HPM 767
Implementation Science in Health
(Credit Hours: 3)
Department of Health Policy and Management
UNC Gillings School of Global Public Health

Spring, 2018 Syllabus
Class Location: 1304 McGavran-Greenberg Hall
Meeting Times: Tuesdays 2:00 – 4:50 p.m.

Faculty: Byron J. Powell, Ph.D., LCSW
Office: 1105C McGavran-Greenberg Hall
Email: bjpowell@unc.edu
Phone: 919-843-2576
Office Hours: By Appointment

TA: Emily Haines
Email: ehaines@live.unc.edu
Office Hours: By Appointment

Course Overview
This course introduces the concepts, theories, and methods of implementing evidence-based health, behavioral health, and social service interventions. The course also examines the methods for conducting rigorous research on implementation.

Learning Objectives and HPM Competencies

<table>
<thead>
<tr>
<th>Course Learning Objectives</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Identify and apply theories and frameworks to inform implementation research.</td>
<td>1, 2, 3, 4, 10</td>
</tr>
<tr>
<td>2 Select and apply implementation strategies that are responsive to context and informed by theory, evidence, and pragmatic considerations.</td>
<td>1, 2, 3, 4, 10</td>
</tr>
<tr>
<td>3 Adapt evidence-based interventions for new settings or target populations.</td>
<td>1, 2, 3, 4, 10</td>
</tr>
<tr>
<td>4 Apply appropriate research designs and analytic approaches for implementation studies.</td>
<td>5, 6, 7, 8, 12</td>
</tr>
</tbody>
</table>
Resources

Website

HPM 767 has its own Sakai website.

Texts

No texts are required for this course. However, we highly recommend that you purchase the Brownson et al. (2018) book, and we also have found the other two texts very helpful. The Assigned chapters will be posted to Sakai.


Articles

Assigned articles and other course materials are posted on Sakai.

Web Sources

Other web sources that might prove useful to you will be posted on Sakai.
Requirements and Expectations

Course Design
The course consists of four modules mapped to the course learning objectives. Each module follows a five-part sequence: (1) individual preparation through required reading; (2) “reports from the field” based on the experiences of guest speakers; (3) Readiness Assurance Quizzes (RAQs) to ensure comprehension and preparation; (4) team assignments focused on analyzing complex issues, weighing trade-offs, and making specific choices; and (5) individual papers in which students apply what they have learned in each module to their own field or area of interest.

Required Reading
At the beginning of each module, students are assigned required readings that have been carefully selected to cover the essential concepts, theories, and scientific evidence that they will need to participate in the application assignments. Students are expected to complete the required readings by the date listed in the course schedule and come prepared to take a quiz covering the material that they have read (see Readiness Assurance Quizzes, below). Additional readings and resources are offered for many topics. While it is recommended that students explore those relevant to their particular interests, these readings and resources are optional and will not be included on RAQs.

Guest Speakers’ “Reports from the Field”
Each learning module will include multiple “reports from the field” by investigators who are engaged in dissemination and implementation research. Students are expected to come to class prepared and on time. Students are also expected to actively engage the guest speaker in discussion. Please try to learn about the guest speakers ahead of time, and come to class prepared to ask questions.

Readiness Assurance Quizzes
The readiness assurance process ensures that students have completed the required reading and are prepared for in-class team work. Students will complete a brief quiz for each module. Select course readings from each module will be included on the RAQs; these readings are indicated by asterisks (**) in the syllabus.

Team Exercises
Students will become members of five- to six-person teams assigned to include diversity of knowledge and experience. These teams will remain intact throughout the semester. Team work will occur almost entirely in class. Teams are not expected to meet outside of class.

For each module (except Module 3), students will complete an in-class integrative team exercise in which students will work in their teams to make specific decisions or predictions based on their collective analysis of a complex issue. At the end of the class period, each team will turn in a written assignment associated with the exercise.
Individual Papers
At the end of each module (except for Module 3), students will write a brief individual paper, in which they apply content from that module to their own field or area of interest to respond to a particular set of prompts, as listed below. These papers should be 2-4 pages, double spaced, and should include APA citations of relevant literature (both in text and in the bibliography). Papers should be submitted on Sakai by 2:00 p.m. on the day they are due. The instructor will allow time in class to discuss these assignments in further detail prior to their due dates.

