Implementation Science for Global Health – 3 credit hours
MHCH 890.971.SP16

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A. Course Description: This graduate level course is an introduction to implementation science with an emphasis on its application for global health. The course will first highlight current challenges in global health and the role of implementation science in addressing them, including the development of practice-based research activities and the provision of technical support for program implementation. The course then will define current implementation research frameworks, active implementation frameworks, and describe the interface between improvement science and implementation science. Students will have the opportunity to work in groups and independently.

Course Competencies:

1. Understand how implementation issues, causes and solutions are approached differently by various stakeholders.
2. Explain why implementation science is necessary for achieving global health goals and objectives and how it contributes to designing policies and interventions/programs that are implementation-informed and fit to local contexts.
3. Describe frameworks for applied implementation and implementation research and characterize the differences.
4. Using an appropriate implementation science framework, develop or tailor approaches and activities to successfully implement an intervention.

5. Identify and apply stage-appropriate implementation strategies to address barriers at all levels of the system.

B. Course Prerequisites: There are no prerequisites for MHCH 890.971.SP16. Since this is an online course, students are expected to have access to the internet.

C. Course Resources: Course resources, including readings, lectures, and videos will be available on the Sakai site as web links and pdf documents.

D. Assignments:

1. Weekly assignments:
   Completion of all weekly assignments is required to ensure comprehension of the topic and to master application of the material to real world problems. Students are expected to be actively engaged in all class discussions on the Sakai discussion boards and to contribute to the discourse in a positive and valuable manner. In this course, there will be several assignments that involve students working together in a group. Students are expected to work collegially with the team and to participate fully in the group's activity by completing assigned tasks, providing meaningful and constructive feedback, and meeting pre-determined group deadlines. It will be required to log into the Sakai site several times during the week to facilitate work being done in a timely manner. Students who expect to be unable to log on to Sakai should inform the instructor and fellow group members in advance. Assignments are expected to be turned in on time. If assignments cannot be turned in on time, an explanation should be provided to the Instructor. Assignments submitted more than a week late without such notice will be subject to a penalty, i.e., points will be deducted.

2. Final Group Presentations:
   Each group will select one of two options listed below citing resources and references from the course and other resources that were used to build your case.
   Option 1: Students will select an implementation issue/problem in global health and apply what they learned regarding implementation science (frameworks, tools, and evaluations) to recommend a course of action that would help policy makers, funders, or a community (choose one group) within the global health context to solve the issue.
   Option 2: Students will select a program and recommend implementation or improvement methodologies to improve program effectiveness and outcomes.

E. Final grade scale:

The distribution of points for each course requirement is shown below:

Requirement	% of Grade
1) Individual Assignment	40%
2) Group Assignment	25%
3) Participation	15%
4) Final Group Presentation	20%
Total	100%

Individual, group assignments, and final group presentation will be graded on the following dimensions:

- Clear and appropriate application of course materials and other resources, and citation of resources (50 percent)
- Effective and logical analysis, including the use of figures and tables when required (35 percent)

- Originality (15 percent)

Using these criteria, individual assignments will be graded on a 10-point scale; group assignments will be graded on a 4-point scale; and participation will be graded on a 1-point scale.

Numeric grades will be given for assignments, but a letter will be given for the final course grade. Grading will be according to the following scheme:

Grade	Explanation
H	Clear Excellence
P	Entirely Satisfactory
L	Low Passing
F	Fail

Typically, H grades are given to those scoring 85% or above, P to scores of 70% and above and L to scores of 55% and above. These are guidelines, and are not meant to be absolute numbers.

A grade of H will indicate effort beyond the expectations of the assignment and production of an exceptional output. A P is completely acceptable and indicates meeting the expectations of the assignment. An L indicates a passing performance, but that the effort is minimally acceptable.

Course Evaluation

Course participation includes completion of the UNC-CH's online course evaluation. Your responses will be anonymous, with feedback provided to the instructors in the aggregate. Open-ended comments will be shared with instructors, but individual students are not identified. Providing constructive course evaluative feedback is a professional responsibility. We appreciate your feedback as it is critical for improving the quality of our courses.

F. Honor system: As part of the UNC Honor Code as set forth in the Instrument of Student Judicial Government, Carolina students pledge to maintain ideals of academic honesty, personal integrity, and responsible citizenship. When a student applies to Carolina, he/she undertakes a commitment to the Honor Code principles. The University endeavors to instill in each student a love of learning, a commitment to fair and honorable conduct, and respect for the safety and welfare of others. It also strives to protect the community from those who, for whatever reason, do not embody these values in their conduct, and to protect the integrity of the University and its property for the benefit of all.

