Fundamentals of Implementation Science in Global Health

Dates: September 25 – December 3, 2023

Location: https://learn.edgh.uw.edu/course/view.php?id=61

Instructor/s

Dr. **Arianna Rubin Means**, PhD, MPH
Assistant Professor, Department of Global Health
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Dr. Means is faculty in the Department of Global Health at the University of Washington where her research focuses on generating operational evidence needed to improve the delivery of infectious disease programs in low and middle income countries, particularly the neglected tropical diseases. She is currently the implementation science lead for the DeWorm3 Project, a series of large hybrid cluster randomized trials in Benin, India, and Malawi. She designs and manages the DeWorm3 Project's qualitative research studies, organizational readiness surveys, process mapping studies, and economic evaluations. A trained epidemiologist and implementation scientist, her area of expertise is building evaluation of implementation outcomes into clinically oriented research to ensure that findings easily translate into the evidence needed to inform policy and guidelines. Dr. Means has previously worked in Kenya, Zambia, Nigeria, Tanzania, and Uganda. Dr. Means is a Scientific Associate at the Natural History Museum in London and an Associate Editor for PLOS Neglected Tropical Diseases.

Student Support Specialist

Dewa Shrestha Greenleaf, MA (edgh@uw.edu)

Dewa Shrestha Greenleaf (she/her/hers) is a Student Support Specialist in the Department of Global Health e-Learning at the University of Washington. Born in Kathmandu, Nepal, Dewa immigrated to the US as a child. She completed her Master's degree in Health Promotion at the University of Iowa. Her graduate work focused on understanding how researchers examine health issues in immigrant and refugee populations. She also worked on a longitudinal study to examine the impact of physical activity on the bone development of children.

Description

In the United States, it's estimated that it takes an average of 17 years from discovery of an intervention to its implementation at scale. This is called the know-do gap. For interventions outside of the US, this know-do gap is even larger. The goal of implementation science is to close the know-do gap.

In this course, you will learn how to use a systematic, scientific approach to find out what works and translate this information into on-the-ground policies and programs for those who need it. By the end, you will know how to apply high quality evaluation and assessment methods to your health interventions and identify and address the barriers to effective replication and scale-up of evidence-based interventions. The purpose of this course is to provide practical implementation science training for health professionals working in global health settings, particularly low- and middle-income country settings.

The 10-week course is comprised of a variety of online formats, including: pre-recorded video lectures from experts in the field, selected reading assignments, quizzes, discussion forums, and a final project.

Each week, you will be presented with a module exploring an implementation science methodology. These modules define the conceptual framework and available methodologies for implementation science.

Course Learning Objectives

This course explores the current literature on implementation science; introduces strategies for using innovative scientific methods and tools of diverse disciplines to understand and overcome impediments to implementation and facilitate scale-up; and uses applied case studies to identify and contextualize implementation successes and failures. At the end of this course the student should be able to:

1. Identify the major factors that limit the translation of high-quality evidence into effective health programs and describe the role of complementary implementation science research methods in the development of evidence-based health programs and policies.
2. Explain appropriate research and evaluation methods to overcome impediments to implementation and facilitate timely scale-up of proven interventions with high levels of fidelity and effectiveness.
3. Contextualize and explain real-world examples where sound interventions failed or succeeded.
4. Describe at least one framework for designing successful implementation strategies and apply the framework to a real-world health problem.

Course Topics

Module 1: Introduction to Implementation Science (IS) and IS Data Sources
- Describe importance of IS.
- Summarize a framework for using IS to facilitate successful program implementation.
- Recognize value of core systems of information collection to monitor disease and health programs; and
- Identify barriers to implementing robust health information systems.

Module 2: Impact Evaluation and IS Study Designs
- Describe impact evaluation methods and study designs used to evaluate effects of programs at scale.
- Distinguish between internal validity and external validity.
- Recognize impact evaluations in the design of public health policies.

Module 3: Economic Evaluation
- Overview of economic evaluation methods.
- Overview of conducting cost-effectiveness evaluations.

Module 4: Qualitative Health System Research
- Identify qualitative data collection methods and sampling approaches.
- Identify how qualitative research design and methods can be developed to maximize rigor, validity, and reliability of findings in implementation studies.
- Describe benefits and limitations of mixing qualitative and quantitative methods in operational and IS study designs.

Module 5: Operations Research
- Identify basic lean implementation and application to healthcare settings: waste and time, value steam mapping, process improvement/Kaizen.
- Recognize other potential applications of modeling for operations research.

Module 6: Quality Improvement as a Management Tool
- Define Plan – Do –Study – Act cycles.
- Use quality improvement to facilitate broad scale-up of health programs.

Module 7: Stakeholder and Policy Analysis
- Describe the stages of policy.
- Identify and map key stakeholders in a policy issue.

