Overview and Objectives:
The objective of this course is to provide health professional trainees with knowledge and skills to understand and apply the basic principles of healthcare disparities research. Students will be introduced to a variety of healthcare disparities that have been identified in the literature. They will learn about a 3-phase conceptual framework for advancing disparities research that involves detecting (Phase 1), understanding (Phase 2), and reducing/eliminating (Phase 3) disparities. They will become familiar with methodological and conceptual issues that pertain to research designed to detect healthcare disparities, understand multi-level factors that contribute to disparities, and reduce or eliminate healthcare disparities. Students will use their knowledge and skills from the course to develop and present a research proposal focused on a healthcare disparities topic of their choice.

The course will consist of didactic lectures, interactive discussions, and homework assignments to establish basic knowledge of research on disparities in health care. It will also include guest presentations by faculty with experience conducting research focused on disparities in health care. These guest presentations will provide students with concrete examples of research focusing on a broad range of healthcare disparities. The course will meet twice a week for eight weeks.

- To become familiar with existing disparities in health care.
- To develop an understanding of existing frameworks of disparities research, with an emphasis on a 3-phase conceptual model.
- To gain appreciation of measurement and conceptual challenges related to the detection of healthcare disparities.
- To develop an understanding of multi-level sources of disparities in health and health care, including those that come from patients (e.g., individual and environmental factors), providers, clinical encounters, and healthcare systems.
- To become familiar with strategies to reduce or eliminate healthcare disparities.
- To apply knowledge gained in this course to develop a research proposal that serves to increase understanding of a healthcare disparity

Responsibilities:
- **Course Requirements:** This course includes 14 sessions composed of didactic lectures, structured class discussions, and presentations by guest faculty who conduct healthcare disparities research (28 contact hours). There will also be 2 sessions in which students present and discuss their final projects (4 contact hours), for a total of 32 contact hours. Non-lecture formats include discussing assigned readings, homework assignments, small-group activities, question and answer sessions with guest faculty, and presentation and critique of student research proposals on a healthcare disparities topic. Attendance is expected for all classes and unexcused absences will detract from the final course grade.

- **Assignments:** There will be 4 homework assignments during the course. The details of these assignments are provided in the descriptions of the class sessions during which they
will be assigned. There will also be a course-long assignment to facilitate class discussion and a final project, each described below.

- **Class Discussion Points:** For Sessions 3 through 14, students will be expected to generate a minimum of two questions or comments regarding the readings for that class session. The two questions/comments for each session must pertain to two separate readings. Questions/comments must be posted to the session discussion board on CourseWeb at least **24 hours** prior to each class session. The purpose of this assignment is to facilitate class discussion. Completion of this assignment is mandatory and contributes to the attendance portion of the final grade.

- **Final Project:** Through assignments completed early in the course, students will identify a healthcare disparity of interest to them and conduct a brief literature review on that topic. For the final project, students will expand on those assignments to write and present a research proposal on their chosen healthcare disparity. The written component will consist of a 5-page research proposal that includes the Aims and Research Strategy (including Significance, Innovation, Approach) sections for a Phase 1, 2 or 3 healthcare disparities study. The presentation component will consist of a 15-minute oral presentation of the proposal, with 12 to 15 accompanying slides, delivered during the final sessions of the course.

- **Assignment Policy:** All homework assignments and the final project must be completed in order to receive a grade for this course.

*Course Requirements:*
- 15% Attendance/class participation/discussion points
- 50% Homework assignments
- 35% Final project

*Attendance Policy:* Students who miss **3 or more** of the 2-hour sessions will not receive a passing grade. Missed classes will be deducted proportionately from the “class participation” component of the course grade.

*Course Grading Scale:* For the computation of the final course grade as well as for the course assignments, the following grading scale will be used:

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<th>Grade</th>
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<tr>
<td>98-100%</td>
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<td>94-97%</td>
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*Required Texts:* Readings consist of book chapters and journal articles that have been selected based on their relevance to specific learning objectives for each class session. All course readings will be made available to students at the start of the term. Other than Session 1, students are expected to read the required readings prior to each class and submit **Class Discussion Points** (see description above) 24 hours before the start of class.
Website resources: Homework assignments, course information, and communication will be available at http://courseweb.pitt.edu.

