



School of Medicine



Department of  
Family Medicine and Public Health Sciences

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## GUIDELINES

### MASTER OF PUBLIC HEALTH PROJECT

#### FPH 8990

##### Academic Year 2011-2012

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## **I. Introduction**

The overall objective of the MPH Research Project is to provide students with the opportunity to work on a scholarly project and to apply the academic knowledge and skills that they have gained in their didactic and practicum experiences in the practice of public health research.

The MPH Project course requirement of 3 credit hours usually involves registration in two semester sections: First semester: 1 credit hour for: a) conducting the literature search; b) developing the project proposal and its approval by an academic advisor and the MPH office; and c) if “Human Participant Research” is being proposed (see definition at <http://www.irb.wayne.edu/policies-human-research.php>), developing and submitting an application for ethics approval to the Wayne State University Human Investigation Committee (<http://www.hic.wayne.edu/>). Second semester: 2 credit hours for data collection, collation, and analyses, and the preparation of material for a research paper and a public presentation.

Although students should not begin work until they have completed all core/required classes, they should be thinking about research ideas throughout the time they are taking classes. Students need to seriously think about a content area and discuss it with their academic advisor, who may supervise the investigation directly or facilitate the identification of a separate individual to serve alternatively as the research advisor. However, the academic advisor, being a member of the MPH faculty, is responsible for the overall academic oversight of the project and so is required to approve the proposal and the submission of the final report.

## **II. Prerequisites**

The following prerequisites must be completed prior to formally starting on the MPH Research Project:

- MPH required core courses must be completed so that students have the knowledge base required to conduct a high quality study.
- Completed health forms (obtainable from the MPH Office) must be on file.
- Collaborative Institutional Training Initiative (CITI) on-line training in the Responsible Conduct of Research (<http://www.citiprogram.org>). A detailed “Page-By-Page Guide” is available on the Human Investigation Committee (HIC) website- <http://irb.wayne.edu/mandatory-training.php>. At a minimum, students should complete the following CITI modules: 1) Basic/Refresher Course – Human Subjects Research: Social & Behavioral Researchers; 2) CITI Health Information Privacy and Security (HIPS); 3) Social and Behavioral Responsible Conduct of Research). Depending on the particular study for the MPH Research Project, other modules may be required as well. On completion of these items, copies of completion documentation need to be forwarded to the MPH office for inclusion in a student’s file as well as included with the MPH Project Proposal Form.

## **III. Course Learning Objectives**

The learning objective of the MPH Research Project is for the student to learn about the phases of the research process as appropriate to the particular study. Every research project must involve the following primary activities so that students learn how to:

1. Formulate a research question, hypothesis or statement of purpose;
2. Conduct a literature review and synthesis;
3. Detail methods for conducting a study;
4. Summarize or analyze data or findings;
5. Interpret findings, and
6. Give an oral presentation of findings

#### IV. Acceptable MPH Research Projects

The acceptable types of Research Projects are quite broad, and can range from secondary analysis of existing data, to the collection of new data, or to the development and evaluation of an intervention or curriculum. Every research project must include a hypothesis or research question and must involve the summary or analysis of data.

Students are encouraged to develop a Research Project stemming from their practicum site, or from another data-rich resource with public health relevance. If a research question is identified from the student's current employment, it is permissible to develop a Research Project distinct from work duties. Specifically, the Research Project must be conducted outside of normal work responsibilities. The student's work supervisor must approve of the use of work-related resources for the Research Project, and may, if appropriate, serve as the research advisor.

**MPH Research Project Study Types:** Students will identify the Project Type that is most appropriate to their research question. Examples of Project Types include but are not limited to the following:

- **Secondary analysis of existing data:** These projects involve the use of publicly-available data, such as NHANES, BRFSS, SEER, state vital record data, etc. Research questions that cannot be addressed using original data collection techniques (due to time or financial constraints) can often be addressed by analysis of previously collected data.
- **Qualitative analysis:** Qualitative approaches are used to study phenomena or experiences and are based on the interpretation of words and text, as opposed to numerical data in quantitative analysis. Qualitative data are collected by means of interviews, focus groups, or observational studies.
- **Survey research:** Survey or questionnaire studies encompass measurement procedures that are based on questions posed to respondents. Survey research includes questionnaires administered by paper, in-person interview, telephone, or web-based data collection strategies.
- **Needs assessment:** Needs assessment refers to a systematic study of a public health issue to identify a potential need for resources to address that issue in a defined population (i.e. children with special health care needs, young mothers, cancer survivors). A wide variety of data sources are generally required for a needs assessment.
- **Program evaluation:** Evaluation research includes a heterogeneous assortment of techniques, procedures, and methods for systematically assessing the conceptualization, design, implementation, and utility of social intervention programs. These techniques can include participant observation, archival research, interviewing, quasi-experimentation, and experimentation.
- **Experiment:** Experiments have 3 essential components: 1) a hypothesis; 2) an intervention or modification of something in a situation; and 3) a comparison of outcomes with and without the intervention/modification.
- **Case study:** In the public health context, a case study is a form of ethnography or participant-observation research. Using a mixed method approach that includes both qualitative and quantitative strategies, a comprehensive description of an organization or program is detailed. Qualitatively, the researcher directly observes and participates in small-scale social settings. The researcher directly talks with and observes the people in the organization or program with the objective to describe how the program functions, including its mission and objectives, and job and role descriptions. Program challenges and limitations are important to describe as well. Quantitative summaries of the program's efforts and outputs are also provided.

#### V. Approval Process for MPH Research Project

All MPH Research Projects must have a research advisor. Students are responsible for identifying a Research Project and recruiting a research advisor. The academic advisor may serve as the research advisor. The research advisor can also be someone from the practicum site or another appropriate research setting.

Research Projects must also be approved by the student's academic advisor. If the research advisor and academic advisor are different individuals, then a "Letter of Understanding" may need to be developed and signed by the research advisor, the academic advisor and the student. Details about the Letter of Understanding are provided in a separate statement below.

To obtain Research Project approval from the academic advisor, research advisor, the FPH 8990 course director and the Graduate Student Officer, students must fill out the "**MPH Project Outline and Record of Approval (FPH 8990)**" form (see Appendix A and downloadable from website <http://www.med.wayne.edu/fam/mph>), in which they provide details of the:

1. Research question/hypothesis
2. Source of participants, data or materials
3. Methods, study design and data analysis
4. Hypothesized results
5. Compliance with public health core competencies (see below)
6. Institutional Review Board (Human Investigation Committee) Compliance

**Compliance with Institutional Review Board Requirements (IRB):** If it is determined that the proposed project involves "Human Participant Research" (see <http://www.hhs.gov/ohrp/policy/checklists/decisioncharts.html#c1>, Chart 1: Is an Activity Research Involving Human Subjects) then the student must also apply for approval from the WSU Institutional Review Board (IRB: <http://irb.wayne.edu/>)(the Human Investigation Committee) which requires a complete study prospectus as an attachment, and the signature of the academic advisor. Under some conditions, studies involving secondary analyses of de-identified data might still require IRB approval; students will need to discuss any requirements with both the academic and research advisors while preparing their proposal for approval. If the Project requires IRB approval, the complete IRB application must be submitted to the MPH administration office attached to the "Project Outline and Record of Approval" form.

No research projects can begin until the student receives either a notice of approval from the IRB or a letter indicating a waiver from the IRB for inclusion in the MPH Project proposal application. To obtain a notice of IRB waiver, students/research advisors should discuss the project with Jo Anna Risk (HIC Education Coordinator: Tel. 577-9534; e-mail: [aa3351@wayne.edu](mailto:aa3351@wayne.edu)).

**Compliance with MPH Program Objectives and Competencies:** The MPH project is a culminating experience of the MPH program and therefore its objectives have to be consistent with meeting the core public health competencies of the MPH degree. As part of the proposal, students are required to indicate how and to what extent completion of this project will demonstrate competency in the following core areas of public health practice:

- *Application of evidence-based knowledge from behavioral and social sciences, biostatistics, epidemiology, environmental health, and health care organization to understanding and improving the health of the public.*
- *Usage of appropriate research and analytical strategies to address public health issues.*
- *Communication of public health principles and findings to professional and community audiences using a variety of media and methods.*
- *Understanding of the ethical choices, values, and professional practices implicit in public health decisions, giving consideration to the effect of choices on community stewardship, equity, social justice, and accountability.*

If any of the following competencies also apply, students are required to indicate how and to what extent they will also be demonstrated by completion of the proposed project:

- *Collaborate sensitively, professionally, and ethically with individuals from diverse cultural, ethnic, and socioeconomic backgrounds.*

- *Recognize dynamic interactions between human and social systems and how they affect relationships among individuals, groups, organizations, communities, and other structures.*
- *Evaluate the roles of health care delivery systems, public health infrastructure, financing, and health policy in solving public health concerns.*

**Approvals:** After the MPH Project proposal is signed by both the research and academic advisors, it will be reviewed by the FPH 8990 course director(s), and the academic/research advisor will be notified of any needed changes. Following subsequent approval by the course director(s), the proposal will be passed to the Graduate Student Officer for final signature and notification that the project may be initiated.

**Letter of Understanding:** When the academic advisor and research advisor are different individuals, a “Letter of Understanding” is the mechanism for communicating about the MPH Research Project. The Letter of Understanding will be specific to each MPH Research Project, and are recommended (but not required) as a vehicle for communication between students and advisors for all MPH research projects. The following elements are suggested for inclusion, as relevant:

- Statement of agreement by the research advisor to supervise the MPH Research Project.
- Statement of understanding that the academic advisor has the responsibility for the overall oversight of all aspects of the MPH student’s plan of work including the MPH Research Project.
- Statement of understanding that the MPH Research Project cannot proceed without approval of the WSU Institutional Review Board.
- Statement of understanding that the research advisor will communicate with the academic advisor about problems or delays affecting the MPH Research Project.
- Statement of understanding about data ownership related to data and other materials (e.g. media, curricula, handbooks) created during the course of the MPH Research Project.
- Statement of understanding about authorship and author responsibilities for any manuscripts submitted for publication.
- In some cases, the research advisor will be asked to work with the MPH student and the academic advisor to develop a learning contract regarding the objectives of the MPH Research Project.
- The letter of understanding will contain the contact information of the research advisor, the academic advisor and the student. Both advisors and the student will sign the letter. The student must deliver a signed copy of the letter of understanding to both advisors and to the MPH administration office for inclusion in his or her file.

## **VI. Guidelines for Written Final Report of MPH Research Project**

All written Research Project reports must contain a title page with an abstract and must follow the **Introduction, Methods, Results And Discussion (IMRAD)** format as listed in the Learning Objectives section and further detailed below in the section “Organization of the Written Research Report”.

### **Order of Parts:**

1. Title page (see Appendix B)
2. Abstract and key words (see below)
3. Introduction
4. Methods
5. Results
6. Discussion
7. Acknowledgements
8. References (see below)
9. Figures and Tables with legends
10. Appendix (see below)

- All text should be double-spaced and left justified.
- Recommended font sizes 11 or 12 in Arial, Helvetica, or Century Gothic fonts.
- The following margins are recommended: 1 inch - 1 ¼ for all margins (top, bottom, left and right).
- Indent to show new paragraphs.
- Quotations 4 lines or less should be double-spaced; quotations exceeding 4 lines should be single-spaced.
- Illustrations and tables should be placed on separate pages with appropriate legends and footnotes as needed. Captions/legends for tables and figures should be single-spaced.

### **Pagination:**

- *Preliminary pages:* Title page and abstract are not numbered.
- *Text:* Use Arabic numbers beginning with "1" on the first page of the text and continuing throughout the manuscript, including the appendices, reference material. The page numbers should be on the top center of the page throughout the text, and they should be within the top margin, approximately ½ inch to ¾ inch from the top edge of the paper. (The text should be no more than 1 ¼ inches from the edge of the paper and the page numbers should be within the margin.)

### **References:**

- The references should be cited and listed according to AMA or APA style. For examples of AMA study, see section IV of the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals, accessible at [www.icmje.org](http://www.icmje.org); and see also <http://www.nlm.nih.gov/citingmedicine> for further details. APA style can be found at: <http://owl.english.purdue.edu/owl/resource/560/01/>.

