

4 January 2017

Winter Quarter 2017
University of Washington

EnvH 538: Public Health and Built Environment

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

UrbDP 538: Public Health and Built Environment / Healthy Community Design

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

EnvH 538 and UrbDP 538 are taught concurrently.

Instructors

Andrew L. Dannenberg, MD, MPH

Affiliate Professor, Dept. of Environmental and Occupational Health Sciences, UW School of Public Health, and Dept. of Urban Design and Planning, UW College of Built Environments
Former Team Lead, Healthy Community Design Initiative, National Center for Environmental Health, Centers for Disease Control and Prevention

Email adannen@uw.edu

Phone 404-272-3978 (cell)

Fritz Wagner, PhD, FAICP

Dean Emeritus, University of New Orleans College of Urban and Public Affairs
Research Professor Emeritus, Dept. of Urban Design and Planning, UW College of Built Environments

Managing Director, Northwest Center for Livable Communities

Email fwagner@uw.edu

Phone 206-543-7459 (Gould Hall office)

Class sessions: Thursdays, 5:00pm – 6:50pm, January 5 to March 9, 2017

Location: UW College of Built Environments, Gould Hall, Room 440

Course Description

This interdisciplinary course focuses on the increasing recognition that the design of communities can impact human health, especially among vulnerable populations. 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 15%
- Street and park audit 20%
- 3-5 page paper on research topic 20%
- Two minute oral testimony 15%
- Written reflections on readings 30%

Access and Accommodations

Your experience in this class is important to us, and it is the policy and practice of the University of Washington (UW) to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with Disability Resources for Students (DRS) to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructors so we can discuss your needs in this course. DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructors, and DRS. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can include but not limited to: mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or disability.uw.edu

Academic Integrity

Students at UW are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. UW is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the UW Student Conduct Code (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Any suspected cases of academic misconduct will be handled according to UW regulations. For more information, see the [UW Community Standards and Student Conduct website](#).

Class Schedule and Readings

Required 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 **Canvas Share Space** (<https://canvas.uw.edu/>).

January 5: Introduction to public health and the built environment

- MHP Preface. Richard Jackson
- MHP Chapter 1. Introduction to healthy places. Howard Frumkin, Arthur Wendel, Robin Abrams, Emil Malizia
- Corburn J. Reconnecting with our roots: American urban planning and public health in the twenty-first century. *Urban Affairs Review*. 2007; 42(5):688-713.
- 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, injuries

Guest speakers: Jason A. Mendoza, MD, MPH, Associate Professor, Pediatrics, University of Washington, Seattle Children's Hospital, 5:00-6:00pm

Dan Burden, Director of Innovation & Inspiration, Blue Zones, LLC;
dan.burden@bluezones.com, 6:00-6:50pm

- MHP Chapter 2. Community design for physical activity. James Sallis, Rachel Millstein, Jordan Carlson
- MHP Chapter 5. Injuries and the built environment. David Sleet, Rebecca Naumann, Rose Anne Rudd
- Blanck HM, Allen D, Bashir Z, Gordon N, Goodman A, Merriam D, Rutt C. Let's go to the park today: the role of parks in obesity prevention and improving the public's health. *Childhood Obesity*. 2012; 8(5):423-428.
- 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.
- McDonald NC, Yang Y, Abbott SM, Bullock AN. Impact of the Safe Routes to School program on walking and biking: Eugene, Oregon study. *Transport Policy*. 2013; 29:243–248.

Optional activity: The Built Environment Assessment Training Institute (BEAT) offers two free online training courses related to the built environment: (a) Assessing the Built Environment for Physical Activity, and (b) Assessing the Nutrition Environment. Total time: approximately 4 hours. <http://www.med.upenn.edu/beat/onlinetraining.shtml>

January 19: Healthy homes, vulnerable populations

Guest speaker: Nicole Thomsen, REHS, Environmental Public Health Planner, Public Health – Seattle & King County, Nicole.Thomsen@kingcounty.gov; 5:00-6:00 pm

- MHP Chapter 9. Vulnerable populations and the built environment. Chris Kochtitzky
- MHP Chapter 11. Healthy homes. James Krieger, David Jacobs
- Aboelata M. Evergreen Cemetery Jogging Path, Boyle Heights CA. From *Built Environment and Health: 11 Profiles of Neighborhood Transformation*. Prevention Institute, Oakland CA, 2004. **[Note:** Read 1 profile on Evergreen Jogging Path, not all 11 profiles]. <http://www.preventioninstitute.org/component/library/article/id-114/127.html?tmpl=component&print=1>
- International City/County Management Association (ICMA). Active living for older adults: management strategies for healthy and livable communities. 2003. http://www.ca-ilg.org/sites/main/files/file-attachments/resources_Active_Living.pdf
- ChangeLab Solutions. Preserving, protecting, and expanding affordable housing. Executive Summary. 2015. http://www.changelabsolutions.org/sites/default/files/Preserving_Affordable_Housing-EXECUTIVE_SUMMARY_FINAL_20150401_0.pdf

