

# MHCH 723 – Introduction to Monitoring and Evaluation of MCH Programs

Fall 2014  
Mondays, 9:00am-11:50  
Rosenau 228

## Instructors:

**Janine Barden-O'Fallon, PhD**  
e-mail: [bardenof@email.unc.edu](mailto:bardenof@email.unc.edu)  
Phone: 919-445-0420  
Office Hours: by appointment

**Nancy Williamson, Ph.D.**  
email: [Nwilliamson@msn.com](mailto:Nwilliamson@msn.com)  
Phone: 919-929-7312  
Office Hours: by appointment

**Ilene Speizer, Ph.D.**  
email: [ilene\\_speizer@unc.edu](mailto:ilene_speizer@unc.edu)  
Phone: 919-966-7411  
Rosenau 405  
Office Hours: Mondays, 12:00-2:00  
(or by appointment)

**Teaching Assistant:**  
**Chinelo Okigbo, MBBS, MPH**  
email: [cokigbo@live.unc.edu](mailto:cokigbo@live.unc.edu)  
Phone: 919-338-9287  
Office Hours: by appointment

## I. COURSE PURPOSE

This course provides students with the basic concepts and methodologies needed to undertake monitoring and evaluation of programs in maternal and child health (MCH) both domestically and internationally. The course covers data use, frameworks, program monitoring, indicators, information sources, evaluation designs, and implementation science. The focus of the course is on practical issues for undertaking program monitoring and evaluation on MCH programs.

## II. COURSE OBJECTIVES

By the end of the course, students should be able to:

- A. Describe the role of monitoring and evaluation in the design of public health programs;
- B. Given a set of MCH program objectives and activities, formulate a conceptual framework and a logic model for how the program or intervention will lead to specific health outcomes and impacts;
- C. Describe the elements (inputs, processes, outputs, outcomes) that provide the context for monitoring and evaluation activities;
- D. Describe the primary types of monitoring systems, sources of data, and their uses;
- E. Develop program indicators based on an understanding of program specific criteria;
- F. Determine the types of programs and questions that require formative research, operations research, process evaluation, and outcome evaluations;
- G. Describe evaluation designs and their relative strengths and weaknesses;
- H. Discuss the issues involved with measuring program impact; and
- I. Develop a monitoring and evaluation plan for an MCH program.

### III. CORE COMPETENCIES

The following is a list of competencies that this course will provide to help support the SPH core competencies as part of the MPH training program.

- **Communication & Informatics** - Effective written and oral communication skills for audiences with varying knowledge and skills in interpreting health information; Collective information sharing, discussion and problem solving.
- **Diversity & Cultural Competency** - Effective and productive skills in working with diverse individuals; develop, implement, and/or contribute to effective public health programming and conduct research that integrates: (1) knowledge levels of health access among individuals and within communities and (2) culturally-appropriate methods for conducting practice or research.
- **Leadership** – Basic team building, negotiation, and conflict management skills; productive organizational, time-management and administrative skills.
- **Professionalism & Ethics** – Ability to apply evidence-based concepts in public health decision-making.
- **Program Planning** - Discuss social, behavioral, environmental, and biological factors that contribute to specific individual and community health outcomes.
- **Systems Thinking** - Respond to identified public health needs within appropriate contextual setting.

### IV. COURSE REQUIREMENTS

Students are REQUIRED to do the M&E 101 certificate offered by MEASURE Evaluation - this program takes about two hours to complete. You can find the information on the certificate at:

<https://training.measureevaluation.org/certificate-courses/m-e-fundamentals-en>

Students should come to the first class with their certificate in hand. Students are expected to attend class, participate actively in class and a group project, and perform satisfactorily on two course exams. The basis for the course grade will be two exams (25% each), a group project (25% of final grade), in-class presentation of the group project (10%); and class participation (15%). Group projects are due one week after the last class. Points will be deducted for delayed submissions. Please note: all students are expected to complete the online course evaluation within two weeks of course completion. Students are encouraged to bring laptops with the lecture notes and for taking the midterm and final exam but **not** for surfing the internet during class!!!

### V. COURSE MATERIALS

There are two types of course materials: 1) resource materials; and 2) lesson-specific materials (see syllabus below).

#### Resource Materials

The main resources for this course are specific to the MCH area.