### **Length:**

- Final reports should be 10-15 pages of text in length (double spaced). The following allocation of pages per section is recommended:
  - Abstract: Place on its own page (do not exceed 250 words) plus 3-4 key words not in the title.
  - Introduction: 2 – 3 pages
  - Methods: 3 – 4 pages
  - Results: 3 – 4 pages
  - Discussion: 2 – 4 pages
  - Tables & Figures: < 6 (total)

## **VII. Organization of the Written Research Report**

Almost all Research Projects should be organized using the IMRAD format. Students are advised to use the following expanded IMRAD outline (Bordage, 1989) to plan their study, to write their study prospectus and to write their final report, which will be used as part of the evaluation process leading to the assignment of a grade for the MPH Research Project course. The relative emphasis on each of the study components will vary depending on the specific study.

**Note:** Subject to adviser and MPH office approval, a manuscript submitted to a peer reviewed journal with the student as the primary author will be considered acceptable *in lieu* of a project final report.

The following represent guidelines that should be taken into consideration when conducting the research and preparing the final report (Bordage 1989). These guidelines also form the basis for the summative evaluation of the project:

### **Title**

1. The title correctly represents the content and breadth of the study reported.

2. The title is clear and concise and gives importance to the study.

### **Abstract or Summary**

1. The abstract is a succinct account of the project and contains a statement of the problem, procedure or method, and conclusion.
2. The abstract covers each component of the study, namely:
  - Problem statement
  - Research question
  - Materials and methods
  - Results
  - Discussion, conclusion, implications
3. The implications and benefits reported are commensurate with the results obtained.
4. Include 3-4 key words not in the title.

### **Introduction and Review of the Literature**

1. The goal or purpose of the study is clearly stated.
2. Key references are reported, and there is a clear relationship between the study purpose and its methods.
3. The literature review provides a theoretical and methodological framework for the problem under study.
4. References to previous findings are accompanied by proper literature citations.
5. Important concepts and variables are defined clearly.
6. The pertinence of the study is presented.
7. A general overview of the study is presented.

### **Materials and Methods**

1. Operational definitions for the study variables are described clearly and are appropriate, given the nature of the question asked.
2. The research design is described in detail.
3. The measurement instrument, including its psychometric qualities (e.g. validity and reliability) is described.
4. The population of interest and the sampling procedure are defined clearly.
5. The data collection procedure is described in detail.
6. The setting in which the study took place is described.
7. The data analysis procedures are stated in precise terms.

### **Results**

1. Study findings or results are presented to answer the research question or address the study purpose.
2. Specific data accompany the written description of the results.
3. Tables and figures are used efficiently.
4. The contents of the tables and figures are clearly labeled.
5. The Results section contains actual results only; it does not include opinion or interpretation.

### **Discussion**

1. The discussion is directly related to the study findings.
2. The study findings are placed in the context of other research findings.
3. The significance of the study is explained.
4. The strengths and limitations of the study are discussed.
5. The conclusions and practical outcomes of the study are commensurate with the design used and the results obtained.
6. Public health implications of the study findings

### **References**

1. The number of references is reasonable (neither too many nor too few); references are up-to-date.
2. The content of the paper clearly shows that the references cited were carefully read and are well understood by the author.

3. References from unreliable sources such as “Wikipedia” are not permitted. Peer reviewed resources are preferred.

## **Appendix**

An appendix is required describing in detail in 250-500 words, how completion of this project meets the objectives and the public health core competencies of the MPH Program as listed in the project proposal.

**Note:** Attach the appropriate evaluation form (download from [www.med.wayne.edu/fam/mph](http://www.med.wayne.edu/fam/mph) ) with your report submissions to your research advisor and independent reader (see below).

## **Other General Considerations**

1. The various sections of the paper are clearly identified and appropriate. Subheadings are encouraged
  2. The terminology is uniform throughout the paper.
  3. The writing style is clear and pleasant. There are no spelling mistakes or typographical errors.
  4. The acknowledgements are complete, including funding source.
  5. Statements of conflict of interest are provided.
- **Reference:** Bordage G. Considerations on preparing a paper for publication. *Teaching & Learning in Medicine*, 1989; 1, 47-52.

## **VIII. Evaluation and Grading of MPH Research Projects**

The written report of the MPH Research Project should be the culmination, integration and application of what the student has learned throughout the MPH program. Students are required to make an oral presentation of their MPH Project, and also to prepare a written research report that follows the IMRAD format, as described above. The grade for the MPH Research Project will be assigned based on both formative and summative evaluations conducted separately by the research advisor and an independent reader, respectively. The independent reader is a member of the MPH faculty (not the student’s academic advisor) who is appointed by the MPH project course director on the basis of recommendations made by the academic and research advisors.