January 26: Healthy food access, air quality, water quality

Guest speaker: Jesse Jones-Smith, PhD, MPH, RD, Associate Professor, Dept. of Health Services & Nutrition Sciences Program, UW School of Public Health, jjones@uw.edu

READING REFLECTIONS FOR WEEKS 1 TO 4 DUE by 5:00pm

- MHP Chapter 3. Food environments. Carolyn Cannuscio, Karen Glanz
- MHP Chapter 4. Community design and air quality. Jonathan Samet

- MHP Chapter 6. Community design for water quantity and quality. Lorraine Backer
- Elbel B, Moran A, Dixon LB, Kiszko K, Cantor J, Abrams C, Mijanovich T. Assessment of a government-subsidized supermarket in a high-need area on household food availability and children's dietary intakes. *Public Health Nutrition*. 2015; 18(15): 2881–2890.
- 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.

February 2: Mental health, social capital, healthy workplaces, behavioral choices
STREET AND PARK AUDIT DUE by 5:00pm

Guest speaker: Judith Heerwagen, PhD, Environmental psychologist, Office of Federal High Performance Green Buildings, US General Services Administration; Judith.heerwagen@gsa.gov; 5:00-6:00 pm

- 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 12. Healthy workplaces. Donna Heidel, L. Casey Chosewood, Matthew Gillen, Paul Schulte, Greg Wagner, Kenneth Wallingford, Liz York
- MHP Chapter 17. Behavioral choices and the built environment. Margaret Schneider
- Leyden KM. Social capital and the built environment: the importance of walkable neighborhoods. *American Journal of Public Health*. 2003; 93(9):1546-1551.

February 9: Land use and transportation, healthy places research

Guest speaker: Mark Hallenbeck, MS, Director, Washington State Transportation Center; tracmark@uw.edu

- MHP Chapter 10. Transportation and land use. Reid Ewing, Gail Meakins, Grace Bjarnson, Holly Hilton
- MHP Chapter 22. Healthy places research: emerging opportunities. Richard Jackson, Arthur Wendel, Andrew Dannenberg
- 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.
- Rissel C, Curac N, Greenaway M, Bauman A. Physical activity associated with public transport use—a review and modelling of potential benefits. *International Journal of Environmental Research and Public Health*. 2012 ; 9(7), 2454-2478.
- Gotschi T. Costs and benefits of bicycling investments in Portland, Oregon. *Journal of Physical Activity and Health*. 2011; 8 Suppl 1:S49-S58

February 16: Healthy health care settings, schools, nature contact, climate change
RESEARCH PROJECT PAPERS DUE by 5:00pm

Guest speaker: Heather Burpee, Research Assistant Professor, UW Department of Architecture; Integrated Design Lab; burpeeh@uw.edu

Observational exercise in and around Gould Hall to be done in class

- MHP Chapter 13. Healthy health care settings. Craig Zimring, Jennifer DuBose
- MHP Chapter 14. Healthy schools. Howard Frumkin, Jared Fox
- MHP Chapter 15. Contact with nature. Howard Frumkin, Jared Fox
- 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-e266.

- 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: Policy interventions, community engagement

- 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
- Rossen LM, Pollack KM. Making the connection between zoning and health disparities. *Environmental Justice*. 2012; 5(3):119-127.
- Salvesen D, Evenson KR, Rodriguez DA, Brown A. Factors influencing implementation of local policies to promote physical activity: a case study of Montgomery County, Maryland. *Journal of Public Health Management and Practice*. 2008; 14(3):280-288.

March 2: Community resilience, healthy places tools

Student presentations in class: Two minute testimony

- MHP Chapter 16. Resiliency to disasters. Timothy Beatley
- MHP Chapter 20. Measuring, assessing, and certifying healthy places. Andrew Dannenberg, Arthur Wendel
- Ross CL, Leone de Nie K, Dannenberg AL, Beck LF, Marcus MJ, Barringer J. Health impact assessment of the Atlanta BeltLine. *American Journal of Preventive Medicine*. 2012; 42(3):203-213.
- Garde A. Sustainable by Design?: Insights From U.S. LEED-ND Pilot Projects. *Journal of the American Planning Association*. 2009; 75: 4, 424-440.