Academic Integrity: Students in this course will be expected to comply with the University of Pittsburgh's Policy on Academic Integrity (http://www.provost.pitt.edu/info/ai1.html). Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy. Furthermore, no student may bring any unauthorized materials to an exam, including dictionaries and programmable calculators.
Introduction to Healthcare Disparities

This course focuses on healthcare disparities, rather than the broader topic of disparities in health, in order to expose students to disparities-related issues that those working within the healthcare system might encounter and can potentially change. During the first session we will briefly review evidence that establishes the existence of diverse and widespread disparities in health care. We will also review key terms in healthcare disparities research that will be used throughout our course. We will provide an overview of conceptual models that have been developed to understand healthcare disparities, with an emphasis on a 3-phase model for advancing disparities research that will serve as the organizational framework for the course.

Learning Objectives:
- Understand why a course on disparities in health care is important
- Understand important definitions and distinctions in disparities research, including differences vs. disparities, health vs. healthcare disparities, and vulnerable populations
- Describe predominant conceptual models of healthcare disparities
- Understand the 3-phase conceptual framework for advancing disparities research that involves detecting (Phase 1), understanding (Phase 2), and reducing/eliminating (Phase 3) disparities
- Identify evidence of disparities in the treatment of several diseases

Session Outline:

20 minutes  Introductions of instructors and students, course overview
60 minutes  Introduction to studying healthcare disparities, including the definition of key terms, summary of the evidence base for healthcare disparities, overview of predominant conceptual models of healthcare disparities, and discussion of the 3-phase framework for advancing disparities research
40 minutes  Class activity – Detecting, understanding, and eliminating healthcare disparities: The example of pain management

Required readings:

Recommended readings:
Assignment 1: NHQRDRNet Activity – Agency for Healthcare Research and Quality’s online source for viewing quality and disparities data. See handout distributed in class for detailed instructions.

Assignment 2: Write a ½ to 1-page essay in which you identify a healthcare disparity of interest or one in your content area, articulate the impact of the disparity, and discuss the possible factors contributing to the disparity.

Phase 1: Detecting Disparities

One of the overarching goals of Healthy People 2020 is to achieve health equity and eliminate disparities. Although this important goal is supported widely in our nation and by most healthcare experts, the terms health disparities and health equity have been used with a number of different meanings. Defining and measuring health disparities, choosing appropriate definitions of populations to compare for health disparities, and determining how to make those comparisons, are complex issues that must be considered in order to study healthcare disparities. This session will explore these issues, both in terms of definition and measurement, and will establish how we will define these topics for the remainder of the class. We will also use this session to discuss potential areas for disparities research in each class participant’s research/clinical area.

Learning Objectives:
- Identify disparities of interest to students and understand how they are to be incorporated into the student project
- Understand the complexity of defining and measuring disparities in healthcare outcomes

Session outline:
- 60 minutes Discussion of disparities of interest to students (from NHQRDRNet Activity or otherwise) and introduction of student projects (LH and LM)
- 60 minutes Complexities of measuring disparities and defining/identifying vulnerable populations (LM)

Required readings:

Recommended readings:
Phase 1: Detecting Disparities

During this session, we will continue our discussion regarding the complexities of defining and measuring health disparities by focusing on two key factors in healthcare disparities research – race/ethnicity and class. We will then learn about a program of research to detect disparities in liver transplantation. Finally, we will use this session to discuss students’ progress in choosing an area for their healthcare disparities final project, and introduce the requirements for the literature review.

Learning Objectives:
- Understand the complexity of measuring race, ethnicity, and class and describe the challenge this poses for studying disparities
- Examine a study that detects disparities in liver transplantation
- Understand the requirements for the literature review (Assignment 3).

Session outline:
- 55 minutes Measuring race, ethnicity and class (Galen Switzer, PhD)
- 55 minutes Detecting disparities in liver transplantation (Cindy Bryce, PhD)
- 10 minutes Introduce literature review (Assignment 3) evaluation criteria (LH and LM)

Required readings:

Recommended readings:

Assignment 3: Conduct a literature search in which you identify at least 10 articles that pertain to the disparity you identified for today’s session (from Assignment 2). Then summarize the current state of research on the topic in a 2-3 page essay. Include a bibliography of cited literature (minimum of 10 references).
Grant Writing and Final Project Overview

This session will be devoted to helping students develop their ability to create the Aims and Research Strategy sections of their final projects for the course. We will begin by reviewing the guidelines for the final projects and presentations. We will then engage in a detailed discussion regarding the components of the Aims and Research Strategy (including Significance, Innovation, Approach) sections of a grant proposal. We will then review and critique four recently submitted NIH grant proposals. Critiquing these proposals will help students hone their critiquing and grant writing skills.