Measuring Success Toolkit (designed by the Measurement, Learning & Evaluation project and MEASURE Evaluation project) – This toolkit provides guidance on how to use data to plan a health program and to measure its success through monitoring and evaluation (M&E). It also offers links to important M&E-related resources. Basic introductions are provided throughout the toolkit, as well as a glossary of planning, monitoring and evaluation terms, for those less familiar with the concepts and demands of using data for program planning and M&E. <http://toolkits.urbanreproductivehealth.org/toolkits/measuring-success>

Speizer IS, Irani I, Telfair J, Samandari G. Monitoring and Evaluation for Global Maternal and Child Health Programs, Chapter 19 in Jonathan Kotch, editor. *Maternal and Child Health: Programs, Problems and Policies in Public Health*. 3rd ed. Sudbury, MA: Jones and Bartlett Publishers; 2012.

*A Guide to Monitoring and Evaluating Adolescent Reproductive Health Programs* by S. Adamchak and colleagues. This book was developed under the FOCUS on Young Adults Project and is available online at:

Part 1: <http://www.pathfind.org/pf/pubs/focus/guidesandtools/PDF/Part%20I.pdf>

Part 2: <http://www.pathfind.org/pf/pubs/focus/guidesandtools/PDF/Part%20II.pdf>

(Part 2 has details on data collection instruments and tips for data collection)

MEASURE Evaluation - Family Planning and Reproductive Health Indicators Database

[http://www.cpc.unc.edu/measure/prh/rh\\_indicators](http://www.cpc.unc.edu/measure/prh/rh_indicators)

Rehle T, Saidel T, Mills S, Magnani R (eds.). *Evaluating Programs for HIV/AIDS Prevention and Care in Developing Countries: A Handbook for Program Managers and Decision Makers*. (On Sakai)

Gage, Anastasia J., Disha Ali, and Chiho Suzuki. 2005. *A Guide for Monitoring and Evaluating Child Health Programs*. MEASURE Evaluation. Carolina Population Center, University of North Carolina at Chapel Hill. Available at:

<http://www.cpc.unc.edu/measure/publications/pdf/ms-05-15.pdf>

**Other useful course materials (as a resource):**

Foreit K, Moreland S, LaFond A. (2006) Data Demand and Information Use in the Health Sector: Strategies and Tools

<http://www.cpc.unc.edu/measure/publications/pdf/ms-06-16b.pdf>

Rossi, P., M. Lipsey, and H. Freeman (RLF). *A Systematic Approach*. 7th edition 2004: Thousand Oaks, CA; Sage.

Patton, M.Q. (2011). Chapter 1, Developmental Evaluation Defined and Positioned. In Patton, M.Q., *Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use*. New York, NY: Guilford Publications.

MacDonald, G., Starr, G., Schooley, M., et al. *Introduction to Program Evaluation for Comprehensive Tobacco Control Programs*. November 2001. Centers for Disease Control and Prevention. Available at:

[http://www.cdc.gov/tobacco/tobacco\\_control\\_programs/surveillance\\_evaluation/evaluation\\_manual/pdfs/evaluation.pdf](http://www.cdc.gov/tobacco/tobacco_control_programs/surveillance_evaluation/evaluation_manual/pdfs/evaluation.pdf)

Cost effectiveness: Cost Effectiveness Analysis of Behavior Change Intervention

<http://communities.usaidallnet.gov/fa/node/1398>

World Bank. *Institutionalizing Impact Evaluation Within the Framework of a Monitoring and Evaluation System*. 2009.

[http://www.worldbank.org/ieq/ecd/docs/inst\\_ie\\_framework\\_me.pdf?cid=IEG\\_AnnouncementsEN\\_P\\_EXT\\_MISC\\_CCECD1](http://www.worldbank.org/ieq/ecd/docs/inst_ie_framework_me.pdf?cid=IEG_AnnouncementsEN_P_EXT_MISC_CCECD1)

Fisher, Andrew A, James R Foreit with John Laing, John Stoeckel, and John Townsend. Designing HIV/AIDS Intervention Studies. An Operating Research Handbook. The Population Council, NY, NY 2002.  
<http://www.popcouncil.org/pdfs/horizons/orhivaidshndbk.pdf>