G. On-line course evaluation: The Gillings School uses an anonymous on-line evaluation system to assess the quality of instruction and learning. The system opens during the last week of class. The instructors will only see the aggregate data with any comments at the end of the course and after grades are turned in. It is your responsibility as a student to complete the evaluations. You will be sent multiple email reminders until it is completed.

H. 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 course. Our own closely held ideas and personal comfort zones may be challenged. The results, however, create a sense of community and promote excellence in the learning environment. Diversity includes considerations of (1) the variety of life experience others have had, and (2) factors related to

"diversity of presence," including, age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, and social position. This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.

Welcome to MHCH 890.971.SP16- Course Orientation and Self-Introductions

Objectives: After completing this module, students will: improve their understanding of on-line learning skills, develop their own strategy for on-line learning and for group learning, improve their on-line communications skills and become familiarized with the Sakai site. Students will also learn about their colleagues' experiences in global health and implementation.

Watch: Welcome by Dr. Herbert Peterson in VoiceThread

Required Readings:
How Students Develop Online Learning Skills
http://www.educause.edu/ero/article/how-students-develop-online-learning-skills

Five-step Strategy for Student Success with Online Learning
https://onlinelearninginsights.wordpress.com/2012/09/28/five-step-strategy-for-student-success-with-online-learning/

How to Succeed in Group Work
http://www.sagepub.com/crispandturner2/downloads/How%20to%20Succeed%20in%20Group%20Work.pdf

Communicating Effectively
http://learningcommons.ubc.ca/student-toolkits-2/working-in-groups/communicating-effectively/

Sakai Frequently Asked Questions
http://sakaitutorials.unc.edu/module_build.php?tag=syllabus

VoiceThread Tutorial
http://sakaitutorials.unc.edu/module_build.php?tag=thread&page=Sharing%20VoiceThreads

BlueJeans Tutorial
https://sph.unc.edu/files/2013/11/SPH_Bluejeans_Basic_Instructions2015.pdf

Assignments:
1. Read course syllabus, objectives, and students assessments. Email your questions and/or concerns to Ms. Kahn. (nkahn@live.unc.edu)
2. In VoiceThread, create an audio or video post (less than two minutes) describing your experience in global health and/or program development, management, evaluation and implementation, what you have been able to accomplish, what you hope to accomplish or a goal towards addressing a particular issue.
3.Review colleagues' posts, and comment on at least five of them that are of interest, or applied to your work in some way, or have a personal connection for you.

Assignments are due by January 10

PART I: Global Health Overview

Week 1 – Global Health Context: Challenges and Opportunities

Learning Objectives**:** After completing this module, students will learn about global health goals, objectives, priorities, and interventions for achieving them, the global health context, and the challenges and opportunities presented with the Millennium Development Goals (MDGs) and the new Sustainable Development Goals (SDGs).

Watch: Global Health: Challenges and Opportunities Moving Forward in VoiceThread Week 1

Required Readings**:**
Millennium Development Goals http://www.who.int/topics/millennium_development_goals/en/ (accessed November 17, 2015)

Sustainable Development Goals Global Sustainable Development Report
http://www.who.int/topics/millennium_development_goals/en/ (accessed December 10, 2015)

Abrams EJ, Simonds RJ, Modi S, Rivadeneira E, Vaz P, Kankasa C, Tindyebwa D, Phelps BR, Bowsky S, Teasdale CA, Koumans E, Ruff AJ. PEPFAR scale-up of pediatric HIV services: innovations, achievements, and challenges J Acquir Immune Defic Syndr. 2012;60(Suppl 3):S105-12. doi: 10.1097/QAI.0b013e31825cf4f5

Chou D, Daelmans B, Jolivet RR, Kinney M, Say L on behalf of the Every Newborn Action Plan (ENAP) and Ending Preventable Maternal Mortality (EPMM) working groups. Ending preventable maternal and newborn mortality and stillbirths. BMJ 2015;351:h4255. doi: http://dx.doi.org/10.1136/bmj.h4255.

Koplan JP, Bond TC, Merson MH, Reddy KS, Rodriguez MH, Sewankambo NK, et al. for the Consortium of Universities for Global Health Executive Board. Towards a common definition of global health. Lancet 2009;373:1993-5. doi.10.1016/S0140-6736(09)60332-9.

Murray CJL. Choosing indicators for the health-related SDG targets. Lancet 2015;836(10001):1314-7.

Assignment**:**
In your own words (300 words min, 900 words max), describe one important challenge faced as we transition from the Millennium Development Goals to the Sustainable Development Goals and the implications of this challenge on global health policy and programming. Submit your responses in Sakai. Assignment is due by January 15.

Week 2 – Implementation Science for Global Health: Why is it needed?