**Oral Presentation:** Following consultation with their academic and research advisors, students are required to contact the MPH office by Week 8 of the semester in which they wish to graduate to arrange a date for their public oral presentation. The oral presentation is required but not graded. Students should prepare a talk with slides of about 30 minutes in length. The talk should include: the background which suggested the project; objectives; the research questions and or /hypothesis; a summary of methods; a presentation of results; and a discussion that includes conclusions and a statement of public health relevance.

**Formative Evaluation:** The Research Advisor will use the attached form (Appendix C) to provide a formative evaluation and grade based on the following considerations: development of the research question; data management; data analysis; interpretation of the study data; the literature review; writing skills; and attainment of the core public health competences identified in the proposal. Grading will be based on an assessment of how well the student utilized expected knowledge and competencies in the execution of the project.

**Summative Evaluation:** An Independent Reader, not directly involved in the project, will use the attached form (Appendix D) to conduct a summative evaluation based on the above guidelines and criteria for writing the report, in order to address the strengths and limitations of the paper and the rationale for an assigned grade.

**Summary:**

- The written report will be read by two faculty members (the research advisor plus an MPH faculty member not involved in the project. Each evaluator will complete their separate formative and summative evaluations using the appropriate form supplied by the student (Appendices C & D)
- These evaluations serve as the rationale for the grades (A-C) that are separately forwarded with the evaluations to the MPH Project Course Director who will average the grade and notify the student that a final grade has been posted as well as provide the student with copies of the evaluations forms. If the two evaluators submit very different grades, the course director will convene a meeting with the faculty evaluators to further discuss the assignment of a final grade for the MPH Research Project.



7. **Compliance with MPH Program Objectives and Competencies:** The MPH project is a culminating experience of the MPH program and therefore, the objectives of student research proposals must be consistent with meeting the core public health competencies of the MPH degree. As part of the proposal, please indicate by bulleted statements how and to what extent completion of your project will demonstrate competency in the following key core areas of public health practice (Section I) and the other MPH Program competencies if they apply (Section II):

**I. Key MPH Program Core Public Health Competencies**

Application of evidence-based knowledge from behavioral and social sciences, biostatistics, epidemiology, environmental health, and health care organization to understanding and improving the health of the public:

Usage of appropriate research and analytical strategies to address public health issues.

Communication of public health principles and findings to professional and community audiences using a variety of media and methods.

Understanding of the ethical choices, values, and professional practices implicit in public health decisions, giving consideration to the effect of choices on community stewardship, equity, social justice, and accountability.

**II. Additional Core Public Health Competencies That May Apply:**

Collaborate sensitively, professionally, and ethically with individuals from diverse cultural, ethnic, and socioeconomic backgrounds.

Recognize dynamic interactions between human and social systems and how they affect relationships among individuals, groups, organizations, communities, and other structures.

Evaluate the roles of health care delivery systems, public health infrastructure, financing, and health policy in solving public health concerns

CITI Documentation Included for review Yes

Notice of IRB Approval Enclosed HIC #: \_\_\_\_\_ Yes

Notice of IRB Waiver Enclosed Yes

**CANDIDATE'S SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**APPROVED BY:** \_\_\_\_\_ **Research Advisor** **DATE:** \_\_\_\_\_

**APPROVED BY:** \_\_\_\_\_ **Academic Advisor** **DATE:** \_\_\_\_\_

**APPROVED BY:** \_\_\_\_\_ **Course Director** **DATE:** \_\_\_\_\_

**APPROVED BY:** \_\_\_\_\_ **Graduate Student Officer** **DATE:** \_\_\_\_\_

**TITLE OF PROJECT**  
**(CENTERED, ALL IN CAPS, SINGLE-SPACED IF MORE THAN ONE LINE)**

**by**

**JOHN/JANE DOE**

**Submitted to the Department of  
Family Medicine and Public Health Sciences  
of Wayne State University,  
Detroit, Michigan**

