SOC390 / HLTH380 Special Topic: *Analyzing Health Disparities in Chicago*
Spring 2015

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Office hours: Thursday 12:00 – 2:00, or by appointment

Class: Tuesday and Thursday, 2:40 – 4:10, SAC240
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Overview
Chicago experiences some of the most profound health disparities in the United States. These disparities are deeply entrenched in our city – for example, the first map of excess child mortality in south-side communities was published in 1901. Yet health disparities are also dynamic – they change over time. Understanding the social patterning of poor health in the city is critically important; we need data analyses that document the nature of health disparities if public policies are to be geared towards reducing differences that are *avoidable, unnecessary, and unfair*. This course is designed around the development of two analytical projects. Both are expected to engage with substantive ideas from public health / medical sociology, and will utilize data from Chicago. The first project explores community-level characteristics, with data from the Chicago Department of Public Health. The second project uses individual-level survey data from the 2012 Rush Community Health Needs Assessment survey. Data analysis will be conducted with Stata.

Evaluation
The course is designed around two projects:

Project 1
Proposal (3 pages) – 10%
Poster (presentation at the *Sharing Social Knowledge* conference) – 10%
Final paper (10 pages) – 25%

Project 2
Proposal (3 pages) – 10%
Poster (presentation at Rush, details to be announced) – 10%

Final paper (10 pages) – 25%

Attendance & participation – 10%

Required Readings
Whitman, S., Shah, A., & Benjamins, M. (Eds.). (2010). *Urban Health: Combating Disparities with Local Data*. New York: Oxford University Press. (referred to as "SUHI" in the weekly scheedule below)

Additional sources will be required. These will be available through the DePaul library and our website. See the bibliographical information in the 'required readings' section of the weekly summaries.

Guests
We have a good number of guests scheduled to visit us in class – from the Chicago Department of Public Health, Sinai Urban Health Institute, Rush University Medical Center, as well as DePaul. My idea is that the guest faculty are not coming to give a lecture, but to join our discussion about health disparities in Chicago.

We will coordinate this with plenty of time – all students will be expected to share preliminary results, project ideas, or questions with our guest faculty. (A wonderful opportunity to develop your work and get different perspectives on your ideas!). This quarter we will welcome:

Raj Shah, MD (co-director, DePaul-Rush Center for Community Health
Nik Prachand, MPH (Director of Epidemiology, Chicago Department of Public Health).
Kristi Allgood, MPH (Senior Epidemiologist, Sinai Urban Health Institute)
Beth Lynch, PhD (Associate Professor, Department of Preventive Medicine, Rush University)
Roberta Garner, PhD (Professor, Department of Sociology)
Michele Shade-McCay, DrPH (Visiting Assistant Professor, Department of Health Sciences)

Weekly Readings and Schedule

Week 1	Introduction
March 31 / April 2	

We begin with discussion of the general problem – what do we know about health disparities in Chicago? Why is this subject important? What can public health contribute, what is the role of sociology and the social sciences?

Videos: In class: *Opening Remarks* from Linda Rae Murray at the 2011 *American Public Health Association* conference. For homework: *I Can't Breathe: Racism and Public Health in Chicago,* the keynote lecture by David Ansell at the 2015 *Health Disparities and Social Justice* conference.

Required Readings (for Thursday)
Hunt, B. R., Tran, G., & Whitman, S. (in press). Life expectancy varies in local communities in Chicago: racial and spatial disparities and correlates. *Journal of Racial and Ethnic Health Disparities*.
Hunt, B. R., & Whitman, S. (2015). Black:White health disparities in the United States and Chicago: 1990-2010. *Journal of Racial and Ethnic Health Disparities, 2*(1), 93-100.

Optional Readings
A good chance to review some texts on health disparities:

Barr, D. A. (2014). *Health Disparities in the United States: Social Class, Race, Ethnicity, and Health* (2nd ed.). Baltimore: Johns Hopkins University Press.
Bartley, M. (2004). *Health Inequality: An Introduction to Theories, Concepts and Methods*. Cambridge: Polity.
Budrys, G. (2010). *Unequal Health* (2nd ed.). Lanhman: Rowman & Littlefield.
De Maio, F. G. (2010). *Health and Social Theory*. Basingstoke: Palgrave Macmillan. (see chapter 4)

Week 2	Community-level data
April 7 / 9	

This week we begin our work in the lab by exploring our community-level dataset, with health and socioeconomic indicators from the Chicago Department of Public Health. One of our key objectives in the first few weeks of the course is to build up our capabilities with stata – learning how to write .do files, manage datasets, and explore the data. Counter-balancing our work with stata, over the coming weeks we will also discuss the great work of the Sinai Urban Health Institute.

