of the links between urban planning, architecture, transportation, community design, and public health.

Prescription for a Healthy Nation: A New Approach to Improving Our Lives by Fixing Our Everyday World

By Tom Farley, MD, and Deborah A. Cohen, MD; Beacon Press, 2005

The authors suggest it is our physical and social environment that is making Americans sick and provide examples of changes that can be made to promote health.

WALK, CAN'T WALK – HEALTH BENEFITS OF COMPLETE STREETS

A recent *USA Today* headline “Walk, Can’t Walk – The Way Cities and Suburbs are Developed Could be Bad for Your Health” drew increased attention to the relationship between community design and health. According to the National Complete Streets Coalition (<http://www.completestreets.org>), communities benefit when they are designed for all users – pedestrians, bicyclists, motorists, and transit users. In fact, mounting evidence suggests that community design is an important element of good health. Emissions from automobiles and other forms of fossil fuel combustion contribute to climate change and also negatively impact health. Asthma and other respiratory effects are often seen at higher rates in communities with poor air quality. Communities that reduce their dependence on automobiles can improve overall air quality, reduce their dependence on fossil fuels, increase

physical activity levels by promoting walking or biking, and thereby improve overall health. In order to facilitate the “complete streets” concepts, health professionals, urban planners, architects, public officials, and engineers must work together.

One example of this collaboration is The Complete Streets Act of 2008, which is co-sponsored by Senator Tom Harkin (D-IA) and Senator Tom Carper (D-DE). The Complete Streets Act of 2008 (S. 2686) was introduced to ensure that all users of the transportation system, including pedestrians, bicyclists, and transit users as well as children, older individuals, and individuals with disabilities, are able to travel safely and conveniently on streets and highways. By helping to translate research into policy and practice, public health professionals can help develop communities that can “Walk, CAN walk!”

HEALTH EDUCATORS CAN PLAY A CRITICAL ROLE IN ADDRESSING THE BUILT ENVIRONMENT



Community collaborations to address the built environment are surfacing nationwide. Notable collaborators include architects, builders, urban planners, elected officials, and parks and recreation and transportation departments. Many of these professionals are now coming to understand the link between the built environment and public health. However, they may not be aware that health educators exist within the public health system and possess a unique range of skills that are critical to the success of community-based programs focusing on promoting health through community design. It is incumbent upon health educators to increase awareness of their specialized skills and experience.

While non-public health partners may be familiar with impact assessments, they are not likely to be familiar with health impact assessments (HIAs). HIAs were developed by the National Association of County & City Health Officials and other partners to assess the impact of community design on public health. HIAs are great tools to use not only to gather necessary data, but also as a means to mobilize community members in the process. In addition, partners in urban design and transportation may be accustomed to addressing policy changes with little or no community involvement. This approach may actually limit their ability to affect change. Health educators are adept at mobilizing community members and public health partners, and can support a change towards more involvement in the community design process. They can use their experience in coalition development, community mobilization, strategic planning, and policy and media advocacy to achieve positive results. Health educators also offer skills in mapping a strategic approach, which includes mobilizing others; setting long-range goals; focusing efforts and putting specific, sequential, realistic, measurable and targeted activities into action; empowering grassroots advocates to educate the public and decision makers; engaging the public in supporting or opposing community design concepts; providing testimony; and serving as media spokespersons.

In summary, new evidence of the impact of community design on chronic disease and other health risks demands that health educators collaborate with non-public health partners. Health education and health promotion specialists have many valuable competencies that can assist in designing more healthy and sustainable communities that are critical to the nation’s health.

CASE STUDY: NEW COLUMBIA NEIGHBORHOOD REDEVELOPMENT

A healthy community is one which “protects and improves the quality of life for its citizens, promotes healthy behaviors and minimizes hazards for its residents, and preserves the natural environment”.¹ These attributes are exemplified in the former Columbia Villa neighborhood in Portland, Oregon redeveloped into New Columbia.

New Columbia was redeveloped into a thriving community from one which was socially, economically and physically depressed, prone to flooding, and physically isolated from surrounding neighborhoods. During redevelopment, 854 new housing units were built, with a range of housing options from project-based Section 8 rental housing to market rate housing. The community also includes senior rental units, increased green space, and stronger connectivity with the surrounding community. Narrow streets and wide sidewalks suggest an intimate community atmosphere and encourage both pedestrian and bicycle use. A four-acre park facilitates increased physical activity with basketball courts, a children’s play area, and a community garden. The Main Street is mixed-use, with apartments overlaying stores and public buildings. Two buildings have received Leadership in Energy and Environmental design (LEED) certification in an effort to support environmentally conscious design. In addition to conserving energy, up to 80% of storm water runoff is treated onsite, and the potential for flooding is greatly reduced.