**MPH Project  
in partial fulfillment of the requirements  
for the degree of  
MASTER OF PUBLIC HEALTH  
YEAR**

**Approved by: \_\_\_\_\_**

**Research Advisor**

\_\_\_\_\_  
**Academic Advisor**

APPENDIX C

**Formative Evaluation – Research Advisor:**

Student Name/ID Number: \_\_\_\_\_

Project Title: \_\_\_\_\_

Project Completed (semester/year): \_\_\_\_\_

Academic Advisor: \_\_\_\_\_

Research Advisor: \_\_\_\_\_

Independent Reader: \_\_\_\_\_

*Top part is to be filled out by the student, attached to a copy of the final report, and then submitted to the research advisor:*

The MPH Project Course Director would first like to thank you for advising the above listed student in their MPH research project. Since you have worked closely with the student you are in the best position to provide a formative evaluation of the process by which the student formulated their ideas and designed and conducted the study, and prepared the final report. If you could please fill out the form and return it to the MPH office before the end of the current semester and separately the MPH project course director with a grade (A, A-, B+, B, B-, C) that will be combined with the summative evaluation being conducted by the above listed independent reader. This form will be forwarded to the student with the assigned grade. Thank you. *(This form is available in MS Word format from the MPH Office)*

	Comments	Exceeded Expectations	Met Expectations	Failed to Meet Expectations	Not Applicable
Development of the research question					
Data management					
Data analysis					
Interpretation of the study data					
The literature review					
Writing skills					

Additional Comments:

**Public Health Core Competencies:** The MPH Project represents a culminating experience of the degree. The student indicated in the proposal and in the final report appendix how and to what extent the following core public health competencies of the program were attained as a result of conducting the project. You charge is to provide an assessment on how well the student demonstrated the following competencies.

Core Public Health Competency	Comments	Exceeded Expectations	Met Expectations	Failed to Meet Expectations	Not Applicable
Application of evidence-based knowledge from behavioral and social sciences, biostatistics, epidemiology, environmental health, and health care organization to understanding and improving the health of the public.					
Usage of appropriate research and analytical strategies to address public health issues.					
Communication of public health principles and findings to professional and community audiences using a variety of media and methods.					
Understanding of the ethical choices, values, and professional practices implicit in public health decisions, giving consideration to the effect of choices on community stewardship, equity, social justice, and accountability.					
Collaborate sensitively, professionally, and ethically with individuals from diverse cultural, ethnic, and socioeconomic backgrounds.					
Recognize dynamic interactions between human and social systems and how they affect relationships among individuals, groups, organizations, communities, and other structures. .					
Evaluate the roles of health care delivery systems, public health infrastructure, financing, and health policy in solving public health concerns					

Please use additional pages if required:

APPENDIX D

**Summative Evaluation – Independent Reader:**

Student Name/ID Number: \_\_\_\_\_

Project Title: \_\_\_\_\_

Project Completed (semester/year): \_\_\_\_\_

Academic Advisor: \_\_\_\_\_

Research Advisor: \_\_\_\_\_

Independent Reader: \_\_\_\_\_

*Top part is to be filled out by the student, attached to a copy of the final report, and then submitted to the independent reader:*

The MPH Project Course Director would first like to thank you for agreeing to serve as a reader of the above listed student’s MPH research project report. Please fill out the evaluation form and return to the MPH office before the end of the current semester and separately provide the MPH course director with a grade of (A, A-, B+, B, B-, C) that will be combined with the formative evaluation being conducted by the above listed research advisor. This form will be forwarded to the student with the assigned grade. Thank you. *(This form is available in MS Word format from the MPH Office)*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<b>Title</b> 1. The title correctly represents the content and breadth of the study reported. 2. The title is clear and concise and gives importance to the study.					
<b>Abstract or Summary</b> 1. The abstract is a succinct account of the project and contains a statement of the problem, procedure or method, and conclusion. 2. The abstract covers each component of the study. 3. The implications and benefits reported are commensurate with the results obtained.					
<b>Introduction and Review of the Literature</b> 1. The goal or purpose of the study is clearly stated. 2. Key references are reported, and there is a clear relationship between the study purpose and its methods. 3. The literature review provides a theoretical and methodological framework for the problem under study. 4. References to previous findings are accompanied by proper literature citations. 5. Important concepts and variables are defined clearly. 6. The pertinence of the study is presented. 7. A general overview of the study is presented.					
<b>Materials and Methods</b> 1. Operational definitions for the study variables are described clearly and are appropriate, given the nature of the question asked. 2. The research design is described in detail. 3. The measurement instrument, including its psychometric qualities (e.g. validity and reliability) is described. 4. The population of interest and the sampling procedure are defined clearly. 5. The data collection procedure is described in detail. 6. The setting in which the study took place is described. 7. The data analysis procedures are stated in precise terms.					
<b>Results</b> 1. Study findings or results are presented to answer the research question or address the study purpose. 2. Specific data accompany the written description of the results. 3. Tables and figures are used efficiently. 4. The contents of the tables and figures are clearly labeled. 5. The Results section contains actual results only; it does not include opinion or interpretation.					
<b>Discussion</b> 1. The discussion is directly related to the study findings. 2. The study findings are placed in the context of other research findings. 3. The significance of the study is explained. 4. The strengths and limitations of the study are discussed. 5. The conclusions and practical outcomes of the study are commensurate with the design used and the results obtained. 6. The study has public health implications.					
<b>References</b> 1. The number of references is reasonable (neither too many nor too few); references are up-to-date. 2. The content of the paper clearly shows that the references cited were carefully read and are well understood by the author. 3. The references were appropriate and cited and listed correctly (AMA or APA).					