Project timeline: start working on project 1 – establish teams, explore data.

Required Readings
SUHI, chapters 1-2

RUMC (2013). *Community Health Needs Assessment Report*. Chicago: Rush University Medical
Center. (available on d2l)

Optional Readings
Lots of great stata resources here: https://www.youtube.com/user/statacorp

Week 3	**Descriptive statistics**
April 14 / 16	

After developing some familiarity with stata and the CDPH community-level dataset, let's work
on descriptive statistics – central tendency and dispersion – and confidence intervals.

Project timeline: proposal for project 1 is due this Friday (5:00).

Required Readings
SUHI, chapters 3-6

Optional Readings
Review one or more introduction to statistics texts:

Garner, R. (2010). *The Joy of Stats*. North York, ON: University of Toronto Press.
Levin, J. (2011). *Elementary Statistics in Social Research: The Essentials*. Boston: Allyn & Bacon.
(see me for other suggestions of basic stats books)

As well – plenty of great resources here: http://www.ats.ucla.edu/stat/stata/ (both for review
and to support the material coming up in the course)

Week 4	**Bivariate Analysis**
April 21 / 23	

Our emphasis this week is on testing simple hypotheses – using chi-square tests for categorical
data and Pearson's *r* for scatterplots.

Project timeline: preliminary data analysis for project 1.

Guests: April 21 - Raj Shah, MD (co-director, DePaul-Rush Center for Community Health
Equity). April 23 - Nik Prachand, MPH (Director of Epidemiology, Chicago Department of Public
Health).

Required Readings
SUHI, chapters 7-9

Optional Readings
De Maio, FG, Linetzky, B., Ferrante, D. (2012). Extending the income inequality hypothesis:
ecological results from the 2005 and 2009 Argentine National Risk Factor surveys.
Global Public Health, 7(6): 635 – 647.

Wilkinson, R. G., & Pickett, K. (2009). *The Spirit Level: Why More Equal Societies Almost Always Do Better*. London: Allen Lane.

Week 5	**Regression I: basics of Ordinary Least Squares**
April 28 / 30	

Ordinary least squares (OLS) regression is the cornerstone of our work. This week we will set up 'simple' and 'complex' models – from models that use only 1 independent variable to models that use many independent variables to 'adjust' coefficients and deal with the potential problem of *spuriousness*.

Project timeline: final paper for project 1 is due on Friday (5:00)

Required Readings
Ross, N. A., Wolfson, M. C., Dunn, J. R., Berthelot, J. M., Kaplan, G. A., & Lynch, J. W. (2000). Relation between income inequality and mortality in Canada and in the United States: cross sectional assessment using census data and vital statistics. *British Medical Journal, 320*(7239), 898-902
SUHI, chapters 10-12

Optional Readings
Tarling, R. (2009). *Statistical Modelling for Social Researchers.* London: Routledge (chapter 4; pages 41-52)

Week 6	**Regression II: developing OLS models**
May 5 / 7	

This week, we extend the OLS regression model to account for interactions between independent variables. This is an important step, for often the effect of an independent variable on the outcome variable *depends* on a third variable. We will also introduce our second dataset, the 2012 Rush Community Health Needs Assessment survey.

Guest: May 7 – Kristi Allgood, MPH (Senior Epidemiologist, Sinai Urban Health Institute).

Project timeline: start working on project 2 – establish teams, explore data.

Required readings
SUHI, chapters 13 & 14

Optional Readings
Moore, S. (2006). Peripherality, income inequality, and life expectancy: revisiting the income inequality hypothesis. *International Journal of Epidemiology, 35*(3), 623-632.

Week 7	Regression III: basics of logistic regression
May 12 / 14	

OLS regression requires an interval-level outcome. But usually, social researchers work with *categorical* data. This week, we'll examine a modeling strategy for outcomes that are coded 0 or 1 (binary data), the *logistic regression model*. Our work will focus on setting up and interpreting results, with a focus on the odds ratio and 95% confidence interval.

Guest: May 14 - Beth Lynch, PhD (Associate Professor, Department of Preventive Medicine, Rush University).

Project timeline: proposal for project 2 is due this Friday (5:00).

Required Readings

Benjamins, M. R., & Whitman, S. (2014). Relationships between discrimination in health care and health care outcomes among four race/ethnic groups. *Journal of Behavioral Medicine, 37*(3), 402-413.

Optional Readings

De Maio, F. G., & Kemp, E. (2010). The deterioration of health status among immigrants to Canada. *Global Public Health, 5*(5), 462-478.

