



THE GILLINGS MPH CORE

Recommendations for an integrated model and structure for teaching MPH Core Courses at the UNC Gillings School of Global Public Health



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UNC GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH
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Background In February 2015, Dean Barbara Rimer commissioned a [committee](#) composed of faculty, students and staff from all departments across the Gillings School of Global Public Health to **advise on important principles, considerations and design features that should be included in core public health training for all MPH students across the School**. Specifically, this committee was asked to recommend both a model and structure for the proposed curriculum that would represent an optimal fit for our School. Additionally, committee members were asked to base our recommendations on best practices in teaching and learning, understanding employers’ needs, and on critical trends that will affect public health in the future. The new curriculum, which we are calling the Gillings MPH Core, will eventually replace the five separate 600-level courses currently used to provide core public health training to MPH students (BIOS 600; ENVR 600; EPID 600; HBEH 600; and HPM 600). Background information and documentation can be found on the [Gillings MPH Core webpage](#). In undertaking this assignment, all committee members recognized that the new MPH Core would require adjustments within all our departments. Yet this group has worked hard both to identify major potential impacts on departments and to find ways to reduce problems.

Drivers for change The year 2015 marked the 100th anniversary of the groundbreaking Welch-Rose report, the conceptual framework that has served as the backbone for how schools of public health have focused their curricula for decades. Yet, the world is changing swiftly around us. We are global; we are connected; tools and methods have evolved and continue to evolve rapidly; and we often work in teams and across disciplines to solve complex problems affecting different populations and individuals.

At the Gillings School, we have experienced these drivers for change in several ways. We now face stronger competition for MPH students, with a three-fold increase in schools of public health in the past decade and with many new training approaches for students to choose from (e.g., distance learning, non-residential programs, part-time programs, and more). Students themselves have identified a variety of changes they would like to see in core courses, including greater coordination across courses; a more integrated approach to core courses; and strongly expressed interest in developing applied, practice-based public health skills (course evaluations; spring 2015 focus groups; [SPH Core Course Review, 2010](#)).

At the national level, as part of its Framing the Future initiative, the Association for Schools and Programs of Public Health ([ASPPH](#)) undertook a comprehensive examination of public health education, including the BSPH, MPH and DrPH degrees, and recommended significant changes to all three programs. In tandem with this report, the [Council on Education for Public Health](#) (CEPH), our certifying body, is proposing important revisions to [criteria](#) for all public health degrees. Although the final criteria have not yet been released, they will call for more integration across disciplines. Indeed, they have avoided using the traditional five separate disciplinary areas, as we currently do at Gillings. Already, a number of schools of public health have redesigned their MPH programs and, in some cases, other degree programs as well.

Now is the time for the Gillings School to focus on ways to renew core public health training for individuals pursuing the MPH degree so that we can stay the **#1 public** school of public health in the U.S. Although we recognize the need to conduct a review of our BSPH programs as well, because



it is the degree with the largest number of enrolled students, our first priority was a focus on the MPH.

Our engaged process In this context, the MPH Core Planning Committee (the Planning Committee), co-led by Dr. Anna Maria Siega Riz, Associate Dean for Academic Affairs and Professor of Epidemiology and Nutrition, and Dr. Laura Linnan, Professor of Health Behavior, embarked on a highly-engaged 10-month process to develop its recommendations, meeting twice a month during the spring and fall semesters and for extended meetings in May, June and July 2015. Through this process the committee reviewed the literature on the state of MPH training in the U.S., focusing particularly on the 2014 ASPPH report, [Framing the Future](#). We also reached out to colleagues at other universities undertaking changes in their MPH programs. With this information, the committee developed:

- A set of [principles](#) to guide decision-making.
- [Draft competencies](#) based on ASPPH domains and CEPH skills that we agreed should be part of core public health content for MPH graduates from the Gillings School (i.e., “the Carolina stamp”).
- A set of [frequently asked questions](#) (and responses) about our process and selected decisions.
- Six draft prototype MPH training programs that adhered to key principles and incorporated all competencies within an integrated structure. Based on extensive feedback from our constituencies, we ultimately designed, and are recommending, a single prototype for the Gillings MPH Core.