**Additional Comments – Outlining Specific Strengths and Weaknesses of the Study and its Report:**

*Please use additional pages if required:*

## APPENDIX E

**Examples of MPH Projects:**

<b>Student</b>	<b>Grad. Year</b>	<b>Academic/Research Advisors</b>	<b>MPH Project Title</b>
Fuad Azrak	2007-08	Neale/Neale	Multivitamin use in pregnant and non-pregnant women: Behavioral risk factor surveillance system, 2004: Epidemiological analysis and public health implications.
Sukanya Pranathiageswaran	2007-08	Severson/Rowley	The influence of race on the severity of sleep-disordered breathing.
Shawnta Jefferson	2007-08	Severson/Cote	A comparison of the risk factors associated with rheumatoid and osteoarthritis in African American and Caucasian women.
Alan Baptist	2008-09	Ager/Ager	Evaluation of Exhaled Nitric Oxide Measurements in the Emergency Department for Acute Asthmatics
Irfan Hameed	2008-09	Severson/Young	Low high-density Lipoprotein as a predictor of adverse outcomes in patients with acute coronary syndrome: A gender oriented approach.
Nikhil Khankari	2008-09	Campbell-Voytal /Bock	Effects of antioxidant intake on renal cell carcinoma tumor severity.
Shatha Alkatib	2009-10	Schwartz/Badr	Influence of obesity on left atrial size in patients with sleep disordered breathing
George Dombi	2009-10	Severson/Severson	Neural network analysis of employment history as a risk factor for prostate cancer
Evone Barkho	2009-10	Arnetz/Fakhouri	Domestic violence among Iraqi immigrant women in Metro Detroit: A pilot study.
Irene Sanford	2009-10	Schwartz/Castronova	Needs assessment for a health and wellness program for seniors
Jocelyn Wilder	2009-10	Schwartz/Schwartz	Depression Treatment Effects on HIV Disease Progression
Rashmi Bairoliya	2010-11	Misra/Campbell-Voytal	Pre-Pregnancy Chronic Health Conditions as a Predictor of Pre-Term Birth among Adolescent and Adult African American Women
Kanishtha Agarwal	2010-11	Binienda/Schwartz	Effect of Raja Yoga Meditation on Chronic Pain
Mary Rose Valina	2010-11	Schwartz/Schwartz & Severson	Hepatitis B vaccine coverage among children aged 19 to 35 months in the United States, 2009
Vicki Collins	2010-11	Misra/Kaye	The Efficacy of Carbapenems, including Ertapenem, Compared to Alternative therapies for Bloodstream infections (BSI) caused by Extended-spectrum $\beta$ -lactamase (ESBL) Producing Enterobacteriaceae
Karen Wells	2010-11	Gleason-Comstock/Williams, HFHS/Peterson, HFHS	Assessing the relationship between combination long-acting beta agonist and inhaled corticosteroid use and serious asthma outcomes
Andrew Prout	2010-11	Schenk/Kaye & Miller	Epidemiology and outcomes of multidrug resistant bloodstream infections due to Gram negative rods in older adults: A retrospective cohort analysis

*Note: These MPH project reports are available for review – please contact the MPH office.*