

29 January 2012

Winter Quarter 2012
University of Washington

EnvH 590-C: Public Health and Built Environment

Dept. of Environmental and Occupational Health Sciences, UW School of Public Health

URBDP 598-O: Public Health and Built Environment/Healthy Community Design

Dept. of Urban Design and Planning, UW College of the Built Environments

EnvH 590-C and URBDP 598-O are taught concurrently.

Instructors

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Research Professor, Dept. of Urban Design and Planning, UW College of the Built Environments

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Course collaborator

Barbara Wright, formerly with Seattle-King County Public Health Department

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Class sessions: Thursdays, 5:00pm – 6:50pm, January 5 to March 8, 2011

Location: UW College of the Built Environments, Gould Hall, Room 110

Course Description

This interdisciplinary course focuses on the increasing recognition that the design of communities can impact human health. Community designs that feature parks, sidewalks, trails, public transit, and connectivity among destinations can encourage physical activity, help prevent obesity and its associated health consequences, and reduce dependence on automobiles whose use contributes to air pollution, motor vehicle crashes, and pedestrian injuries. Increased attention to the health implications of the built environment has led to various innovative solutions, such as mixed-use Smart Growth developments, investments in bicycling and pedestrian infrastructure, and the use of health impact assessments to convey health information to community decision-makers.

Course Learning Objectives

At the conclusion of the course, students should be able to:

- Explain how the built environment impacts public health both positively and negatively
- Critique the literature regarding health and built environment including its strengths and weaknesses
- Describe the methods used to assess the built environment and its impact on health
- Describe the options available to promote healthy community design decisions
- Summarize the benefits of and barriers to working in an interdisciplinary environment

Student Evaluation

Class participation 30%

Walkability or park audit 20%

3-5 page paper on research topic 20%

Two minute oral testimony 20%

Written comments on readings 10%

Accommodations

Students with disabilities are welcome to request academic accommodations. To request academic accommodations due to a disability, please contact Disability Resources for Students, 448 Schmitz Hall, 206-543-8924 (V/TTY). If you have a letter from Disability Resources for Students indicating that you have a disability which requires academic accommodations, please present the letter to the instructor (Andrew Dannenberg or Fritz Wagner) so we can discuss the accommodations you might need in class.

Class Schedule and Readings

Textbook: Making Healthy Places: Designing and Building for Health, Well-Being, and Sustainability. Andrew Dannenberg, Howard Frumkin, Richard Jackson. Island Press, 2011. (abbreviated as MHP). Details about the book are available at: www.makinghealthyplaces.org

Other readings are provided on Catalyst Share Space.

January 5: Introduction

MHP Preface Richard Jackson

MHP Chapter 1. Introduction to healthy places

Howard Frumkin, Arthur Wendel, Robin Abrams, Emil Malizia

Peterson J. The impact of sanitary reform upon American urban planning, 1840–1990.

Journal of Social History. 1979;13:83–103.

Malizia EE. City and regional planning: a primer for public health officials. *American Journal of Health Promotion.* 2005;19(5S):1–13.

January 12: Physical activity and food environment

Guest speaker: Brian Saelens, PhD, Associate Professor of Pediatrics, UW

MHP Chapter 2. Community design for physical activity

James Sallis, Rachel Millstein, Jordan Carlson

MHP Chapter 3. Food environments

Carolyn Cannuscio, Karen Glanz

- Pucher J, Dijkstra L. Promoting safe walking and cycling to improve public health: lessons from the Netherlands and Germany. *American Journal of Public Health*. 2003; 93:1509 –1516.
- Teig E, Amulya J, Bardwell L, Buchenau M, Marshall JA, Litt JS. Collective efficacy in Denver, Colorado: Strengthening neighborhoods and health through community gardens. *Health & Place*. 2009; 15(4):1115-1122.

January 19: Air, water, and injuries

- MHP Chapter 4. Community design and air quality
Jonathan Samet
- MHP Chapter 5. Injuries and the built environment
David Sleet, Rebecca Naumann, Rose Anne Rudd
- MHP Chapter 6. Community design for water quantity and quality
Lorraine Backer
- Friedman MS, Powell KE, Hutwagner L, Graham LM, Teague WG. Impact of changes in transportation and commuting behaviors during the 1996 summer Olympic Games in Atlanta on air quality and childhood asthma. *JAMA* 2001;285:897–905.
- Tester JM, Rutherford GW, Wald Z, Rutherford MW. A matched case-control study evaluating the effectiveness of speed humps in reducing child pedestrian injuries. *American Journal of Public Health*. 2004; 94(4), 646-650.