Learning Objectives:
- Understand the requirements for the research project and oral presentation (Final Project).
- Understand the core components of a grant’s Specific Aims and Research Strategy sections
- Develop grant review and critiquing skills

Session outline:
20 minutes  Introduce final paper/presentation and review scoring criteria
35 minutes  Discuss components and best practices for developing a Specific Aims and Research Strategy section
40 minutes  Critique grant examples in small groups
25 minutes  Class discussion of grant critiques

Required readings:
- Bains W. How to write up a hypothesis: The good, the bad, and the ugly. Medical Hypotheses. 2005; 64: 665-668.
- Orientation to Peer Review slides from NIH and other NIH documents regarding Scoring System
- Chang, Gwadz, Patterson, and Switzer grant proposals

Phase 2: Understanding Determinants of Disparities - Patient/Individual Factors

Potential determinants of healthcare disparities include individual, provider, and healthcare system factors. After briefly reviewing a model of how these factors interact, in this session we will focus specifically on how patient/individual factors can contribute to disparities in healthcare. We will review a broad range of patient factors, such as genetics, demographic characteristics, psychosocial characteristics, health behaviors, and community/neighborhood environments in which individuals live. Then, we will examine one line of research that focuses on patient factors, and a second that examines environmental factors.

Learning Objectives:
- Understand that factors affecting healthcare disparities may be examined at different levels, including the patient, provider, and healthcare system.
- Identify patient factors that may be related to healthcare disparities including:
  o Biology/genetics
Demographic factors
- Psychosocial characteristics
- Health behaviors
- Community/neighborhood environments

Session outline:
- 10 minutes: Introduction to understanding disparities and review the CHERP Model of levels of research in healthcare disparities: patient, provider, and system. (LM)
- 20 minutes: Overview of patient factors related to healthcare disparities (LM)
- 30 minutes: Effects of patient factors on disparities in kidney transplantation (LM)
- 60 minutes: Community/neighborhood effects on health disparities (Tamara Dubowitz, ScD)

Required readings:

Recommended readings:

Assignment 4: In this assignment, you will complete an assessment of implicit attitudes and reflect on your experience. Access the online Implicit Association Test (IAT) at https://implicit.harvard.edu/implicit/demo/. Click on “Go to the Demonstration Tests.” Click “I wish to proceed.” Complete the Race IAT and at least one of the other IAT demonstrations on the website. Write a 1-page reflection in which you describe your experience, what you think of the IAT in general, and your thoughts on whether the IAT could be a useful tool for disparities researchers and/or medical educators.
Phase 2: Understanding Determinants of Disparities - Patient/Individual Factors

In this session, we will continue our focus on how patient/individual factors contribute to healthcare disparities. We will examine a line of research that exemplifies this focus: a study that examines how patient factors may contribute to disparities in sterilization methods.

Learning Objective:
• Become familiar with different contexts and patient factors that may be used to understand determinants of disparities.

Session outline:
60 minutes Understanding disparities in sterilization methods for women (Sonya Borrero, MD)

Required readings:

Recommended readings:

Phase 2: Understanding Determinants of Disparities - Provider Factors and Clinical Encounters

A portion of healthcare disparities may be due to provider behavior and/or bias. Providers’ conscious and unconscious beliefs about patients may influence their interpretation of symptoms, clinical decision-making, and interpersonal behavior towards patients, all of which can influence patient treatment and outcomes. In this session we will review the distinction between conscious and unconscious beliefs and discuss how both can play out in the healthcare setting. We will review and discuss a model outlining various pathways by which provider beliefs about patients can influence clinical practice. Finally, we will review possible strategies to reduce the impact of provider bias on health care.

Learning Objectives:
• Understand the distinction between conscious and unconscious beliefs and how they can affect behavior.
• Identify multiple pathways by which providers’ conscious and unconscious beliefs about patients can influence healthcare provision.
• Identify strategies to reduce the possible impact of provider bias on health care.
**Session outline:**

- **20 minutes** General introduction to conscious and unconscious bias and discussion of how provider bias, in particular, can affect health care.
- **30 minutes** Discussion of strategies to reduce the impact of provider bias on health care, including the use of an implicit attitudes measure as a way to raise self-awareness.
- **50 minutes** Discussion of student perspectives on completing a measure of implicit bias and reactions to a research study that used the measure (Cooper et al., 2012)
- **20 minutes** Discuss student progress on literature reviews (LH and LM)

**Required readings:**


**Recommended readings:**


**Phase 2: Understanding Determinants of Disparities - Provider Factors and Clinical Encounters**

In this session, we will continue examining how provider factors and features of the clinical encounter can contribute to healthcare disparities, with a particular focus on patient-provider communication. We will first examine a line of research that explores whether patient-provider communication contributes to racial disparities in colorectal cancer screening. We will then examine research on language barriers and the underuse of interpreters in the clinical context as factors contributing to sub-optimal care for patients with limited English proficiency.