Learning Objectives**:** After completing this module, students will have a deeper understanding of the global health context and challenges related to health systems and the health workforce in low and middle income countries. They will also better understand the role of innovations, a stronger focus on implementation of innovations, and implementation science in addressing some of these challenges.

Watch: Global Health: Challenges and Opportunities Moving Forward in VoiceThread Week 2.

Required Readings**:**
Campbell J, Cometto G, Rasanathan K, Kelley E, Syed S, Zurn P, et al. Improving the resilience and workforce of health systems for women's, children's, and adolescents' health. BMJ 2015;351:h4148. doi: http://dx.doi.org/10.1136/bmj.h4148

El-Sadr WM., Philip NM, Justman J. Letting HIV transform academia: embracing implementation science. NEJM 2014;370(18):1679-81. doi: 10.1056/NEJMp131477.

Freedman LP, Graham WJ, Brazier E, Smith JM, Ensor T, Fauveau V, et al. Practical lessons from global safe motherhood initiatives: time for a new focus on implementation. Lancet 2007;370(9595):13-9. doi:10.1016/S0140-6736(07)61581-5

Padian NS, Holmes CV, McCoy SI, Lyerle R, Bouey PD, Goosby EP. Implementation science for the US president's emergency plan for AIDS relief (PEPFAR). J Acquir Immune Defic Syndr. 2011;56(3): 199-203.

Peterson HB, Haidar J, Merialdi M, Say L, Gülmezoglu AM, Fajans PJ, et al. Preventing maternal and newborn deaths globally: using innovation and science to address challenges in implementing life-saving interventions. Obstet Gynecol 2012;120(3):636-42. doi:10.1097/AOG.0b013e3182632cc1.

World Health Organization, WHO global strategy on integrated people-centered health services 2016-2026. WHO Press Geneva. 2015.

Assignment:
Students have now been assigned to three groups (A, B, C). Prepare a voice-thread with your group's findings for the assigned task (provide text as well as graphics). Read each other's presentations and provide comment(s) as an individual on what you found most interesting. Group presentations are due by January 29, and comments by January 31.

Groups A&B: Given the health workforce challenges outlined in the paper by Campbell et al., provide recommendations for strategies (training, new competencies, community-based health workforce development programs, etc.) that might support the development of a health workforce that is more aligned with the SDGs.

Groups C: Explore the challenges and opportunities of implementing people-centered health systems in a constrained health system, especially with regard to significant shortages of health care personnel.

PART II: Implementation Science Overview

Week 3 – History and Why Implementation is Important

Learning Objectives:
After completing this module, students will be to define implementation, explain implementation in the context of moving research to practice, and describe the evolution of the field of implementation science.

Required Readings:
Burke K, Morris K, McGarrigle L. An Introductory Guide to Implementation. Centre for Effective Services. Dublin IR, 2012.
http://www.effectiveservices.org/images/uploads/file/Guide%20to%20implementation%20concepts%20and%20frameworks%20Final%20for%20web.pdf

Durlak JA, Dupre EP. Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting the implementation. Am J Community Psychol 2008; 43:327-44.

Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O. Diffusion of innovations in service organizations: systematic review and recommendations. Milbank Quart 2004; 82:581-621.

Optional Readings:
Bernfeld GA, Farrington DP, Leschied AW (Eds.) Offender rehabilitation in practice: Implementing and evaluating effective programs. London: Wiley, 2001. Chapter 1 (pp. 3-19).

Watch:
IBM Innovation Man: https://www.youtube.com/watch?v=MudaxA80eI4

Implementation science-overview:
http://media.sph.unc.edu/adobe/mch_ole/Foundations/Implementation_Science/

What is Implementation Science: http://www.implementation.eu/implementation

Implementation Quick Start:
https://unc-fpg-cdi.adobeconnect.com/_a992899727/ai-lesson-quickstart/

The Art and Science of Implementation: https://youtu.be/XGAvSsjVA8U

Assignment:
Create your elevator speech about why implementation matters. Imagine you are in the elevator with a funder or administrator and they've asked you why they should invest in implementation. This may be your one shot at getting their attention and funding! Using what you learned in this week's readings and videos, in your own words, describe why implementation matters. Support your statement with examples from the readings.

Your elevator speech should address the following:

- What are the costs of not attending to implementation
- How implementation relates to outcomes
- What are the issues related to successful implementation of any initiative/program/practice
- Why dissemination/diffusion is insufficient
- The differences between letting it happen and making it happen

Post your elevator speech using VoiceThread by Friday at 11:59pm (your speech should be no longer than 2-3mins).

Then review your classmates' elevator speeches. As you review their speeches imagine you are a funder or administrator, from the perspective of a funder or administrator select the elevator speech you would fund and list 3 reasons that this speech convinced you to invest in implementation. Your written comment is due by Sunday at 11:59pm.