To develop this prototype and supporting documents, the committee engaged continuously with stakeholders from across the School. Committee co-chairs visited departmental faculty meetings in spring and fall 2015 (with spring meetings also attended by Dean Rimer); held five town hall meetings for faculty, students and staff; held sessions with deans from other schools of public health; held focus groups with student leaders and student services managers; and, publicized our work via the web, social media and email. We sought and received specific feedback on the prototype using an online survey sent to faculty, staff, students and alumni. The committee worked together to integrate suggestions and feedback using a consensus-building approach. This prototype was then presented to School leadership at a December 2015 [Dean’s Council](#) meeting; and, at the School’s [External Advisory Committee](#) meeting. At these two meetings, participants expressed considerable enthusiasm for the Gillings MPH Core as presented. Below we summarize the Gillings MPH Core and final recommendations from the Planning Committee:

Recommended model and structure: Core components of the Gillings MPH Core

Overarching structure:

- Organized so students learn to plan and implement a public health problem and evaluate its success
- 12 credit hours, ideally taken in one academic year and offered as modules, with grades assigned for each module. Modular approaches to required coursework can vary in credit hours; are assigned grades; and are sometimes taught within an overarching framework with other courses. This approach has been successfully adopted in some SPH departments (HB doctoral program; EPID) and in many other units across UNC.
- Core public health competencies and CEPH skills guided the approach; all covered in this prototype.
- Foundational courses/modules designed to create interdisciplinary cohorts in one-year block, typically in Year 1

Recommended Gilling MPH Core

Summer	Fall (15 weeks, 6 credits)		Spring (15 weeks, 6 credits)	
	4 Credits (graded)	2 Credits (graded)	3 Credits (graded)	3 Credits (graded)
Summer reading & discussion Acceleration camp (online) -Statistical software programming -Writing -Quantitative skills	Using data to understand the health problem(s) -Biostatistics -Epidemiology	Engaging with individuals & communities Social and environmental determinants of health Priority setting and design	Systems & ecological change -US & global health care system -Multiple levels of intervention	Using data to evaluate the health problem and possible solutions -Outcome evaluation -Process evaluation Implementation & improvement science -Design for dissemination and sustainability; D
*Competency				
E	B	A, C	D, E	B, C

Ethics in public health and professional development are embedded in all class assignments. **F**

*[Gillings MPH Core competencies](#)

Pedagogy/Approach:

- Instructor team selected for modules within courses; faculty experts from all departments would be “on call” based on topic/skill
- Case-based approach where interdisciplinary teams solve real-world health problems over two semesters with multi-level intervention strategies
- Community partners, adjuncts and alumni suggest case topics and stay involved throughout the two semesters
- Biostatistics and epidemiology skills front-loaded (four credits), with two credits of additional EPID/BIOS content and skills addressed in the rest of the curriculum as part of lectures and case studies
- Ethical issues and professional development interwoven throughout all class assignments. Training in IRB, CITI, communications, writing and professional conduct included in training as well as opportunities to gain practice experience in the field.

Core components:

- Summer reading – online and onsite discussions
- Acceleration camp – online and/or onsite (to be determined); students choose from at least one of three options to enhance their success with quantitative methods (some basic epidemiology and biostatistics), writing skills and programming skills
- Remediation/refreshers - online or onsite. Students must demonstrate competency in the skill before progressing.
- “Carolina stamp”; i.e., content and approaches that draw on our School’s strengths, such as a focus throughout the curriculum on (a) “global/local” approach/topics; (b) health equity/disparities and cultural competency/humility; and (c) population health

Next steps

The MPH Core Planning Committee recommends the next steps in the creation of the Gillings MPH Core.

