

Introduction

Supporting Health Through Design: Challenges and Opportunities

Richard Killingsworth, MPH; JoAnne Earp, PhD; Robin Moore, Dipl Arch, MCP

INTRODUCTION

This special issue of the *American Journal of Health Promotion* on “Health Promoting Community Design” highlights the most recent research into how the built environment affects health. This emerging research provides another chapter in the rich history of public health and its quest to overcome obstacles to health through shaping the environment in which people live. The role of public health in community design has traditionally been to improve sanitation and personal hygiene. Now attention is shifting to how design affects other important elements of health, especially physical activity. The 13 articles in this special issue provide a fundamental overview of the relationship between community design and health and what needs to be done to promote physical activity and improve health through affecting social circumstances and environmental conditions.

BREAKING OLD PARADIGMS

While preparing this special issue over the past year, we have gained tremendous insight into what we know, where we need to go, and especially how a variety of disciplines can come together to effect change. More than half of the over 70 manuscripts received for review came from disciplines outside of public health. The manuscripts demonstrate the broad range of interests, the various ways that practice has guided the research agenda in this field, and the evolution of rapidly emerging paradigms across sectors. It became increasingly clear that in order to address the problem of promoting physical activity and health, we would have to break old paradigms that dictated who should participate in designing solutions to this problem. To capture this mix of expertise and interest most effectively, we recruited a special issue editor, associate editors, and reviewers from diverse backgrounds.

The process of breaking the paradigm began several years ago. The legendary physicist Thomas Kuhn had written in 1962 that creators of new paradigms are generally “very young or very new” to their field of interest and that, “being little committed by prior practice to the traditional rules of normal science, [they] are particularly likely to see that those

rules no longer define a playable game and to conceive another set that can replace them.”¹ In order to create the circumstances proscribed in this statement, the Centers for Disease Control and Prevention (CDC), on October 6–7, 1997, convened 30 of the nation’s foremost experts from disciplines traditionally distant from public health to discuss something remote from their everyday thinking—promoting physical activity and health. Disciplines represented included architecture, urban design, city planning, landscape architecture, transportation engineering, community development, and criminal justice. The meeting set into motion what few of us recognized then as the birth of a new way of thinking about health, breaking traditional paradigms and forming new models for addressing how the built environment affects health.

That meeting was the dawn of what we are now calling the “active living” movement and, specifically for the purposes of this special issue, served as a catalyst for encouraging professionals from diverse fields to rethink how community design impacts human health and behavior.

BUILDING A MOVEMENT

Today we are part of what Kuhn would call a scientific revolution. The process is under way to transform the thinking of multiple sectors, as they embrace a movement that offers many beneficial health outcomes. The evidence of this transformation is in the explosion of literature, programs, and policy decisions that now address the topic of promoting health through community design.

In the academic realm, publications in peer-reviewed journals both reflect and fuel interest in this important topic. Recent special issues on the built environment and health have been published in *The American Journal of Preventive Medicine*, May 2002 (www.sciencedirect.com/science/journal/07493797); *The Institute for Transportation (ITE) Journal*, June 2003 (www.ite.org/itejournal/0307.asp); *Landscape and Urban Planning*, Sep 2003 (www.sciencedirect.com/science/journal/01692046); and *The American Journal of Public Health*, Sep 2003 (<http://www.ajph.org/contents-by-date.0.shtml>). This flurry of interest has revitalized the call to embrace interdisciplinary collaboration and identify ways to build a research agenda and practice model to address the new demand for knowledge.

The federal government has also taken a strong interest in addressing this demand. The National Institutes of Health; CDC; the Department of Transportation (Federal Highway Administration, National Highway Traffic Safety Administration, Federal Transit Administration, and the Bureau of Transportation Statistics); Environmental Protection Agency; Na-

Richard Killingsworth, MPH, is Director of Active Living by Design and Associate Research Professor in the Department of Health Behavior and Health Education, School of Public Health, University of North Carolina, Chapel Hill, North Carolina. JoAnne Earp, PhD, is Chairperson of the Department of Health Behavior and Health Education, School of Public Health, University of North Carolina, Chapel Hill, North Carolina. Robin Moore, Dipl Arch, MCP, is Professor of Landscape Architecture, College of Design, Adjunct Professor, Family and Consumer Sciences, North Carolina State University, Raleigh, North Carolina.

tional Park Service; U.S. Forest Service; and even quasi-government agencies such as the Institute of Medicine, the Transportation Research Board, and the World Health Organization are focusing more attention on the complex questions about the built environment that face us all.