January 26: Mental health, social capital and vulnerable populations
SUMMARIES FOR FIRST FOUR WEEKS OF READINGS DUE

- MHP Chapter 7. Mental health and the built environment
William Sullivan, Chun-Yen Chang
- MHP Chapter 8. Social capital and community design
Caitlin Eicher, Ichiro Kawachi
- MHP Chapter 9. Vulnerable populations and the built environment
Chris Kochtitzky
- Brown, S.C., Mason, C.A., Lombard, J.L., et al. The relationship of built environment to perceived social support and psychological distress in Hispanic elders: The role of “Eyes on the Street.” *Journal of Gerontology: Social Sciences*. 2009; 64B(2), 234–246.
- International City/County Management Association (ICMA). Active living for older adults: management strategies for healthy and livable communities. 2003. E–43140. bookstore.icma.org.

February 2: Land use and transportation

Guest speaker: Mark Hallenbeck, Director, WA State Transportation Center
WALKABILITY OR PARK AUDIT DUE

- MHP Chapter 10. Transportation and land use
Reid Ewing, Gail Meakins, Grace Bjarnson, Holly Hilton
- Talen E, Knaap GJ. Legalizing smart growth: An empirical study of land use regulation in Illinois, *Journal of Planning Education and Research*. 2003; 22: 345-359.
- Dumbaugh E, Rae R. Safe urban form: Revisiting the relationship between community design and traffic safety, *Journal of the American Planning Association*. 2009; 75(3):309-329.
- Besser M, Dannenberg AL. Walking to public transit: steps to help meet physical activity recommendations. *American Journal of Preventive Medicine*. 2005; 29(4):273-280.

Tierney J. The Autonomist Manifesto (Or, How I Learned to Stop Worrying and Love the Road). *New York Times Magazine*. September 26, 2004.

February 9: Healthy homes, workplaces and health care settings

- MHP Chapter 11. Healthy homes
James Krieger, David Jacobs
- MHP Chapter 12. Healthy workplaces
Donna Heidel, L. Casey Chosewood, Matthew Gillen, Paul Schulte, Greg Wagner, Kenneth Wallingford, Liz York
- MHP Chapter 13. Healthy health care settings
Craig Zimring, Jennifer DuBose
- CDC Blood lead levels – United States, 1999-2002. *MMWR Morbidity and Mortality Weekly Report*. 2005; 54(20):513-516.
- Takaro TK, Krieger J, Song L, Sharify D, Beaudet N. The Breathe Easy Home: The impact of asthma-friendly home construction on clinical outcomes and trigger exposure. *American Journal of Public Health*. 2010; 101:55-62.
- Soler RE, Leeks KD, Buchanan LR, et al. Point-of-decision prompts to increase stair use: a systematic review update. *American Journal of Preventive Medicine*. 2010; 38(2S):292-300.

February 16: Healthy schools, nature contact, community resilience

- MHP Chapter 14. Healthy schools
Howard Frumkin, Jared Fox
- MHP Chapter 15. Contact with nature
Howard Frumkin, Jared Fox
- MHP Chapter 16. Resiliency to disasters
Timothy Beatley
- CDC. Barriers to walking and bicycling to school: U.S., 2004. *MMWR Morbidity and Mortality Weekly Report*. 2005; 54:949-952.
- Younger M, Morrow-Almeida HR, Vindigni SM, Dannenberg AL. The built environment, climate change, and health: opportunities for co-benefits. *American Journal of Preventive Medicine*. 2008; 35:517–526.

February 23: Behavior, policy, and community engagement

Guest Speaker: Amber Trout, CBE doctoral student

RESEARCH PROJECT PAPERS DUE

- MHP Chapter 17. Behavioral choices and the built environment
Margaret Schneider
- MHP Chapter 18. Policy and legislation for healthy places
Lisa Feldstein
- MHP Chapter 19. Community engagement in design and planning
Manal Aboelata, Leah Ersoylu, Larry Cohen
- Librett JJ, Yore MM, Schmid TL. Local ordinances that promote physical activity: a survey of municipal policies. *American Journal of Public Health* 2003; 93:1399–1403.
- Dowda M, Brown WH, McIver KL, Pfeiffer KA, O’Neil JR, Addy CL, Pate R. Policies and characteristics of the preschool environment and physical activity of young children. *Pediatrics*. 2009; 123:e261-266.