**Learning Objectives:**

- Describe research on the role of patient-provider communication in disparities in colorectal cancer screening rates.
- Describe the impact of language barriers and the underuse of interpreters on healthcare quality.
Session Outline:

60 minutes  Patient-provider communication and disparities in colorectal cancer screening  
(Bruce Ling, MD, MPH)

60 minutes  The impact of language barriers and underuse of interpreters on quality of health care for patients with limited English proficiency (Yael Schenker, MD, MS)

Required Readings:


Phase 2: Understanding Determinants of Disparities - Healthcare System Factors

In the first part of this session, we will provide an overview of current racial disparities in where patients receive care and who provides that care. Historical developments that contributed to these disparities will be discussed, including early segregation in healthcare systems, segregation and discrimination in early medical education programs, and current residential segregation. A distinction will be made between disparities that occur within facilities and between facilities, with evidence focusing on the two sources of disparities being presented. Characteristics of healthcare facilities that can lead to between-facility healthcare disparities will be identified. The second part of this session will discuss how healthcare reimbursement practices and geographic distribution of providers contribute to socio-economic and geographic disparities in access to health care. Policies that have attempted to increase the number of healthcare providers in underserved areas will be discussed.

Learning Objectives:

- Describe historical developments in healthcare delivery that resulted in disparities in where people get care and who provides that care
- Understand the distinction between “within-facility” and “between-facility” variation in healthcare quality
- Identify features of facilities that can contribute to healthcare disparities (e.g., location, private vs. public)
- Understand how healthcare reimbursement practices contribute to socio-economic disparities in access to health care.
- Understand how geographic distribution of providers contributes to geographic disparities in access to health care.
- Identify policies that have attempted to increase providers in underserved areas.
Session outline:

60 minutes Discussion of current disparities in where patients get care, the historical developments that contributed to these disparities, distinction between within-facility and between-facility disparities, and facility features associated with quality of care. (LH)

60 minutes Discussion of how reimbursement practices and distribution of providers contribute to socio-economic and geographic disparities in access to health care, and discussion of policies to increase providers in underserved areas. (Ateev Mehrotra, MD, MPH)

Required readings:

Recommended readings:

Phase 2: Understanding Determinants of Disparities - Healthcare System Factors

In this session, we will continue to focus on how healthcare system factors can contribute to healthcare disparities with a discussion of an emerging model for addressing healthcare disparities called dismantling racism. This model argues that healthcare disparities are rooted in institutional racism, and that efforts to eliminate disparities must involve system-wide, multi-level changes. Efforts to use the dismantling racism approach to reduce disparities in health institutions will be described. In the latter half of the session, we will learn about a program of research focused on detecting and understanding race disparities in the diagnosis of mental health disorders. This work illustrates how it is not always clear whether the factors underlying a disparity are primarily patient, provider, and/or system-level factors, and that research examining a variety of factors is often necessary to identify why a particular disparity exists.

Learning Objectives:
• Understand the underlying theory and basic principles of the dismantling racism approach to addressing healthcare disparities.
• Understand how the dismantling racism approach is being applied in health institutions to address healthcare disparities.
• Describe research designed to identify and understand race disparities in the diagnosis of mental disorders.

Session Outline:

60 minutes Overview of the underlying theory and use of the dismantling racism approach to addressing healthcare disparities. (Michael Yonas, DrPh)
60 minutes Research examining disparities in diagnosis of mental disorders (Shaun Eack, PhD)

Required Readings:


Recommended Readings:


Phase 3: Intervention Research on Healthcare Disparities

Interventions on health disparities are important to improving health and well being, particularly for vulnerable populations. Unfortunately, progress towards the identification of interventions that successfully reduce disparities lags behind our understanding of the existence of disparities and the reasons they occur. Conducting research to intervene on disparities poses special challenges for investigators. This session will provide an overview of intervention research to address health disparities. Examples of research involving interventions to reduce disparities in two specific patient populations will be discussed.

