

Urban Sprawl and Public Health

Rollins School of Public Health of Emory University Georgia Institute of Technology

Overview

This course, offered simultaneously to students at Emory and Georgia Tech, introduces students to the concept of urban sprawl as a public health issue. It begins by defining sprawl, introducing key concepts of urban and regional planning and presenting data on recent demographic trends. It then introduces the major public health impacts of sprawl: air quality, urban heat island effects, exercise and physical activity patterns, pedestrian and motor vehicle injuries, water quantity and quality, mental health consequences, and civic life. For each public health issue, students will review the public health methodologies (such as epidemiologic surveillance) that yield data, assess the available data on public health impacts of sprawl, and analyze the public policy implications. The course will end with a survey of policy initiatives that address sprawl, such as regional transportation plans, new urbanism and other architectural, land use, and planning strategies, and energy policy, evaluating the public health implications of these initiatives. Throughout the course there will be a focus on Atlanta as a case study.

Goals

Following this course students will be able to:

1. Define urban sprawl and discuss its principal defining features, including demographic data, planning, zoning, and development practices, and historical trends since World War II.
2. Identify the major public health implications of urban sprawl.
3. Identify the kinds of public health data used to evaluate public health implications of sprawl, and the limitations of each data source.
4. Identify current public policy trends that address sprawl, and describe the expected public health implications of each.

Faculty

Howard Frumkin, M.D., Dr.P.H.
Professor and Chair
Department of Environmental and Occupational Health
Rollins School of Public Health of Emory University

Lawrence Frank, Ph.D.
Associate Professor
School of Architecture
Georgia Institute of Technology

Class Format

The class will be conducted as a seminar, meeting once weekly for a two-hour session. Students will complete a reading assignment prior to each class and will be expected to be prepared to discuss it. There will be quizzes at the four-week and the eight-week points, and a final paper will be assigned for completion at the end of the semester.

Evaluation

Student evaluations will be based on performance on two quizzes (one third), a final paper (one third), and class participation (one third).

Detailed Class Syllabus

| Class Session | Topic | Readings | Instructor |
|---------------|--|---|----------------|
| 1 | Course introduction The city in history Introduction to sprawl | Selections from Jackson, <i>Crabgrass Frontier</i> | Frank, Frumkin |
| 2 | Introduction to sprawl (continued): history, demographic data, transportation, design, and zoning issues | Selections from Barfield, Raimi, and Chen, <i>Once There Were Greenfields: How Urban Sprawl is Undermining America's Environment, Economy and Social Fabric</i> and Garreau, <i>Edge City</i> . Reid Ewing, <i>Characteristics, Causes and Effects of Sprawl: A Literature Review</i> . <i>Environmental and Urban Issues</i> | Frank, Frumkin |
| 3 | Introduction to public health: paradigm, epidemiologic data, prevention, agencies | Lecture notes | Frumkin |
| 4 | Quiz # 1 | | |
| | Guest speaker: Atlanta sprawl trends (Research Atlanta or ARC) | | |
| 5 | Sprawl, air pollution and health | Lecture notes | Redd |
| 6 | The urban heat island, sprawl, and health | Lecture notes | Quatrocchi |

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| 7 | Sprawl, physical activity, and public health | <i>How Land Use and Transportation Systems Impact Public Health: A Literature Review of the Relationships between Physical Activity and Built Form.</i> ACEs Working Paper #1. Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion, CDC. 2000. | Dietz |
| 8 | Sprawl and traffic and pedestrian injuries | Surface Transportation Policy Project. <i>Mean Streets: Pedestrian Safety and Reform of the Nation's Transportation Law</i> | Schieber |
| 9 | Quiz #2 | | |
| | Sprawl and mental health | Selections from <i>Commuting Stress</i> , and Frumkin, <i>Beyond Toxicity: The Health Benefits of Nature Contact</i> , <i>Am J Prev Med</i> 2001. | Frumkin |
| 10 | Sprawl, civic life, and mental health | Atlanta Social Capital report, Atlanta Community Foundation, 2001. | |
| 11 | Guest speaker: Atlanta's response to sprawl. | | Katherine Ross |
| | Guest speaker: Environmental justice and sprawl | Selections from <i>Sprawl City</i> . | Robert Bullard |
| 12 | Trends in regional planning policy | Selections from <i>The New Urbanism : Toward an Architecture of Community</i> and <i>A Better Place to Live: Reshaping the American Suburb</i> and <i>How Smart Growth Can Stop Sprawl</i> | |
| 13 | Trends in transportation planning | | Frank |
| 14 | Presentation of student papers | | Frumkin, Frank |
| 15 | Presentation of student papers | | Frumkin, Frank |