Week 4 – Intro to Applied Implementation & Implementation Research

Learning Objectives:
After completing the next three modules, students will be able to identify both applied and implementation research frameworks and differentiate between applied implementation and implementation research based on their readings and review of frameworks.

Required Readings:
Bhattacharyya O, Reeves S, Zwarenstein M. What is implementation research: rationale, concepts, practices. Res Soc Work Pract 2009:19:491-502.

Fixsen DL, Naoom SF, Blase KA, Friedman RM, Wallace F. Implementation Research: A Synthesis of the Literature. Tampa, FL: Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231), 2005, 101 pp. Available at: http://ctndisseminationlibrary.org/PDF/nirnmonograph.pdf Chapter 1, (pp. 1-6).

Neta G, Glasgow RE, Carpenter CR, Grimshaw JM, Rabin BA, Fernandez ME, Brownson RC. A framework for enhancing the value of research for dissemination and implementation. AJPH 2015;105(1):49-57.

Powell BJ, Waltz TJ, Chinman MJ, Damschroeder LK, Smith JL, Mathieu MM, et al. A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project. Implement Sci 2015; 10:21.

Proctor EK, Landsverk J, Aarons G, Chambers D, Glisson C, Mittman, B. Implementation research in mental health services: An emerging science with conceptual, methodological, and training challenges. Admin Policy Ment Health 2009;36(1):24-34.

Optional Reading:
Rabin BA, Brownson RC, Haire-Joshu D, Kreuter MW, Weaver NL. A glossary for dissemination and implementation research in health. J Pub Health Mgmt Pract 2008;14(2):117-23.

Watch:
Applied Implementation - Dean L. Fixsen https://www.youtube.com/watch?v=MuKLOhqIe-g

Individual Assignment:
In your own words (200 words min) define implementation research and applied/active implementation, and then describe what you see as the similarities and differences between applied implementation and implementation research. In your response highlight some of the activities Dean Fixsen described as necessary for successful implementation and describe how these are similar and different from the constructs that Neta et al. and Proctor et al. highlight as necessary to study or assess in implementation research. Submit your response in Sakai.

Group Assignment: Due by Wednesday at 11:59 pm of Week 7
Students have now been assigned to small groups. Prepare a voice-thread presentation with your group's findings for the assigned task (provide text as well as graphics- with no more than 5 slides).

Group A: Identify and describe 3-4 key features of applied implementation that are common to two or more of the frameworks you reviewed in Week 5. You can use different frameworks for different key features. Identify each framework associated with each key feature. A table may be helpful. Finally

select an applied/active implementation framework to present to the rest of the class. (Search for additional information on your own and be sure to make appropriate citations). In your presentation include a brief overview of the framework's core features and reasons why its use may improve at least 2 of the following: planning for implementation, the design process of putting an intervention in place in a specific context, assessing or evaluating how well an intervention has been implemented, or improving the implementation of the innovation.

Groups B & C: Identify and describe 3-4 key features of implementation research that are common to two or more of the frameworks you reviewed in Week 6. You can use different frameworks for different key features. Identify each framework associated with each key feature. A table may be helpful.
Finally select an implementation research framework to present to the rest of the class. (Search for additional information on your own and be sure to make appropriate citations). In your presentation include a brief overview of the framework's core features and reasons why its use may improve at least 2 of the following: the research process, research questions, logic models, interpretation of the intervention's evaluation or research results, or improve the implementation of the innovation.

Week 5 – Applied Implementation Frameworks

Learning Objectives:
Identify both applied and implementation research frameworks and differentiate between applied implementation and implementation research based on their readings and review of frameworks.

Required Readings:
Kilbourne AM, Neumann MS, Pincus HA, Bauer MS, Stall R. Implementing evidence-based interventions in health care: Application of the replicating effective programs framework. Implementation Science. 2007; 2:42.

Metz A, Bartley L. Active Implementation Frameworks for Program Success: How to Use Implementation Science to Improve Outcomes for Children. Zero to Three. Chapel Hill, NC. 2012;March:11-18.

Meyers DC, Katz J, Chien V, Wandersman A, Scaccia JP, Wright A. Practical implementation science: Developing and piloting the quality implementation tool. Am J Community Psychol. 2012;50:481–96.

Wandersman A, Duffy J, Flaspohler P, et al. Bridging the gap between prevention research and practice: the interactive systems framework for dissemination and implementation. Am J Community Psychol. 2008;41(3-4):171–81.