Individual Paper 1 (due 2/6)
Identify and describe at least one “science-to-service gap” or “implementation gap” in your area, and provide the most rigorous evidence from the literature that documents that gap. Articulate how implementation research can be leveraged to address the gap that you describe. Select implementation frameworks that could guide implementation. Briefly describe each framework you select and explain how they can help you to: 1) identify implementation barriers and facilitators, 2) inform implementation processes, and 3) specify relevant implementation outcomes.

Individual Paper 2 (due 3/6)
Describe a process for identifying and prioritizing barriers and facilitators that need to be addressed with implementation strategies. For example, what framework(s) would you use to guide the process, what methods would you use to identify barriers and facilitators that have already been identified in the implementation literature, would you collect additional qualitative, quantitative, or mixed methods data? It is plausible that you will identify so many potential barriers and facilitators that it would be difficult to address them all. Once they have been identified, what types of processes would you use to prioritize the barriers and facilitators that you will address?

Outline an approach to selecting implementation strategies that are appropriate for addressing the determinants that you have identified. How will you ensure that relevant stakeholders, theory, and evidence will inform the selection of implementation strategies?

Describe a multifaceted implementation strategy that may effectively address the barriers that you prioritize. Outline your theoretical, empirical, or pragmatic rationale for including specific discrete (or component) strategies. Carefully specify the strategies that you select using an established reporting guideline for implementation strategies, such as the Proctor et al. (2013) recommendations (http://www.implementationscience.com/content/8/1/139), the WIDER Recommendations (http://www.implementationscience.com/content/8/1/52), or the Template for Intervention Description and Replication (http://www.bmj.com/content/348/bmj.g1687).

Individual Paper 3 (due 3/27)
Find and critique an empirical article in which an intervention was adapted, addressing the following questions:
- What is the intervention and what adaptations were made?
- Did the authors explicitly state their rationale for adaptation? Do you agree with them?
- How well did the authors describe the adaptations made? How did they justify which aspects of the intervention were adapted and which were preserved?
- Did the authors address the issue of fidelity? Do they make a good case for preserving core components?
- Do you have any other concerns with the adaptations made?

**Individual Paper 4 (due 5/1)**
Develop a plan to evaluate the implementation strategy that you specified in Individual Assignment 2. Please accomplish the following: 1) identify an appropriate research design; 2) specify the implementation and public health outcomes that you would assess and operationally define them; and 3) suggest data collection methods and measures that you would use.

---

**Cell Phones and Laptops**

Turn off cell phones in class and during exams. Laptops may be used in class only for taking notes and for looking up information relevant to the topic being discussed.

---

**Valuing, Recognizing, and Encouraging Diversity**

Promoting and valuing diversity in the classroom enriches learning and broadens everyone’s perspectives. Inclusion and tolerance can lead to respect for others and their opinions and is critical to maximizing the learning that we expect in this program. This may challenge our own closely held ideas and personal comfort zones. The results, however, create a sense of community and promote excellence in the learning environment. Diversity includes consideration of (1) the variety of life experiences others have had, and (2) factors related to “diversity of presence,” including, among others, age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, social position. *This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.*

UNC-CH supports all reasonable accommodations, including resources and services, for students with disabilities, chronic medical conditions, a temporary disability, or a pregnancy complication resulting in difficulties with accessing learning opportunities.

All accommodations are coordinated through the UNC Office of Accessibility Resources & Services (ARS), [http://accessibility.unc.edu](http://accessibility.unc.edu); phone 919-962-8300, email accessibility@unc.edu. Students must document/register their need for accommodations with ARS before accommodations can be implemented.
Evaluation Method

Grade Components

<table>
<thead>
<tr>
<th>Grade component</th>
<th>% of grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAQs (4)</td>
<td>20%</td>
</tr>
<tr>
<td>Individual papers (4)</td>
<td>60%</td>
</tr>
<tr>
<td>Integrative team assignments (3)</td>
<td>15%</td>
</tr>
<tr>
<td>Class participation</td>
<td>5%</td>
</tr>
</tbody>
</table>

Grading Scale

93-100: *Honors* indicates exceptional graduate-level work. Assignments must meet or exceed performance expectations, as defined for each assignment under the Course Information section of the course website.