MacIntosh, T., et al. (2013). Socially-assigned race, healthcare discrimination and preventive heatlh services. *PLOS One, 8*(5): e64522

Week 8	Regression IV: developing logistic models
May 19 / 21	

In our second week on logistic regression, we'll continue to develop our models. From the basics of ORs and 95%CIs, we'll move on to using the regression results to *predict probabilities* – allowing us to predict, based on theoretically derived characteristics – the 'best off', the 'worst off', and the gap between them.

Project timeline: your opportunity to present your findings from project 1 at the *Sharing Social Knowledge* conference; also time to work on project 2

Guest: On May 21, we will welcome Roberta Garner, PhD (Professor, Department of Sociology) to discuss your work and social research in general.

Required Readings
None

Optional Readings
 De Maio, F. G., Linetzky, B., & Virgolini, M. (2009). An average / deprivation / inequality (ADI) analysis of chronic disease outcomes and risk factors in Argentina. *Population Health Metrics, 7*(8).

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Week 9	Refining our projects
May 26 / 28	

The last two weeks of the course will be dedicated to refining your second projects – discussing preliminary findings, setting up and interpreting regression models, exploring the literature, and sharing our findings with fellow students and faculty.

Guest: On May 26, we will welcome Michele Shade-McCay, DrPH (Visiting Assistant Professor, Department of Health Sciences).

Week 10	Final presentation and discussion
June 2 / 4	

Details of end-of-quarter presentation at Rush University Medical Center to be discussed in class.

Evaluation Details

All written assignments should be submitted in .docx or .doc format through our website. Deadlines are indicated below. *All written work* should be double-spaced, with standard margins, and Calibri 12 font. Each assignment also needs to include a title that is reflective of the content of your paper, page numbers, and a bibliography formatted in the ASA or APA style.

This course is designed around the development of two analytical projects. Both are expected to engage with substantive ideas from public health / medical sociology, and will utilize data from Chicago. The first project explores community-level characteristics, with data from the Chicago Department of Public Health. The second project uses individual-level survey data from the 2012 Rush Community Health Needs Assessment survey.

Each project consists of:

Proposal – a 3 page overview of what your project is going to investigate. The proposal should include (1) introduction, (2) literature review, and (3) proposed analysis. The introduction sets the scene for the project and briefly explains the importance of the analysis. The literature review examines what is already known about this topic, drawing on previous studies in Chicago, or if none are available, from work in other cities. The proposed analysis describes what variables you will use, as well as your ideas for data analysis.

Poster – both projects will feature a poster presentation. A great method for sharing your findings with fellow students and faculty. Details on the poster presentations will be discussed in class.

Final paper – a 10 page paper following the structure of a traditional journal article: (1) Introduction, (2) Methods, (3) Results, and (4) Discussion. Details to be discussed in class.

<u>The projects will be written in teams of 2 – with students working with different partners on project 1 and 2.</u>

Participation and Attendance
To get full marks, you will need to be an active member of the class – primarily, that means coming to class prepared to engage in discussion around the readings and issues raised in them. Your mark will also reflect the extent to which you listen to other students as they raise questions, as well as your attendance and punctuality.

Grading Policy and Other Notes

- Grading for this course is based on the following system:

A	90-100	B+	80-84	C+	65-69	D	50-54
A-	85-89	B	75-79	C	60-64	F	<50
		B-	70-74	C-	55-59		

- If you disagree with the mark given to you for a piece of coursework, see me during office hours.

- The late penalty is 10% per day. Extensions may be granted for valid medical circumstances, provided a medical note is provided within a reasonable period of time, and that note explains why the assignment could not be completed on time. Extensions for the observance of religious holidays must be sought by the end of week 2.

- Only coursework submitted via the course website will be accepted; please do not leave papers under my office door, and do not send them to me via email or fax (these will not be accepted).

- I have no tolerance for plagiarism and academic dishonesty. See DePaul's policy on academic integrity at http://academicintegrity.depaul.edu/.   I reserve the right to check for plagiarism using software provided by the university for this purpose.

- I value student participation and class dialogue. Your attendance and active engagement in the class is very important. As such, I expect that you will come to every class prepared to discuss the assigned readings. I also expect that if you use a laptop to take notes, your focus will be exclusively on the discussion at hand, and not on your email or other things. Chronic tardiness, early departures, and use of cell phones / texting will result in a lowering of your attendance and participation grade to 0.

- DePaul offers a fantastic service through the Writing Center: http://condor.depaul.edu/writing/ Take a look at the resources for writers – very helpful!