## LECTURES & READINGS

<p><b>August 25<sup>th</sup></b> - INTRO TO COURSE OBJECTIVES; OVERVIEW OF M&amp;E; DATA DEMAND AND INFORMATION UTILIZATION</p> <p><i>Janine Barden-O'Fallon</i></p> <p><i>Identification of in-class groups</i></p>	<p><b>Readings</b> - Speizer IS, Irani I, Telfair J, Samandari G. Monitoring and Evaluation for Global Maternal and Child Health Programs, Chapter 19.</p> <p>Measuring Success Toolkit:  <a href="http://toolkits.urbanreproductivehealth.org/toolkits/measuring-success">http://toolkits.urbanreproductivehealth.org/toolkits/measuring-success</a> (take a look).</p> <p>Performance Management Plans: A Checklist for Quality Assessment. MEASURE Evaluation PRH, September 2012 MS-12-53. (<a href="http://www.cpc.unc.edu/measure/publications/MS-12-53">http://www.cpc.unc.edu/measure/publications/MS-12-53</a>) (nice description of PMP – class output)</p> <p>Tools for Data Demand and Use in the Health Sector. MEASURE Evaluation, April, 2011 MS-11-46.  <a href="http://www.cpc.unc.edu/measure/publications/ms-11-46">http://www.cpc.unc.edu/measure/publications/ms-11-46</a>)</p>
<p><b>September 1<sup>st</sup></b> – Labor Day</p>	<p>No class – finish reviewing materials from previous session</p>
<p><b>September 8<sup>th</sup></b> – FRAMEWORKS – DISCUSSION/QUESTIONS AND INITIATION OF GROUP ACTIVITY</p> <p><i>Janine Barden-O'Fallon</i></p> <p><i>Identification of out of class groups</i></p>	<p><b>Readings</b> – Bryce, Victora, Boerma, Peters, Black. Evaluating the scale-up for maternal and child survival: A common framework. International Health, 2011;3:139-146. (on Sakai)</p> <p>UNAIDS Monitoring and Evaluation Reference Group (MERG) (2008). <b>Organizing Framework for a functional national HIV monitoring and evaluation system</b>. Geneva (Switzerland): UNAIDS. Available at:  <a href="http://data.unaids.org/pub/BaseDocument/2008/20090305_organizingframeworkforhivmesystem_en.pdf">http://data.unaids.org/pub/BaseDocument/2008/20090305_organizingframeworkforhivmesystem_en.pdf</a></p>
<p><b>September 15<sup>th</sup></b> – FRAMEWORKS – GROUP REPORT OUT</p> <p>INDICATORS</p> <p><i>Ilene Speizer</i></p>	<p>Report out and discuss frameworks from in-class group projects (conceptual framework and logic models); discuss any challenges (experienced/perceived for out-of-class groups; start out of class frameworks if time permits)</p> <p style="text-align: center;"><b>Phase I of Group Project Due</b></p>
<p><b>September 22<sup>nd</sup></b> INDICATORS (CONT.) – COVERAGE INDICATORS AND GROUP ACTIVITY</p> <p><i>Ilene Speizer</i></p>	<p><b>Readings</b> – MEASURE Evaluation - Family Planning and Reproductive Health Indicators Database  <a href="http://www.cpc.unc.edu/measure/prh/rh_indicators">http://www.cpc.unc.edu/measure/prh/rh_indicators</a></p>
<p><b>September 29<sup>th</sup></b></p> <p>INFORMATION SOURCES</p>	<p><b>Readings</b> – Measuring Success Toolkit (Data Sources Tab)  <a href="http://toolkits.urbanreproductivehealth.org/toolkits/measuring-success/data-sources">http://toolkits.urbanreproductivehealth.org/toolkits/measuring-success/data-sources</a></p>