75-92: *Pass* indicates that assignments are acceptable with regard to both content and presentation, but contain one or more deficiencies with respect to performance expectations.

65-74: *Low pass* indicates marginally acceptable graduate-level work. Assignments show some major deficiency with respect to content or presentation.

< 65: Fail indicates that the assignment does not meet an acceptable level for graduate-level work.

Missed Classes

In the workplace, when someone is gone, the group has to pick up the slack but the absent member still benefits from the group work. If the absent person has a good reason for being gone, explains the reason to the group, and does their best to make up for their absence, most groups will gladly extend the benefit. If, however, members have doubts about the reason for the absence, feel like the member is trying to “freeload” or both, then the absence is likely to be a black mark that may not be forgotten when the peer evaluations come around. So, if you have to be absent, let your peers know in advance and make sure that you do your best to make up for it.
UNC Honor Code

The principles of academic honesty, integrity, and responsible citizenship govern the performance of all academic work and student conduct at the University as they have during the long life of this institution. Your acceptance of enrollment in the University presupposes a commitment to the principles embodied in the Code of Student Conduct and a respect for this most significant Carolina tradition. Your reward is in the practice of these principles.

Your participation in this course comes with the expectation that your work will be completed in full observance of the Honor Code. Academic dishonesty in any form is unacceptable, because any breach in academic integrity, however small, strikes destructively at the University's life and work.

If you have any questions about your responsibility or the responsibility of faculty members under the Honor Code, please consult with someone in either the Office of the Student Attorney General (966-4084) or the Office of the Dean of Students (966-4042).

Read “The Instrument of Student Judicial Governance” (http://instrument.unc.edu).

Course Evaluation

The Department of Health Policy and Management is participating in the Carolina Course Evaluation System (CES), the university's new online course evaluation tool, enabled at the end of each semester. Your responses will be anonymous, with feedback provided in the aggregate; open-ended comments will be shared with instructors, but not identified with individual students. Your participation in CES is a course requirement, as providing constructive feedback is a professional expectation. Such feedback is critical to improving the quality of our courses, as well as providing input to the assessment of your instructors.
## Overview of Course Schedule

<table>
<thead>
<tr>
<th>Module 1: Introduction &amp; Guiding Theories and Frameworks</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1: 1/16/18 Introduction to Implementation Science</td>
</tr>
<tr>
<td>W2: 1/23/18 Guiding Frameworks and Theories</td>
</tr>
<tr>
<td>Guest Speaker: <a href="#">Laura Damschroder</a></td>
</tr>
<tr>
<td>W3: 1/30/18 Module 1 RAQ &amp; Team Exercise</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module 2: Identifying, Developing, and Testing Implementation Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>W4: 2/6/18 Implementation Strategies: What We Know and What We Need to Know</td>
</tr>
<tr>
<td>Individual Paper 1 due</td>
</tr>
<tr>
<td>W5: 2/13/18 Identifying, Developing, and Testing Implementation Strategies I (Organizational Implementation Strategies)</td>
</tr>
<tr>
<td>Guest Speakers: <a href="#">Greg Aarons</a> &amp; <a href="#">Sheena McHugh</a></td>
</tr>
<tr>
<td>W6: 2/20/18 Identifying, Developing, and Testing Implementation Strategies II (Policy Dissemination, Global Health, and Facilitation in Health Systems)</td>
</tr>
<tr>
<td>Guest Speakers: <a href="#">Ross Brownson</a>, <a href="#">Ben Chi</a>, &amp; <a href="#">JoAnn Kirchner</a></td>
</tr>
<tr>
<td>W7: 2/27/18 Module 2 RAQ &amp; Team Exercise</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module 3: Fidelity, Adaptation, Sustainment, &amp; De-Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>W8: 3/6/18 Fidelity &amp; Adaptation</td>
</tr>
<tr>
<td>Guest Speakers: <a href="#">Rinad Beidas</a>, <a href="#">Ana Baumann</a>, &amp; <a href="#">Alexis Kirk</a></td>
</tr>
<tr>
<td>Individual Paper 2 due</td>
</tr>
<tr>
<td>3/13/17 NO CLASS (Spring Break)</td>
</tr>
<tr>
<td>W9: 3/20/18 Sustainment &amp; De-Implementation</td>
</tr>
<tr>
<td>Guest Speakers: <a href="#">Shannon Wiltsey Stirman</a> &amp; <a href="#">Christian Helfrich</a></td>
</tr>
<tr>
<td>Module 3 RAQ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module 4: Evaluating Implementation Efforts</th>
</tr>
</thead>
<tbody>
<tr>
<td>W10: 3/27/18 Research Designs</td>
</tr>
<tr>
<td>Guest Speakers: <a href="#">J. D. Smith</a> and <a href="#">Geoff Curran</a></td>
</tr>
<tr>
<td>Individual Paper 3 due</td>
</tr>
<tr>
<td>W11: 4/3/18 Measurement and Mixed Methods Assessment</td>
</tr>
<tr>
<td>Guest Speakers: <a href="#">Cara Lewis</a> &amp; <a href="#">Alison Hamilton</a></td>
</tr>
<tr>
<td>W12: 4/10/18 Example Methods in Implementation Science I (Social Network Analysis, Group Model Building, Concept Mapping)</td>
</tr>
<tr>
<td>Guest Speakers: <a href="#">Alicia Bunger</a>, <a href="#">Lindsey Zimmerman</a>, &amp; <a href="#">Byron Powell</a></td>
</tr>
<tr>
<td>W13: 4/17/18 Example Methods in Implementation Science II (Assessing Stages of Implementation Completion and Costs, Configurational Comparative Methods, and User-Centered Design)</td>
</tr>
<tr>
<td>Guest Speakers: <a href="#">Lisa Saldana</a>, <a href="#">Sarah Birken</a>, &amp; <a href="#">Aaron Lyon</a></td>
</tr>
<tr>
<td>W14: 4/24/18 Module 4 RAQ and Team Exercise</td>
</tr>
<tr>
<td>W15: 5/1/17 No Class</td>
</tr>
<tr>
<td>Individual Paper 4 due</td>
</tr>
</tbody>
</table>
**Course Schedule**

