Proposed Research Curriculum: Block I and II

Joan Ilardo, PhD, Director of Research Training
Jeffrey Dwyer, PhD, Associate Dean for Research and Community Engagement

Curriculum Objectives

1. Provide standardized research training for all Block I and II students
2. Maximize utility and impact of CHM research training
3. Enrich mentored research experiences
4. Provide research writing and presentation experience

Rationale

- Provides practical research training early in curriculum rather than in years 3 and 4
- Replaces current Critical Appraisal/Analytic Medicine (CA/AM) in Block III Core Competencies
- Provides principal point of entry for students into research projects
- Significant number of CHM students seek research projects in summer between Blocks I and II
- Fulfills MSU Graduate School requirements for Responsible Conduct of Research
- Increases awareness and application of quality assurance and improvement in clinical practice
- Provides research mentoring training and experience
- Provides research experience students can use for residency applications
- Relieves researchers/health systems of providing basic research training

Description of Curriculum

BLENDED FORMAT
Online lectures and assessments and mentored project

COVERED TOPICS – Block I
1. Research and Clinical Practice: Significance, Practicality, and Evidence-based Practice
2. Research Basics: Core Steps
3. Conducting Literature Searches and Reviews
4. Developing a Research Design and Plan
5. Human Research Protections from an Ethical Perspective
6. Sampling and Data Analysis
7. Data Collection, Management, and Protection
8. Disseminating Research Findings

ANGLER: Each topic includes an online lecture, readings, web resources, and online assessment questions selected from a question bank.

RESEARCH PROJECT – Block II (Starts in June)
- Research Proposal and Plan that includes Background and Significance of the research area, Student's role in the research, preliminary studies, and research design and methods
- Institutional Review Board (IRB) approval must be granted before data collection involving human subjects begins. Students will complete MSU IRB training as part of course
- Research Mentors responsible for guiding intellectual course of student's work and holding regularly scheduled mentoring sessions where project progress and activities are discussed
- Student Research Summary each semester includes a description of activities, lessons learned, results, and publication and presentation plans
- Research Mentors complete online evaluation each semester

Resources and Faculty Development

- Online Research Basics Training course (on Angel)
- Research Mentor mentoring program that pairs experienced researchers with new investigators
- Online research mentor and project database
- Student/researcher matching process
- Online semester reporting forms for students and mentors (responses in a database)

Discussion

The quality of the research learning experience depends on design of the project and engagement of research mentors. The expectation is that CHM faculty and community investigators (including residents and fellows) with projects that are appropriate for CHM students will provide opportunities for quality research experiences. Research projects will provide a diverse set of skill-building opportunities such as research project design, abstracting and analyzing data from clinical records, aggregating and analyzing laboratory results, statistical analysis, data management, conducting surveys, conducting interviews, writing abstracts and manuscripts, and developing and delivering presentation.