<p>GROUP ACTIVITY ON INDICATORS AND INFORMATION SOURCES</p> <p><i>Chinelo Okigbo</i></p>	<p>Using PRISM to strengthen and evaluate health information systems. MEASURE Evaluation Fact Sheet-FS-07-18. 2008.</p> <p>Fapohunda B. Using Health Facility Assessment Data to Address Programmatic Questions. MEASURE Evaluation. SR-12-72. 2012.</p>
<p><b>October 6<sup>th</sup></b> - – GIS TO INFORM STUDY DESIGNS AND RESULTS</p> <p><i>Jennifer Winston</i></p> <p><i>2<sup>nd</sup> half:</i> OUTCOME MONITORING</p> <p><i>Janine Barden-O’Fallon</i></p>	<p><b>Readings</b> – Adamou B. Appendix D: Guide for Monitoring Scale – up of Health Practices and Interventions. MEASURE Evaluation PRH, 2013. MS-13-64D</p> <p>Tatem AJ, Adamo S, Bharti N et al., Mapping populations at risk: improving spatial demographic data for infectious disease modeling and metric derivation. <i>Population Health Metrics</i>, 2012, 10:8.</p> <p><b>Optional (but useful):</b> MEASURE Evaluation. GIS Data Linking to Enhance Multi-sectoral Decision Making for Family Planning and Reproductive Health: A Case Study in Rwanda.SR-12-74. 2012.</p>
<p><b>October 13<sup>th</sup></b> – <b>Mid-term Exam</b></p> <p>PRESENTATION BY CHINELO OKIGBO ON AN EVALUATION PLAN EXAMPLE</p>	<p style="text-align: center;"><b>EXAM 1</b></p>
<p><b>October 20<sup>th</sup></b> - EVALUATION DESIGNS – DISCUSSION AND INITIATION OF GROUP ACTIVITY</p> <p><i>Janine Barden-O’Fallon</i></p>	<p style="text-align: center;"><b>Phase II of Group Project Due</b></p> <p><b>Readings</b> - Victora, C. G., Black, R. E., Boerma, J. T., Bryce, J. Measuring Impact in the Millenium Development Goal Era and Beyond: a new approach to large-scale effectiveness evaluations. July 2010. Lancet.</p> <p>Habicht JB, Victora CG, Vaughan JP. Evaluation designs for adequacy, plausibility and probability of public health programme performance and impact. <i>International Journal of Epidemiology</i>, 28(1): 10-18. 1999.</p>
<p><b>October 27<sup>th</sup></b> – EVALUATION DESIGNS GROUP ACTIVITY REPORT-OUT</p> <p>DISCUSSION OF SAMPLING</p> <p><i>Janine Barden-O’Fallon and Ilene Speizer</i></p>	<p><b>Readings</b> - Laga M, Rugg, D, Peersman G, Ainsworth M. Evaluating HIV prevention effectiveness: The perfect as the enemy of the good. AIDS. 2012, 26:1-5.</p> <p>Rehle T, Saidel T, Mills S, Magnani R (eds.). <i>Evaluating Programs for HIV/AIDS Prevention and Care in Developing Countries: A Handbook for Program Managers and Decision Makers</i>. (PDF on Sakai). Chapter 9: Sampling strategies for monitoring HIV risk behaviors.</p>
<p><b>November 3<sup>rd</sup></b> – IMPLEMENTATION SCIENCE – WHAT IS IT ALL ABOUT</p> <p><i>Ilene Speizer</i></p>	<p><b>Readings</b> - Padian, N et. al., Implementation Science for the US President’s Emergency Plan for AIDS Relief (PEPFAR) <a href="http://journals.lww.com/jaids/Fulltext/2011/03010/Implementation_Science_for_the_US_President_s.1.aspx?WT.mc_id=HPxADx20100319xMP">http://journals.lww.com/jaids/Fulltext/2011/03010/Implementation_Science_for_the_US_President_s.1.aspx?WT.mc_id=HPxADx20100319xMP</a></p> <p>Adamou Bridgit. Guide for Monitoring Scale-Up of Health Practices and Interventions. MEASURE Evaluation PRH. 2013. <a href="http://www.cpc.unc.edu/measure/publications/MS13-64">http://www.cpc.unc.edu/measure/publications/MS13-64</a></p> <p>Grant A, Treweek S, Dreischulte T, et al., Process evaluations for cluster-randomised trials of complex interventions: a proposed framework for design and reporting. <i>Trials</i>. 2013, 14:15.</p>