**Module 1: Introduction & Guiding Theories and Frameworks**

**Learning Objectives:**
- Describe and apply core concepts of implementation science and practice
- Identify implementation gaps
- Use theories and frameworks to inform implementation research and practice
- Assess multi-level barriers and facilitators of implementation effectiveness

**Week 1 (1/16/18): Introduction to Implementation Science**

**Required Readings:**

**Week 2 (1/23/18): Guiding Frameworks and Theories**

**Guest Speaker:** Laura Damschroder, VA Ann Arbor Center for Clinical Management Research

**Required Readings:**

---

1 ** indicates that a course reading will be included in the RAQ for that module

Additional Readings:

Resources:

Week 3 (1/30/18): Module 1 RAQ and Team Assignment

Module 2: Identifying, Developing, and Testing Implementation Strategies

Learning Objectives:
- Identify implementation strategies that can address multi-level barriers
- Consider the effectiveness of implementation strategies and identify evidence gaps
- Apply methods for identifying, selecting, and tailoring implementation strategies that integrate evidence, theory, and pragmatic considerations

Week 4 (2/6/18) Implementation Strategies: What We Know and What We Need to Know

ASSIGNMENT DUE: Individual Paper 1

Required Reading:
Additional Reading:

Resources:
5. Cochrane EPOC (http://epoc.cochrane.org)
6. Health Systems Evidence (https://www.healthsystemsevidence.org)

Week 5 (2/13/18): Identifying, Developing and Testing Implementation Strategies I (Organizational Implementation Strategies)

Speakers: Greg Aarons, Child and Adolescent Services Research Center at Rady Children’s Hospital & Department of Psychiatry, School of Medicine, University of California, San Diego
Sheena McHugh, School of Public Health, University College Cork

Required Readings:


**Recommended Readings:**


**Week 6 (2/20/18): Identifying, Developing and Testing Implementation Strategies II (Policy Dissemination, Global Health, and Facilitation in Health Systems)**

**Speakers:**
- **Ross Brownson**, Brown School & Department of Surgery, School of Medicine, Washington University in St. Louis
- **Ben Chi**, Department of Obstetrics and Gynecology, School of Medicine, University of North Carolina at Chapel Hill
- **JoAnn Kirchner**, Central Arkansas Veterans Healthcare System & Department of Psychiatry, University for Arkansas for Medical Sciences