Module 8: Dissemination Research
- Familiarize yourself with IS frameworks for dissemination of evidence-based health promotion practices.
- Discuss need for dissemination research and describe the roles that researchers play in dissemination.

Module 9: Social Marketing of implementation strategies
- Explain process of developing an effective social marketing strategy.
- Assess incremental value of social marketing strategies in health program development and execution.

Module 10: Organizational Readiness
- Explain theory behind and importance of organizational readiness.

Target Audience

This course is designed for health care and public health professionals who have at least a master's degree in a health-related field or in the social sciences, or commensurate professional experience. If participants have a keen interest in the topic and professional work experience with elements of implementation science, they may also be a good candidate for the course.

Participants are from multiple countries around the world and include health care workers, early to mid-career clinical and public health managers, and program directors.

Format

This is a self-paced, online modular course divided into 10 weeks.

This course will be delivered entirely online through a course management system named (Moodle).

Participants are expected to review the pre-recorded weekly lectures, complete assigned readings and activities, and participate in discussion via the discussion forums. Most participants will also meet with a local study group that is led by a site facilitator. This is meant to increase opportunities for discussion about the relevance of the material to the local setting. Completion of a final course evaluation is strongly encouraged for successful completion of the course.

If you have any questions, please look at the course FAQ. If your question isn't answered there, please email edgh@uw.edu.

Materials

All reading materials for this course are provided, in PDF form, or by linking to online sources.

Grading

To be successful in the course you will need to complete all of the learning activities listed.

Final grades will be calculated as follows:

Activity	Percentage
Baseline Project Selection Assignment (20 points)	20%
Assignments (2 points each, 10 total)	10%
Discussion Forums (2 points each, 5 total)	20%
Quizzes (2 points each, 10 total)	20%
Final Project (30 points, 1 total)	40%
Total	**100%**

Submitting Assignments

All assignments for this course will be submitted electronically through Moodle. Assignments must be submitted by the given deadline.

Viewing Grades in Moodle

Points you receive for graded activities will be posted to the Moodle Grade Book.

Quizzes will be graded upon submission. Discussion and assignment grades are posted by the end of the day Monday after an assignment is due. If you submit your assignment late (after the due date), please note that your grade will be updated approximately 10 days after the due date. All due dates and times are in Pacific Time.

Assignments

Baseline Project Selection Assignment: During week 1 decide upon a health topic of focus for your final project, country of focus, and implementation objective.

Writing Assignments: Weeks 2-10 you will respond to a short writing assignment, meant to help build your final project. Each are worth 1 point each (total of 9 points).

Discussion Forums

Your participation in the discussion forums is critical for maximizing your learning experiences in this course. Please refer to the information on posting to discussion forums to read about expectations for posting.

Quizzes

Quizzes will open when the module opens. You will have 2 attempts on each quiz. The learning management system will record your highest score.

Note, there is **no final exam**.

Final Project

Throughout the course you will apply methodological approaches and frameworks to develop a final project. The final project is intended to be an application of the information presented in the prior 10-weeks of the course. You will be asked to incorporate key concepts from throughout the course into your project. Your project should be approached from the perspective of a Minster of Health or Director of a large national institution presenting a proposal to Parliament. In other words, assume that even very basic information is required.

Certificate of Completion

Active participation is required in order to receive a Certificate of Completion for the course. To receive a Certificate of Completion from the University of Washington, USA, you must pass the course, which means getting a final score of 70% or higher on all graded activities.

If you are a site participant, you must earn a qualifying score and attend 3 of the site meetings your site will hold. Attendance at more, if offered, is encouraged but not required to meet the site participation requirement. After the course, site participant certificates will be sent to site coordinators for distribution.

Late Work Policy

Assignments will be due at the end of each module. If you are unable to submit your assignment by the due date, you may still submit it up to one week late without penalty. After the one-week grace period, the assignment will close and it can no longer be accepted for grading.

Commitment to Academic Integrity

Commit to Integrity

As a participant in this course, you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom.

Definitions

"Plagiarism is defined as the use of the words, ideas, diagrams, etc., of publicly available work without appropriately acknowledging the sources of these materials. This definition constitutes plagiarism whether it is intentional or unintentional and whether it is the work of another or your own, previously published work. Plagiarism is a very serious offense that the University of Washington's eDGH Program does not tolerate."

Enforcement

Corroborated reports of plagiarism, cheating, or other misconduct will result in no credit on that assignment and may result in suspension from the course and ban from participation in future courses.

Religious Accommodations

eDGH uses the UW's policy on religious accommodations for participants who need to make special arrangements in meeting course deadlines due to reasons of faith or conscience or for religious activities. Accommodations must be requested within the first two weeks of this course by contacting edgh@uw.edu.

Copyright Statement

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