March 9: Built environments in developing countries, future built environments

Guest speakers: Local health department panel on healthy community design

Keri Moore, MPH, Healthy Communities Specialist, Snohomish Health District,
kmoore@snohd.org

Amy Shumann, MSW, Environmental Public Health Planner, Healthy Community Planning, Public Health - Seattle & King County, Amy.Shumann@kingcounty.gov

READING REFLECTIONS FOR WEEKS 5 TO 10 DUE by 5:00pm

- MHP Chapter 23. Urban health in low- and middle- income countries. Jenna Johnson, Sandro Galea
- MHP Chapter 24. Built environments of the future. Tony Capon, Susan Thompson
- Jackson RJ, Dannenberg AL, Frumkin H. Health and the built environment: 10 years after. (Commentary). *American Journal of Public Health*. 2013; 103:1542-1544.
- Kent J, Thompson S. Health and the built environment: exploring foundations for a new interdisciplinary profession. *Journal of Environmental and Public Health*. 2012. <http://www.hindawi.com/journals/jep/2012/958175/>

Optional course readings

- MHP Chapter 21. Training the next generation to promote healthy places. Nisha Botchwey, Matthew Trowbridge (includes discussion of job opportunities in field)
- MHP Glossary
- Urban Land Institute. *Building Healthy Places Toolkit: Strategies for Enhancing Health in the Built Environment*. Washington, DC: Urban Land Institute, 2015. 95 pages. <http://uli.org/wp-content/uploads/ULI-Documents/Building-Healthy-Places-Toolkit.pdf>

Class activities/requirements

Reading Reflections: DUE DATES: January 26 and March 9

For each assigned reading, write one paragraph (typically ¼ to ½ page long, single spaced) responding to the following questions. “Considering the focus of the class on health and built environment issues,

- What information in the reading was new to you,
- How does the information in the reading relate to your background and interests,
- How might the information in the reading be useful to you in your future work?”
- Should the reading be used in this course next year, using scale of 1 (definitely delete) to 10 (definitely keep)?

Deliverables: Set of reading reflections accumulated into a file (Part 1 and Part 2) uploaded to Canvas.

DUE January 26: Reflections Part 1 covering weeks 1 to 4 of readings

DUE March 9: Reflections Part 2 covering weeks 5 to 10 of readings

Field exercise: Street and park audit DUE DATE: February 2

1. Review combined street and park audit tool posted on Canvas.
2. Work in pairs with a classmate from another college or school (such as CBE and SPH) to conduct an audit of one local park and an adjacent street that leads to the park.
3. Deliverables to be uploaded to Canvas, clearly labeled to indicate who worked in your group:
 - a) Map of park and adjacent street with key features noted.
 - b) Completed audit tool for that park and street, including recommendations for how that park and street could be improved.
 - c) Up to 10 digital photographs highlighting important features – please use low resolution photos so report can be emailed. Include brief captions with each photograph.

Research project paper: DUE DATE: February 16

1. Review research methods and topics listed in *Making Healthy Places Chapter 22. Healthy places research: emerging opportunities.*
2. Select a topic of interest from this chapter and write a 3-5 page single-spaced 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. Paper should 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, informant interviews, use of existing datasets
 - Types of analyses
 - Ethics concerns (if any)
 - Types of results that might be found in such a study
 - Possible implications of such results.

Deliverable: 3-5 page single spaced paper uploaded to Canvas.

Two minute testimony: DUE DATE: March 2

1. Pick a current topic related to a proposed change in the built environment (locally or elsewhere) that has health implications.
2. Prepare a two minute oral testimony that might be delivered to a city council, legislature, zoning board, 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: Upload topic of testimony to Canvas (one sentence or less), and give a 2 minute (timed) oral presentation **during March 2 class**. You do not need to submit a written version of what you present to the class.

The topic you pick may be a real or fictional, and may be Seattle-based or from your hometown or elsewhere. You may find a topic in the local newspaper. The proposed project may be favorable to health that you want to support, or could be bad for health that you want to discourage. Your task is to convey to the decision-makers in 2 minutes the impact of the proposal on health and urge them to consider health as part of their decision. Feel free to be creative on your topic. Some examples of possible topics –

- A bill to close three nearby community schools and build one large new school on cheap land farther from the students it serves
- A bond issue to provide more funding for new parks and for maintaining existing parks
- A bill to build a new sports stadium and demolish homes of 1000 low income persons
- A bill requiring 10% of city transportation funds be used to improve bike and pedestrian infrastructure in the city
- A zoning proposal to require that houses be built on large lots and to forbid mixed use developments
- A bill to set aside land for more community gardens (P patches) in the city
- A proposal to allow apodments (tiny apartments) to be built in Capitol Hill

The format of your 2 minute testimony should be as follows:

- First introduce yourself: “I am [your real name] representing XYZ organization (real or fictional) or speaking as a public health professional or as a concerned citizen”
- The location today is Seattle City Council or wherever.
- The topic today is the proposed bill to do (one sentence maximum)
- Then provide succinctly how the proposed bill affects health and the built environment and how you are urging the decision-maker to vote or to improve the proposal.