**Required Readings:**


**Recommended Readings:**


**Week 7 (2/27/18): Module 2 RAQ and Team Assignment**

**Module 3: Fidelity, Adaptation, Sustainment, and De-Implementation**

**Learning Objectives:**
- Define adaptation and discuss benefits and drawbacks of adaptation
- Differentiate core elements and key characteristics of evidence-based interventions
- Identify features of target populations that affect feasibility, acceptability, and effectiveness of evidence-based interventions
- Identify features of settings that affect feasibility, acceptability, and effectiveness of evidence-based interventions
- Discuss systematic approaches for adapting evidence-based interventions

**Week 8 (3/6/18): Fidelity and Adaptation**

**ASSIGNMENT DUE: Individual Paper 2**

**Speakers:**
- **Rinad Beidas**, Center for Mental Health Policy and Services Research, Department of Psychiatry, Perelman School of Medicine, University of Pennsylvania
- **Ana Baumann**, Brown School, Washington University in St. Louis
- **Alexis Kirk**, Department of Health Policy and Management, Gillings School of Global Public Health, University of North Carolina at Chapel Hill

**Required Readings:**

**Recommended Reading:**

**Resources:**

**Week 9 (3/20/18) Sustainment & De-Implementation**
**Module 3 RAQ**

**Speakers:** Shannon Wiltsey Stirman, Department of Psychiatry and Behavioral Health Services, Stanford University & Palo Alto Veterans Affairs Health Care System
Christian Helfrich, Department of Health Services Research, School of Public Health, University of Washington & Veterans Administration Puget Sound Health Care System

**Required Readings:**

**Recommended Readings:**

**Resources:**
2. [https://sustaintool.org](https://sustaintool.org)

**Module 4: Evaluating Implementation Efforts**

**Learning Objectives:**
- Identify a range of study designs appropriate for implementation research, discuss associated trade-offs, and identify factors to guide study design choices
- Describe measurement issues in implementation research
- Articulate the role of mixed methods in implementation research and identify different structures, functions, and processes in mixed methods studies
- Gain familiarity with a range of research methods that can be applied to implementation research
- Discuss ethical issues in implementation research

**Week 10 (3/27/18): Research Designs for Implementation Research & Ethics**

**ASSIGNMENT DUE: Individual Paper 3**

**Speakers:**
- **J. D. Smith**, Department of Psychiatry and Behavioral Sciences and Department of Preventive Medicine, Feinberg School of Medicine, Northwestern University
- **Geoff Curran**, Center for Implementation Research, School of Pharmacy, University of Arkansas for Medical Sciences
Required Readings:


Resources:


Week 11: Measurement and Mixed Methods Assessment in Implementation Science

Speakers: Cara Lewis, Kaiser Permanente Washington Health Research Institute

Alison Hamilton, VA HSR&D Center for the Study of Healthcare Innovation, Implementation & Policy, VA Greater Los Angeles Healthcare System & Department of Psychiatry and Biobehavioral Sciences, University of California, Los Angeles

Required Readings:


Recommended Readings:

Resources:

Week 12 (4/10/18): Exemplar Methods in Implementation Science Session I (Social Network Analysis, Group Model Building, and Concept Mapping)

Speakers:  
**Alicia Bunger**, College of Social Work, Ohio State University  
**Lindsey Zimmerman**, National Center for Posttraumatic Stress Disorder, Dissemination and Training Division, VA Palo Alto Health Care System  
**Byron Powell**, Department of Health Policy and Management, Gillings School of Global Public Health, University of North Carolina at Chapel Hill

Recommended Readings:
Week 13 (4/17/18): Exemplar Methods in Implementation Science Session II (Measuring Stages of Implementation Completion and Implementation Costs, Configurational Comparative Methods, and User Centered Design)

Speakers: Lisa Saldana, Oregon Social Learning Center  
Sarah Birken, Department of Health Policy and Management, Gillings School of Global Public Health, University of North Carolina at Chapel Hill  
Aaron Lyon, Department of Psychiatry and Behavioral Sciences, University of Washington School of Medicine

Recommended Readings:

Week 14 (4/24/18): Module 4 RAQ and Team Assignment

Week 15 (5/1/18): No Class Due to Finals Week.

ASSIGNMENT DUE: Individual Paper 4