Learning Objective:
• Identify different approaches used in conducting intervention research and their different advantages and challenges.
• Describe research designed to reduce disparities in utilization of joint replacement treatment
• Describe research designed to reduce disparities in breast cancer treatment

Session outline:
20 minutes Brief overview of intervention research (LM)
50 minutes Intervention to reduce disparities in the utilization of joint replacement as a treatment for end-stage knee osteoarthritis (C. Kent Kwoh, MD)
50 minutes The ACTS Intervention to reduce breast cancer treatment disparity (Margaret Quinn Rosenzweig PhD, FNP-BC, AOCNP)

Required readings:

Recommended readings:

Phase 3: Application of Community-based participatory research to address health disparities

Community-based participatory research (CBPR) consists of a mutually beneficial investigative and service partnership between campus and community agencies regarding issues faced by (usually) vulnerable communities. CBPR has been successfully used to address the health needs of disadvantaged communities and is a useful means to reducing health disparities. Investigators who wish to study these problems or to evaluate programmatic interventions face unique practical and methodological challenges. This session will introduce the student to the principles of CBPR and explore the potential of CBPR in practice from the academic and community perspective. In addition, this session will explore the advantages and disadvantages
of CBPR, methodological challenges associated with research in vulnerable communities, and special concerns of Institutional Review Boards with research in community settings.

**Learning Objectives:**
- Describe the principles of CBPR and examine application of those principles into real world projects
- Describe the application and concerns of CBPR from community and academic investigator perspectives
- Describe the major methodological and logistical challenges to conducting research in community settings
- Describe application of CBPR principles to good partnerships to achieve positive outcomes and misapplication of CBPR principles that form bad partnerships
- Anticipate and respond to some of the funding, political, and research ethics ramifications of CBPR

**Session outline:**
- 35 minutes What is Community Based Participatory Research? (AG)
- 20 minutes Interactive Discussion #1: CBPR: The Community Perspective (Community investigator: Paul Freyder)
- 25 minutes Interactive Discussion #2: CBPR: The Academic Perspective (AG)
- 20 minutes Interactive Discussion #3: Developing CBRR project – modeling the way (PF, AG)
- 20 minutes Discuss student projects – check in on progress on aims/research strategy, discuss any issues (LH and LM)

**Required readings:**

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**Phase 3: Examples of Community Based Participatory Research to Intervene on Health Disparities**

In this session we will continue to examine the use of community-based participatory research (CBPR) to intervene on health disparities by discussing two CBPR projects. The first project involves a community-based intervention to reduce adverse sexual health outcomes among African American adolescents. The second project involves a community-based teen pregnancy prevention program.

**Learning Objective:**
- Become familiar with projects that use CBPR to intervene on health disparities
Session outline:
60 minutes CBPR intervention to reduce adverse sexual health outcomes among African American adolescents (Aletha Akers, MD, MPH)
60 minutes CBPR intervention to reduce teen-pregnancy (Jeannette South-Paul, MD)

Required readings:
• Allegheny County Health in Black and White. A report of the Urban League of Greater Pittsburgh, Allegheny County Health Department, and the University of Pittsburgh University Center for Social and Urban Research, 2011. (Executive Summary, p. 9-13, Required, remainder of report recommended).

Phase 3: Implementing Interventions to Reduce Disparities
Once interventions to reduce health and healthcare disparities have been developed and shown to be effective, they must be translated into practice so that they can impact disparities on a broad scale. As with all scientific discoveries, the translation of disparities-reducing interventions into practice poses significant challenges. The field of implementation science seeks to address those challenges by studying the factors that contribute to the success or failure of efforts to implement evidence-based interventions. This session will provide an introduction to the field of implementation science. How implementation science can be used to facilitate the translation of effective disparities-reducing interventions into practice will be discussed.

Learning Objectives:
• Understand the basic principles and methods of implementation science.
• Understand how implementation science can facilitate the translation of disparities-reducing interventions into practice.

Session Outline:
90 minutes Translational research – from theory to practice; Introduction to implementation science and its application to the field of disparities research (Adam Gordon, MD, MPH)
20 minutes Course re-cap and overview of plan for presentations of student final projects (LH and LM)
10 minutes Course Evaluations
Required readings:


Recommended readings:


Presentation of Student Projects

During these two sessions, students will present their final projects and will provide constructive feedback on the projects of their classmates. Students will:

1. Identify their healthcare disparities issue and the population affected by it.
2. Identify the significance of the healthcare issue and how it relates to patient health outcomes.
3. Briefly discuss what is already known about their topic and what is still lacking in their topic area.
4. Describe a set of research aims that address existing gaps in the literature on their topic.
5. Provide a brief description of the proposed methods to carry out the research aims.

Learning Objectives:

- Apply the principles of the 3-phase conceptual framework for advancing disparities research to develop a research proposal within their chosen topic.
- Critically analyze research related to healthcare disparities by reviewing colleagues' research projects.

Session outline: Each student will have 10 minutes to present and 5 minutes to answer questions.

Required readings:

None