March 1: Healthy places tools and the future

Guest Speaker: Barbara Wright, formerly Public Health Seattle & King County
SUMMARIES FOR REST OF READINGS DUE

MHP Chapter 20. Measuring, assessing, and certifying healthy places

Andrew Dannenberg, Arthur Wendel

MHP Chapter 24. Built environments of the future

Tony Capon, Susan Thompson

Dannenberg AL, Bhatia R, Cole BL, Heaton SK, Feldman JD, Rutt CD. Use of health impact assessment in the U.S.: 27 case studies, 1999–2007. *American Journal of Preventive Medicine*. 2008;34:241–256.

Forsyth A, Slotterback CS, Krizek KJ. Health impact assessment in planning: Development of the design for health HIA tools. *Environmental Impact Assessment Review*. 2010; 30: 42–51.

Garde A. Sustainable by Design?: Insights From U.S. LEED-ND Pilot Projects. *Journal of the American Planning Association*. 2009; 75: 4, 424-440.

Dannenberg AL, Cramer TW, Gibson CJ. Assessing the walkability of the workplace: a new audit tool. *American Journal of Health Promotion*. 2005; 20(1):39-44.

March 8: Student presentations: Two minute testimony

Optional course readings

MHP Chapter 21. Training the next generation to promote healthy places

Nisha Botchwey, Matthew Trowbridge

MHP Chapter 22. Healthy places research: emerging opportunities

Richard Jackson, Arthur Wendel, Andrew Dannenberg

MHP Chapter 23. Urban health in low- and middle- income countries

Jenna Johnson, Sandro Galea

MHP Glossary

Class activities/requirements

Readings: For each assigned reading, write one paragraph (typically ¼ to ½ page long) responding to the following question. “Considering your own background and interests, and considering the focus of the class on health and built environment issues, what information in the reading was new to you, and how might the information in the reading be useful to you in your future work?” Also, on a scale of 1 (definitely delete) to 10 (definitely keep), should this reading be used in this class in the future?

Deliverable: Set of paragraphs about the readings accumulated into one file.

DUE January 26 (first 4 weeks of readings) and **March 1** (last 5 weeks of readings)

Walkability audit OR Park audit - Choice of field activity. DUE DATE February 2

- A. Review the walkability audit tool available on-line at <http://www.cdc.gov/nccdphp/dnpao/hwi/toolkits/walkability/> and described in Dannenberg AL, et al. Assessing the walkability of the workplace: a new audit tool. *Amer J Health Promotion*. 20(1):39-44, 2005. Then work in pairs with a classmate from another college or school (such as CBE and SPH) to conduct a walkability audit of at least 10 adjacent segments of a university or corporate campus setting. If you

use the UW campus or other large setting, you may select a section of the overall campus.

- a. Deliverables:
 - i. Map of campus and audit tool with scores on each audited segment.
 - ii. Up to 10 digital photographs highlighting important features – please use low resolution photos so report can be emailed
 - iii. Recommendations for how that section of campus could be improved for walkability.
- B. Review park audit tool provided on Catalyst Share Space. Then work in pairs with a classmate from another college or school (such as CBE and SPH) to conduct an audit of one local park.
 - a. Deliverables:
 - i. Map of park with key features noted.
 - ii. Completed audit tool for that park, including recommendations for how that park could be improved.
 - iii. Up to 10 digital photographs highlighting important features – please use low resolution photos so report can be emailed.

Research project: Review *MHP Chapter 22. Healthy places research: emerging opportunities*. Select a topic of interest from this chapter and write a 3-5 page paper first describing briefly why the topic is important, and then describing in more detail how you would design a research project to add to our knowledge about this topic. Include proposed study design, types of skills research team would need, characteristics of a study population (and of comparison group if needed), data sources, methods such as surveys, ethics concerns if any, etc. The paper should also discuss what types of results might be found in such a study and the possible implications of such results.

Deliverable: 3-5 page paper. **DUE DATE February 23**

Two minute testimony: Pick a current topic related to a proposed change in the built environment (locally or elsewhere) that has health implications. Instructors will provide some possible projects. Prepare a two minute oral testimony that might be delivered to a city council, zoning board, legislature, or other decision making group conveying the health concerns about the project and how it might be improved to promote health or mitigate adverse health impacts.

Deliverable: 2 minute (timed) oral presentation in **March 8** class.