Watch:
Video Vignette 13: Active Implementation & Scaling up: http://implementation.fpg.unc.edu/module-1/rationale

An Overview of Active Implementation Frameworks: http://implementation.fpg.unc.edu/module-1

Group Assignment: Due by Wednesday of Week 6
After completing this week's readings and the Overview of Active Implementation Frameworks module, read "Big Med", by Atwul Gawande, http://www.newyorker.com/magazine/2012/08/13/big-med and hold a videoconference discussion session for your group using BlueJeans.

During the session identify the key points made in the article and answer the following two questions:
1) What are the similarities between the Cheesecake Factory, hospital systems, and public health/health system? (Identify at least 4)
2) What active implementation frameworks or components were discussed in this article? (Identify at least three)
At the end of your discussion, have one person summarize the answers and turn in the answers for the group using the assignment tool on Sakai.

Week 6 – Implementation Research Frameworks

Required Readings:
Chaudoir SR, Dugan AG, Barr CH. Measuring factors affecting implementation of health innovations: A systematic review of structural, organizational, provider, patient, and innovation level measures. Implementation Science. 2013;8:22.

Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: The RE-AIM framework. Am J Public Health. 1999;89(9):1322–7.

McQueen L, Mittman B, Demakis J. Overview of the Veterans Health Administration (VHA) Quality Enhancement Research Initiative (QUERI). J Am Med Informatics Assoc. 2004;11(5):339–344.

Quality Enhancement Research Initiative (QUERI) Implementation Guide, Department of Veterans Health Administration, Health Services Research & Development, 2013. Section 1, Part 1

Watch:
John Landsverk: Mixed Methods and Measures in Implementation Research:
https://www.youtube.com/watch?v=uT5nnyMGobQ

PART III: Implementation in Practice: Creating Conditions for Successful Implementation

Week 7 – Common Factors Related to Successful Implementation

Learning Objectives:
After completing this module, students will be able to identify and describe common factors required for success implementation across implementation science frameworks, assess and discuss differences between IS frameworks, and describe common implementation processes (steps and activities).

Required Readings:
Aarons GA., Hurlburt M, Horowitz SM. Advancing a conceptual model for evidence-based practice implementation in public service sectors. Administration and Policy in Mental Health and Mental Health Services Research (Adm Policy Ment Health) 2011;38:4-23.

Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. Implementation Science. 2009; 4:50.

Meyers DC, Durlak J, Wandersman A. The quality implementation framework: A synthesis of critical steps in the implementation process. Am J Community Psychol. 2012;50(3-4):462–78.

Metz A, Naoom SF, Halle T, Bartley L. An integrated stage-based framework for implementation of early childhood programs and systems (OPRE Research Brief). Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. 2015. (pp1-10)

Tabak RG, Khoong EC, Chambers DA, Brownson RC. Bridging research and practice: models for dissemination and implementation research. Am J Prev Med. 2012; 43(3): 337-50.

Watch:
Advanced Topics for Implementation Science Research: Use of theory in implementation research: EPIS https://www.youtube.com/watch?v=OYw6g0F1rTs

Individual Assignment:
Based on this week's readings, which included reviews of several implementation frameworks, identify common factors related to successful implementation across these reviews of frameworks, as well as common implementation processes (steps and activities). The OPRE brief by Metz et al. provides good guidance on common factors and activities: It may be helpful to use this article as the starting point and align factors from other frameworks in the remaining articles with those provided in the Metz et al. article. Please be sure to cite and use examples from the readings in your response. A table may be helpful. Submit your response in Sakai.

Week 8 – Understanding the Implementation Science Context

Learning Objectives:
After completing this module, students will be able to define inner and outer context, identify and describe the multi-level context for implementation of an evidence-based program; identify and describe key actors, implementation strategies, and outcomes at each level of the system.

Required Readings:
Chambers D, Glasgow R, Stange K. The dynamic sustainability framework: addressing the paradox of sustainment amid ongoing change. Implement Sci 2013;8:117

Edwards N, Barker PM. The Importance of Context in Implementation Research J Acquir Immune Defic Syndr 2014;67:S157–S162) http://www.who.int/hiv/pub/journal_articles/inspire_10.pdf

Jacobs SR, Weiner BJ, Bunger AC. Context matters: measuring implementation climate among individuals and groups. Implement Sci, 2014;9:46.

Metz A. Implementation Brief-The Potential of Co-Creation in Implementation Science. NIRN 2015. http://nirn.fpg.unc.edu/sites/nirn.fpg.unc.edu/files/resources/NIRN-Metz-ImplementationBreif-CoCreation.pdf

Paulsell D, Austin AMB, Lokteff M. Measuring implementation of early childhood interventions at multiple system levels (OPRE Research Brief OPRE 2013-16). Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. (pp 6-15) 2013.
https://www.acf.hhs.gov/sites/default/files/opre/levels_brief_final_002.pdf

Optional Readings:
Metz A, Albers B. What does it take? How federal initiatives can support the implementation of evidence-based programs to improve outcomes for adolescents. J Adolesc Health. 2014;54: S92-S96.