One result of government interest in answering these questions is the recent introduction of the Pedestrian and Cyclists Equity Act (PACE) of 2003 (<http://www.americabikes.org/saferoutes.asp>) by Congressman James Oberstar (D-MN), the senior ranking Democrat on the House Transportation and Infrastructure Committee. If passed, this legislation will provide annual funding of \$280 million to address issues pertaining to active living, safe routes to school, and active transportation. This legislation is an important sign that Congress is beginning to recognize the connections of the built environment and transportation and human health.

Another strong indicator of how this movement is taking hold is the support of philanthropic organizations. The Robert Wood Johnson Foundation (RWJF) is providing more than \$70 million to support initiatives related to research (www.activelivingresearch.org), practice (www.activelivingbydesign.org), and policy (www.activeforlife.org), and leadership (www.leadershipforactiveliving.org). The presence of RWJF in this arena has encouraged other philanthropic organizations to pay attention to this issue. The Funders' Network for Smart Growth and Livable Communities (www.fundersnetwork.org) published a key translation paper titled "Health and Smart Growth: Building Health, Promoting Active Communities" (Feb 2003) that identifies the multi-disciplinary nature of this movement and how funders can take and are taking a role in supporting research, practice, and policy efforts.

All of this interest and support has fundamentally shaped how national organizations such as the American Planning Association, Urban Land Institute, Institute of Transportation Engineers, American Institute of Architects, Congress for the New Urbanism, and American Society of Landscape Architects see themselves as part of this movement. We are now seeing national conferences with themes related to active living and the impact of the built environment on health. Many disciplines, including those first brought together to talk about this 6 years ago, now have specialty areas related to these themes, and consultants who concentrate on these issues are emerging to help a broad range of professions join the movement to increase opportunities for active and healthy living.

THE CALL TO ACTION

So where do we go from here? We have enjoyed many successes but continue to encounter many challenges. Notwithstanding the interest and support outlined here, the theories, methods, data, and conclusions identified in this special issue are far from being mainstream and widely accepted. Resistance is fueled by inertia to stay the same and adherence to the status quo, and by the absence of reliable data to identify which factors in design specifically affect human health and behavior. In fact, the scientific debate of what constitutes health promoting community design is very much in its infancy. However, this very fact provides the opportunity to act. Public health researchers can serve as catalysts by which this paradigm may emerge by developing the methods that will

allow us to capture the data to explain the relationships between the built environment and health.

Public health is at the crossroads of discovery, but it is challenged by the old rule that we should ploddingly obtain data before intervening. The problems of the built environment and health demand a different approach. Although a health and fitness boom has occurred over the past 3 decades, routine physical activity has been engineered out of our daily lives. Many individuals participate in organized sports or traditional fitness programs, but fewer and fewer people are using active approaches in daily routines, and this disturbing trend may explain why as a nation we are becoming increasingly overweight. Our work and leisure time primarily consists of sedentary activities, and fewer people are making decisions that result in active tasks even for simple options such as taking the stairs or walking to nearby destinations. The tendency of most Americans is to seek the most convenient way to do things and this often translates into less physical activity. The result—70 percent of Americans do not achieve the goal of 30 minutes of moderately intense activity on five or more days per week recommended by the CDC.²

Public health professionals must recognize that we cannot improve population health without a new paradigm that includes other disciplines in the quest to create environments that support health.

This special issue is a call to action to researchers and practitioners, exhorting us all to collaborate across disciplines and lead the way to address this national crisis of physical inactivity, obesity, and the myriad problems that are gravely affected by the environments in which American live and work. We must refine research methods, formulate policies, and develop practices that promote healthier and more activity-friendly environments. The articles in this special issue challenge our current thinking and guide us to be the visionaries we need to become to design communities that truly foster healthy living. Through a new transdisciplinary paradigm, we will build a movement fully capable of leaving a legacy of research and practice that translate into healthier places for healthier people.