The New Columbia redevelopment promotes enhanced health for its residents by simply improving the conditions found in the former neighborhood that encouraged poor health outcomes such as asthma, vector borne diseases, metal toxicity. The new, walkable design of New Columbia encourages physical activity by residents, which can decrease the risk of obesity, cardiovascular disease, and other chronic diseases. In addition, buildings were constructed with no discernable difference between income levels, thereby reducing social inequality. The front porches on homes and open green spaces facilitate neighborly social interaction, decrease crime² and contribute to sound mental health.³

The New Columbia neighborhood has won several awards for sustainable development, health promotion and environmental stewardship such as the (1) EPA National Award for Smart Growth Achievement (2007); (2) Columbia Slough Watershed Council Achievement Award (2007); (3) Reader’s Choice Awards – Planned/Mixed Use Winner (2007); and (4) Regional Erosion Prevention Award (2007).

References

1. Dannenberg, A., Jackson, R.; Frumkin, H.; Schieber, R.; Pratt, M.; Kochtitzky, C.; Tilson H. 2003. The Impact of community design and land-use choices on public health: a scientific research agenda. *American Journal of Public Health*, 93 (9): 1500-1508.
2. Kuo, F.; and W. Sullivan. 2001. Environment and crime in the inner city: does vegetation reduce crime? *Environmental Behavior* 33:343-367.
3. Hawe, P.; and Shiell, A. 2000. Social capital and health promotion: a review. *Social Science and Medicine* 51:871-885.

WEBSITES ON URBAN PLANNING & PUBLIC HEALTH

Active Living by Design

Active Living by Design is a national program of the Robert Wood Johnson Foundation and is a part of the North Carolina Institute for Public Health at the UNC School of Public Health in Chapel Hill, North Carolina. This program establishes innovative approaches to increase physical activity through community design, public policies and communications strategies.
<http://www.activelivingbydesign.org/>

Active Living Research

Active Living Research, a national program of the Robert Wood Johnson Foundation, contributes to the prevention of childhood obesity in low-income and high-risk racial/ethnic communities by supporting research to examine how environments and policies influence active living for children and their families.
<http://www.activelivingresearch.org/>

U.S. Environmental Protection Agency’s Smart Growth Program

EPA’s smart growth program helps communities grow in ways that expand economic opportunity, protect public health and the environment, and create and enhance the places that people love.
<http://www.epa.gov/smartgrowth/>

Smart Growth Network

In 1996, the EPA joined with several non-profit and government organizations to form the Smart Growth Network (SGN). The Network’s partners include environmental groups, historic

preservation organizations, professional organizations, developers, real estate interests; local and state government entities.
<http://www.smartgrowth.org/>

CDC’s National Center for Environmental Health

<http://www.cdc.gov/nceh/>

CDC’s Healthy Places Program

<http://www.cdc.gov/healthyplaces/>

Smart Growth America

Smart Growth America is a coalition of national, state and local organizations working to improve the ways we plan and build the towns, cities and metro areas we call home.
<http://www.smartgrowthamerica.org/>

American Planning Association

APA is a nonprofit public interest and research organization committed to urban, suburban, regional, and rural planning. APA and its professional institute, the American Institute of Certified Planners, advance the art and science of planning to meet the needs of people and society.
<http://www.planning.org/>

NACCHO’s Community Design Project

NACCHO’s Community Design project enhances the capacity of local health departments (LHDs) to be involved in decision-making processes and otherwise extend their role in issues related to land use.
http://www.naccho.org/topics/hpdp/Land_Use_Planning.cfm

Prevention Institute: Built Environment and Health

Through a series of program profiles, this project highlights examples of neighborhood-level successes in altering elements of the built environment to improve health behaviors and outcomes.
<http://www.preventioninstitute.org/builtenv.html>

Natural Resources Defense Council: Smart Growth

NRDC advocates smart growth solutions that will help limit sprawl and encourage more sustainable communities for the 21st century.
<http://www.nrdc.org/smartgrowth/default.asp>

Urban Land Institute: Smart Growth

http://www.uli.org/AM/Template.cfm?Section=Smart_Growth2&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=110&ContentID=13924

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