Naoom SF, Wallace F, Blase KA, Haines M., Fixsen DL. Implementation in the Real World-Taking Programs and Practices to Scale: Concept Mapping Report. Tampa, FL: National Implementation Research Network, Louis de la Parte Florida Mental Health Institute, University of South Florida. 2004.

Group Assignment: Due by Wednesday of Week 9
Based on the readings, develop a concept map/picture of the context in which real world implementation exists (one page). Be sure to think about and represent the systems, inner and outer contexts, partners, and levels involved, as well as how they interact. Prepare a voice-thread to share and explain your group's concept map (provide text as well as graphics).

Week 9 – Evidence for Decision-Making

Learning Objectives**:** After completing this module, students will understand the concepts of evidence-based medicine, evidence-based public health practice, and evidence-based implementation.

Required Readings:
Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: A fundamental concept for public health practice. Annu Rev Public Health 2009;30:175-201. doi:10.1146\annurev.pubhealth.031308.100134.

Fraser MW, Galinsky MJ. Steps in intervention research: designing and developing social programs. Res Soc Work Pract2010;20(5);459–66

Mitchell PF. Evidence-based practice in real-world services for young people with complex needs: new opportunities suggested by recent implementation science. Child Youth Srv Rvw, 2011; 33:207-16. doi:10.1016/j.childyouth.2010.10.003.

Mohlajee AP, Curtis KM, Flanagan RG, Rinehart W, Gaffield ML, Peterson HB. Keeping up with evidence: a new system for WHO's evidence-based family planning guidance. Am J Prev Med, 2005;28(5):483-90. doi:10.1016/j.amepre.2005.02.008

Puddy RW, Wilkins N. Understanding evidence part 1: best available research evidence. a guide to the continuum of evidence of effectiveness. Atlanta, GA: Centers for Disease Control and Prevention. 2011.

Sackett DL, Rosenberg WMC, Gray JAM, Haynes RB, Richardson WS. Evidence based medicine: what it is and what it isn't. BMJ 1996;312(13 Jan):71-72.

Yamey G, Feachem R: Evidence-based policy making in global health-the payoffs and pitfalls. Evidence-Based Med 2011;16(4):97-9

Watch:
http://blog.wtgrantfoundation.org/post/132023099542/evidence-at-the-crossroads-pt-1-what-works?utm_content=buffered718&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

Optional Resources:
SUPPORT (http://www.support-collaboration.org)
EVIPNET (http://www.who.int/rcp/evipnet)
E2Pi (http://www.e2pi.org)

Individual Assignment:
Recognizing the limitations of randomized controlled trials (RCTs) in evaluating programs in real world settings, the global public health community is increasingly asking for new research methodologies to help to shed the light on implementation or what's been referred to as the "black box". In your own words (300 min, 600 max), and based on your learning from the course so far, describe how implementation can help to improve evidence for policy making. Assignment due by March 11.

Week 10 – Stages and Phases of Implementation

Learning Objectives:
After completing this module, students will be able to identify and describe the common stages/phases of implementation, describe key activities in each stage of implementation, and develop a plan to apply this knowledge to assess the implementation stage of initiatives in global health.

Required Readings:
Aarons GA, Hurlburt M, Horowitz SM. Advancing a conceptual model for evidence-based practice implementation in public service sectors. Adm Policy Ment Health. 2011;38:4-23.

Fixsen DL, Naoom SF, Blase KA, Friedman RM, Wallace F. Implementation Research: A Synthesis of the Literature. Tampa, FL: Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231), 2005, 101 pp. Chapter 3 (pp. 11– 21)

Saldana L, Chamberlain P, Wang W, Brown CH. Predicting Program Start-Up using the Stages of Implementation Measure. Admin Policy Ment Health 2012;39(6):419-25.

Van Dyke M, Naoom S. The Critical role of state agencies in the age of evidence-based approaches: The challenge of new expectations. J Evidence-based Soc Work. Published online: 14 Jun 2015

Watch**:**
Stages of Implementation Module- http://implementation.fpg.unc.edu/module-4

Stages of Implementation Analysis: Where are we?
https://unc-fpg-cdi.adobeconnect.com/_a992899727/ai-lesson7/

Individual Assignment: In your own words (500 word max) identify and describe the common stages/phases of implementation and some key activities in each stage. Be sure to cite and use examples from your readings. Next, develop a survey or checklist tool (three page max) that you could use to evaluate the stage of implementation for a current initiative in global health. Submit your responses in Sakai.