Acknowledgments

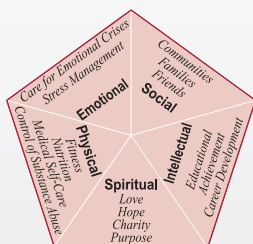
The authors thank the following people for all of the hard work in coordinating the review process for the special issue: Jennifer Johnston and Audrey de Nazelle, graduate students, School of Public Health, University of North Carolina, Chapel Hill, North Carolina; and Phil Bors, Rich Bell, Keezia James, and Sarah Strunk, Active Living by Design, School of Public Health, University of North Carolina, Chapel Hill, North Carolina. We also thank the following scholars who reviewed manuscripts for this special issue: Judd Allen, Human Resources Institute, Inc; Ross Brownson, St. Louis University; Kelly Evenson, University of North Carolina at Chapel Hill; Reid H. Ewing, Rutgers University; Michael C. Farmex, Georgia Institute of Technology; Fred Fridinger, University of North Texas; Susan Handy, University of California at Davis; M. Katherine Kraft, The Robert Wood Johnson Foundation; Emile E. Malizia, University of North Carolina at Chapel Hill; Robert W. Marans, University of Michigan; William E. Reger, West Virginia University; James F. Sallis, San Diego State University; Thomas L. Schmid, Division of Nutrition and Physical Activity, Centers for Disease Control and Prevention; Daniel Stokols, University of California at Irvine; and Charles V. Zenger, University of North Carolina at Chapel Hill.

References

1. Kuhn TS. *The Structure of Scientific Revolutions*. 3rd ed. Chicago, Ill: University of Chicago Press; 1996:90.
2. Macera CA, Pratt M. Public health surveillance of physical activity. *Res Q Exerc Sport*. 2000;71(2 suppl):S97-S103.

Health Promotion

A fusion of the best of science and the best of practice — together, to produce the greatest impact.



DIMENSIONS OF OPTIMAL HEALTH

Definition of Health Promotion

“Health Promotion is the science and art of helping people change their lifestyle to move toward a state of optimal health. Optimal health is defined as a balance of physical, emotional, social, spiritual and intellectual health. Lifestyle change can be facilitated through a combination of efforts to enhance awareness, change behavior and create environments that support good health practices. Of the three, supportive environments will probably have the greatest impact in producing lasting change.”

(O'Donnell, *American Journal of Health Promotion*, 1989, 3(3):5.)

“The *American Journal of Health Promotion* provides a forum for that rare commodity — *practical and intellectual exchange between researchers and practitioners.*”

Kenneth E. Warner, PhD

Avedis Donabedian Distinguished University Professor of Public Health School of Public Health, University of Michigan

“The contents of the *American Journal of Health Promotion* are *timely, relevant*, and most important, *written and reviewed by the most respected researchers in our field.*”

David R. Anderson, PhD

Vice Programs and Technology, StayWell Health Management

Stay on top of the science and art of health promotion with your own subscription to the American Journal of Health Promotion.

Subscribe today...

ANNUAL SUBSCRIPTION RATES: (Good through 12/31/05)

	Individual	Institution
U.S.	\$99.95	\$144.85
Canada and Mexico	\$108.95	\$153.85
Other Countries	\$117.95	\$162.95

CALL 800-783-9913 (U.S. ONLY) or 818-760-8520

OR FIND US ON THE WEB AT

<http://www.HealthPromotionJournal.com>

Editor in Chief

Michael P. O'Donnell, PhD, MBA, MPH

Associate Editors in Chief

Bradley J. Cardinal, PhD

Diane H. Morris, PhD, RD

Judy D. Sheeska, PhD, RD

Mark G. Wilson, HSD

SECTION EDITORS

Interventions

Fitness

Barry A. Franklin, PhD

Medical Self-Care

Donald M. Vickery, MD

Nutrition

Karen Glanz, PhD, MPH

Smoking Control

Michael P. Eriksen, ScD

Weight Control

Kelly D. Brownell, PhD

Stress Management

Cary Cooper, CBE

Mind-Body Health

Kenneth R. Pelletier, PhD, MD (hc)

Social Health

Kenneth R. McLeroy, PhD

Spiritual Health

Larry S. Chapman, MPH

Strategies

Behavior Change

James F. Prochaska, PhD

Culture Change

Daniel Stokols, PhD

Health Policy

Kenneth E. Warner, PhD

Applications

Underserved Populations

Ronald L. Braithwaite, PhD

Health Promoting Community Design

Jo Anne L. Earp, ScD

Research

Data Base

David R. Anderson, PhD

Financial Analysis

Ron Z. Goetzel, PhD

Method, Issues, and Results in Evaluation and Research

Lawrence W. Green, DrPH

Qualitative Research

Marjorie MacDonald, BN, PhD

Measurement Issues

Shawna L. Mercer, MSc, PhD

The Art of Health Promotion

Larry S. Chapman, MPH