<b>November 10<sup>th</sup></b> – COST-EFFECTIVENESS ANALYSIS  <i>Rick Homan (need to confirm)</i>	<b>Readings - TBD</b>
<b>November 17<sup>th</sup></b> – HOT TOPICS IN M&E  <i>Janine Barden-O'Fallon</i>	<b>Readings - TBD</b>
<b>November 24<sup>th</sup></b>	<b>Phase III: GROUP PRESENTATIONS</b>
<b>December 1<sup>st</sup></b>	<b>Phase III: GROUP PRESENTATIONS</b>
<b>DATE – TBD – EXAM 2</b>	<b>Final Exam</b>
<b>December 8<sup>th</sup></b> -TBD	<b>FINAL PROJECT (Phase IV) DUE by 5:00pm</b>

## OUT-OF-CLASS GROUP PROJECT INSTRUCTIONS

The objectives of the group project are to:

- (1) Give students practical experience in developing a performance monitoring and evaluation plan using a program design framework, selecting indicators, and identifying data sources.
- (2) Build professional skills in presenting findings from a monitoring and evaluation plan to improve the quality of maternal and child health services and/or household and community health practices

### Groups:

Please form groups of approximately 4 students. You should form a group around a common interest or within a group chose a program area in MCH (domestic or international) that is of interest to all in the group and that someone in the group knows of a particular program.

### Project Elements:

Each group will produce the key elements of a Performance Monitoring Plan (PMP), based on a case study of an actual program. At the end of the course, each group will develop a PMP for a specific program, including:

- Description of the program
  - Problem statement\*
  - Conceptual framework
  - Well-defined goals and objectives
  - Program description (interventions, geographic scope, target population, duration)
  - Whether an existing intervention will be studied or a new one set up
  - Logic model
- Indicators
  - Indicator reference sheets (one per group member)
  - Indicator matrix
- Stakeholder engagement plan
- Table and description of information sources for program monitoring and evaluation
- One or more study designs for evaluating the program
- Presentation of sampling strategies
- Discussion of ethical procedures for the evaluation (and monitoring if applicable)
- Time frame for intervention and evaluation
- Strengths and limitations of evaluation design
- Plan for dissemination and use of information

\* For the problem statement, you can use data from a report (e.g., DHS) or from Stat Compiler, or information from the literature to briefly introduce the problem and why evaluating this type of program is needed.

## **PROJECT PHASES**

### **Phase I:**

- 1) Country and problem selection – Describe the context and needs of the target population. Provide a problem statement of why evaluating this program is important.
- 2) Determination of what intervention will be evaluated to address this problem – you can use an existing intervention, one previously implemented, or devise one that would be feasible to meet the problem. Emphasis of the class is more on the evaluation design (Phases II and III) rather than on the intervention design.

**By September 15, 2014, each group will submit in writing their problem statement and the intervention they propose to evaluate (short - one page or less, not including references if included). This is meant to avoid lots of wasted work on the part of the group if the proposed intervention is not one that would typically be evaluated with the methods discussed in class.**

**Phase II.** As a group, you will implement the methods discussed in class and begin to determine issues of why, how, what, when, and where. Your Phase II project will build on Phase I (include Phase I materials when you submit Phase II) and include:

Due October 20, 2014 – written document that captures (please include Phase I):

- Goals and objectives
- Conceptual framework
- Logic model
- Indicators matrix
- Table and description of information sources for program monitoring
- Stakeholder engagement plan

**Phase III.** Oral presentations will be given November 17<sup>th</sup> or 24<sup>th</sup> and will cover the following main issues:

- Problem statement (needs assessment)
- Whether a new or existing intervention
- Stakeholder engagement plan
- Logic model/conceptual framework
- Formative research (if applicable)
- Indicators matrix and indicator reference sheets (do not present sheets in the oral presentation but matrix is useful)
- Information sources for monitoring and evaluation
- Outcome/impact evaluation design

Feedback will be given to each group by the class to provide input on 1) refining the problem; 2) strengthening the monitoring and evaluation plans; 3) ensuring that all stakeholders are included; 4) determining clarity and appropriateness of logic model; 5) appropriateness of indicators and data sources. Please turn in Power Point presentation to receive comments.

**Phase IV.** This is where the group will pull together the final project that addresses the entire scope of the intervention and evaluation (see PMP reading from first session for some guidance). Emphasis for this phase is ensuring that the evaluation design is appropriately addressed. Issues of sampling, human subjects enrollment, data sources, strengths and limitations need to be addressed in the evaluation design. The Phase III material is the final written project which is due on (or before) December 8, 2014.