PART IV: Implementation Quality

Week 11 – Implementation Capacity

Learning Objectives:
After completing this module, students will be able to identify and describe the drivers of successful implementation, describe implementation strategies and practices, and apply this knowledge to assess the implementation drivers in practice.

Required Readings:
Fixsen DL, Naoom SF, Blase KA, Friedman RM, Wallace F. Implementation Research: A Synthesis of the Literature. Tampa, FL: Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231), 2005, 101 pp. (Chapter 4: pp 23-34).

Metz A, Bartley L. Active Implementation Frameworks for Program Success: How to Use Implementation Science to Improve Outcomes for Children. Zero to Three, Chapel Hill, NC. 2012;March:11-18. (Repeated Reading)

Metz AM, Bartley L, Ball H, Wilson D, Naoom SF, Redmond P. Active Implementation Frameworks (AIF) for Successful Service Delivery: Catawba County Child Wellbeing Project. Res Social Work Prac. 2015;24(4):415-22.

Watch:
Implementation Drivers:
http://implementation.fpg.unc.edu/module-2

Drivers Ed-Selection:
https://unc-fpg-cdi.adobeconnect.com/_a992899727/drivers-ed-selection/

Case Example: Reflection and Application of Implementation Drivers in Minnesota - Vicky Weinberg, Minnesota Department of Education- http://implementation.fpg.unc.edu/resources/video-vignette-08-activity-25a

Individual Assignment**:**
Part 1: Complete the Capstone Quiz for Module 2 (Implementation Drivers), which you reviewed this week.

Part 2: Using content from Module 2 and the Implementation Drivers diagram, try summarizing the Implementation Drivers and the components in a few short sentences. Imagine you have 2-3 minutes to explain Implementation Drivers to a group or colleague. The timer is running! Post your summary using VoiceThread.

Part 3: As you listen to the 'Case Example: Reflection and Application of Implementation Drivers in Minnesota' video clip, check off Implementation Drivers as they are discussed (use the implementation drivers figure to help you). Notice if all the Implementation Drivers are discussed.
Which driver(s) are discussed the most?
Which driver(s) are discussed the least?

Submit your response in Sakai.

Week 12 – Evaluation

Learning Objectives:
After completing this module, students will be able to define core components, as they relate to interventions; define fidelity and describe the common factors that comprise the construct of fidelity; explain the role of fidelity in explaining program outcomes. Students will also be able to discriminate between evaluating implementation and evaluating outcomes

Required Readings:
Blasé K, Fixsen D. Core Intervention Components: identifying and operationalizing what makes programs work. ASPE Research Brief.
http://aspe.hhs.gov/hsp/13/KeyIssuesforChildrenYouth/CoreIntervention/rb_CoreIntervention.pdf

Dane AV, Schneider BH. Program integrity in primary and early secondary prevention: Are implementation effects out of control? Clin Psychol Rev. 1998;18(1):23-45.

Dusenbury L, Brannigan R, Falco M and Hansen WB. A review of research on fidelity of implementation: implications for drug abuse prevention in school settings. Health Educ Res 2003; 18(2):237–56.

Evaluating Policy Implementation: http://www.cdc.gov/injury/pdfs/policy/Brief%204-a.pdf

Mihalic S. (2004). The importance of implementation fidelity. Emotional and Behavioral Disorders in Youth, 2004;4:83-105. http://www.blueprintsprograms.com/publications/EBDY_4-4--Mihalic.pdf

Optional Readings:
Durlak JA, Dupre EP. Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting the implementation. Am J Community Psychol 2008;43:327-50. (Repeated reading)

Watch /Listen:
Evaluating Implementation and Performance to Improve Program Quality
http://dwwlibrary.wested.org/media/evaluating-implementation-and-performance-to-impro

Fidelity and Implementation -
http://unc-fpg-cdi.adobeconnect.com/fidelity-and-implementation/

Individual Assignment: Based on your readings from this week, in 300-500 words, articulate the importance and role of fidelity in explaining program outcomes and why assessing fidelity is key to understanding outcomes. Please also explain the difference between evaluating program outcomes and evaluating implementation outcomes. Also describe some of the barriers and facilitators related to assessing fidelity in everyday service settings vs. research projects. Be sure to cite and use examples from the readings. Although the Durlak and Dupre reading is optional, it is a repeated reading from a previous week, you will find it helpful in your assignment. Submit your response in Sakai.

Group Assignment: Due by 11:59pm on Wednesday of Week 14
Search online for a fidelity measure assessing any intervention within the fields of human services and share it via VoiceThread with the rest of the class. Using the written comment feature in VoiceThread, please critique the measure and comment on the extent to which the fidelity measure addresses the factors related to fidelity as described by Dane & Schneider and Dusenbury et al., and in cases where the fidelity measure does not (or does not capture them well) discuss how you would improve the measure. NOTE:

Terms that may be helpful in your search: intervention fidelity checklist, fidelity checklist, fidelity assessment, and fidelity measure. Also, you'll have luck finding measures in the fields of education, adult mental health and children's mental health, as well as primary and secondary prevention (drug and substance abuse programs, bullying programs, teen dating violence programs).

PART IV: Implementation Quality

Week 13 – Continuous Quality Improvement

Learning Objectives: After completing this module, students will understand challenges related to improvement research. They will also learn the role of quality improvement in maximizing the impact of a newly implemented health practice or program as well as how to identify and develop changes that will result in improvement.

Module 5: Improvement Cycles
http://implementation.fpg.unc.edu/module-5

Lesson 6: The PDSA Cycle
https://unc-fpg-cdi.adobeconnect.com/_a992899727/ai-lesson6/

Required Readings**:**
Leatherman S, Ferris TG, Berwick D, Omaswa F, Crisp N. The role of quality improvement in strengthening health systems in developing countries. Int J Qual Health Care 2010; 22(4):237-43.

Øvretveit J, Gustafson D. Evaluation of quality improvement programmes. Qual Saf Health Care 2002;11(3):270-5.

Taylor MJ, McNicholas C, Nicolay C, Darzi A, Bel D, Reed JE. (2014). Systematic review of the application of the plan–do–study–act method to improve quality in healthcare. BMJ Qual Saf 2013;23:290-8.

Wandersman A, Alia KA, Cook B, Ramaswamy R. Integrating empowerment evaluation and quality improvement to achieve healthcare improvement outcomes. BMJ Qual Saf 2015;0:1–8. doi:10.1136/bmjqs-2014-003525

Individual Assignment**:**
In your own words (300 min, 600 max), describe to a program manager how quality improvement methodologies such as PDSA cycles could drive change, improve quality and ensure consistency in delivering health services.

PART V: Strategies for Scaling and Sustaining

Week 14 – Scalability and Sustainability

Learning Objectives**:** After completing this module, students will understand the different scale up perspectives and methods intended to increase the impact of global health programs. They will also understand issues regarding financial sustainability and why some health programs fail after implementation.

Watch this Video:
David Chambers: Advancing the Science of Sustainability - https://www.youtube.com/watch?v=N6PUZ4Pxh0M

Required Readings**:**
Chambers DA, Glasgow RE, Stange, KC. The dynamic sustainability framework: addressing the paradox of sustainment amid ongoing change. Implement Sci 2013;8:117.

Fixsen DL, Blase K, Horner R, Sims B, Sugai G. State implementation and scaling-up of evidence-based practices center. Scaling-up Brief 2013;3:1-4.

Khatri GR, Frieden TR. Rapid DOTS expansion in India. Bulletin of the World Health Organization, 2002;80(6):457-63.
Melnyk BM, Fineout-Overholt E, Gallagher-Ford L, Stillwell SB. Sustaining evidence-based practice through organizational policies and an innovative model. AJN 2011;111(9):57-60.

Milat AJ, Bauman A, Redman S. Narrative review of models and success factors for scaling up public health interventions. Implement Sci 2015;10:113. doi:10.1186/s13012-015-0301-6.

Stirman SW, Kimberly J, Cook N, Calloway A, Castro F, Charns M. The sustainability of new programs and innovations: a review of the empirical literature and recommendations for future research. Implement Sci 2012;7:17.

USAID Center for Accelerating Innovation and Impact. Idea to Impact: A Guide to Introduction and Scale of Global Health Innovations and the companion Market Shaping Primer. Retrieved from www.usaid.gov/cii. 2015.

World Health Organization, ExpandNet. Nine steps for developing a scaling-up strategy. Geneva, 2010.

Yang A, Farmer PE, McGahan AM. 'Sustainability' in global health. Glob Public Health. 2010;5(2):129-35.

Optional Readings:
Simmons R, Fajans P, Ghiron L. (eds) Scaling up health service delivery: from pilot innovations to policies and programmes. World Health Organization ExpandNet, Geneva, 2007.

Spicer N, Bhattacharya D, Dimka R, Fanta F, Mangham-Jefferies L, Schellenberg J, et al. Scaling-up is a craft not a science: Catalysing scale-up of health innovations in Ethiopia, India and Nigeria. Soc Sci Med 2014;121:30-3.

Assignment**:**
Prepare a voice-thread with your group's findings for the assigned task (provide text as well as graphics). Choose a global health intervention or program and describe challenges related to scalability and sustainability. Provide recommendations (up to 5) for addressing these challenges.

Week 15 – Lessons Learned in Global Health Implementation

Watch: Concluding remarks by Dr. Herbert Peterson

Final group presentations due by May 6, 4:00 PM