- **Appoint an MPH Program Director.** The committee recommends appointment of a director of the Gillings MPH Core. Once the curriculum is established, faculty may work together to develop syllabi, and an advisory committee may review syllabi and serve other functions; but someone will need to lead this group through multiple decision-making processes while serving as the primary liaison with the Associate Dean for Academic Affairs, the Dean and department chairs about progress and decisions. This individual also will liaise with the Graduate School and departments about specific curriculum revisions and coordinate implementation and evaluation efforts over time. Finally, this individual will be responsible for careful coordination and oversight of content, delivery and quality among multiple sections of the same course. Many of our competitors have an MPH program director who coordinates across departments and can speak on behalf of the degree.
- **Convene and empower an implementation and evaluation (I/E) committee.** Appointing a combined I/E committee may make sense. But it is possible, indeed likely, that subcommittees (one for implementation and one for evaluation) would be formed as a way to facilitate effective work. Implementation issues identified by the Planning Committee that the I/E committee must address include the following:
 - **Flexibility:** Even as we recognized that all departments would need to adjust curricula, committee members worked hard to identify and resolve problems to reduce potential negative impacts on departments and programs. Even so, the implementation committee will still face many decisions, small and large. Early on, this group will need to clarify how they will address flexibility issues (see appendix of issues already identified by the MPH Core Planning Committee). What is the process for dealing with flexibility? Could we consider additional assignments or workshops for those who want to go deeper in certain areas? Or ways to test out of other modules?
 - **Assessment/remediation/refreshers:** Think through how to offer remediation/refreshers on a timely basis. We will need people thinking about regular assessments, remediation and refresher opportunities throughout the year-long period of implementation.
 - **Diversity of health topics and populations:** Ensure that the curriculum focuses attention on diverse topics and populations. Designers of the new curricula should strive for systematic inclusion of people of all ages, races, ethnicities, abilities, gender identities and sexual orientations. We want to emphasize local and global health topics/issues and from a wide array of current and emerging public health topics that represent all of the departments within the school over time. Moreover, students will need a framework and common vocabulary for exploring these topics in nuanced, sensitive ways. We should also include content areas where we have a lot of expertise in the School or among key stakeholders so as to promote problem-based learning as well as a forward-thinking anticipation of issues that are likely to be important over the next decade. Population health is an important example of areas we should include. A checklist of core elements can help ensure these areas are covered.
 - **Acceleration camps** will require specific consideration and may benefit from forming its own subcommittee. Consider the purpose of the acceleration camps, logistics (whether, when and how to offer them online v face-to-face; whether students will be able to access user-friendly software such as Stata, much less SAS, that is very expensive without a student license; whether and how to require registration); funding model; *and* in terms of grading/preparation; i.e., how do we support a student who does not demonstrate competency after completing the acceleration camp? We have admitted these students, so we agree to the principle that we need to help them meet expectations with regard to writing, programming, and other quantitative skills needed to complete the MPH Core and other required components of the MPH training program. I/E committee members could consult with colleagues in other schools (e.g., Pharmacy) that have required these, including

exploring whether our students can have access to University resources prior to the opening of fall semester.

- **Fully engage with community partners and alumni.** The implementation committee should decide how and in what ways we will engage with community partners and alumni in the new MPH Core. The Planning Committee, the School's External Advisory Committee, and our students recommend using case examples to address real public health problem(s) where feasible. Several departments' courses and capstone experiences already use case examples. Several departments, e.g., HPM, Nutrition, HB and MCH, have strong partnerships with community agencies and their capstones and other efforts should be considered in determining how to engage with partners.
- **Logistics.** The implementation committee should consider and recommend solutions for numerous logistical issues. For example, Planning Committee members perceive that class size, number of sections, recitations, and TAs, plus refreshers and how to handle them, will be important considerations. There will be a need for careful coordination of content, delivery and quality among multiple sections of the same course. We recommend class sizes of no more than 75-100, with smaller recitation breakout groups that meet regularly during the week. Currently, we have about 200 incoming MPH students in any given year. The implementation committee should determine number of sections, recitations, refreshers, TAs, etc., based on this starting point. The implementation committee will also need to consider the process for selecting, training and mentoring student TAs.
- **Embrace continuous quality improvement.** In keeping with the [Guiding Principles](#) developed by the Planning Committee, before rolling out the new courses, we need to establish thoughtful avenues for soliciting feedback, together with corrective feedback mechanisms, at each stage of the implementation process. We could consult with colleagues at the School of Pharmacy who recently rolled out their new curriculum and had a very strong system in place to respond to problems in a thoughtful way, consistent with continuous quality improvement processes. The evaluation (sub) committee should work independently to limit bias during the evaluation process. We encourage a process improvement approach, recognizing that not everything will be perfect on day one, but that, with appropriate evaluation strategies and early warning systems, improvements will follow where weaknesses and gaps are identified. And, when we truly do not have the data to select one strategy over another, we will consider experiments to help us determine the optimal path.

Additional considerations The Gillings MPH Core Planning Committee reached consensus on the recommended prototype outlined in our recommendations report. Yet we realize there are unknowns in the rollout of such an ambitious curriculum change. In the FAQ sheet below, we identify specific solutions to potential challenges we identified through our planning process. We anticipate that the I&E Committee will need to address additional, similar questions, as they move forward, including, for example:

- Whether and how students can complete certificates; and
- Ways to accommodate incoming students who already have prior expertise in a wide array of core competencies.

On a final, related note, we anticipate that the I&E Committee may wish to consult with Planning Committee members, either collectively or individually, as this process continues. Members of this group are all glad to consult, as needed, and to continue serving as liaisons for both the new committee and their home departments.

Additional information The FAQs below help provide answers to specific questions that will undoubtedly arise within the Implementation and Evaluation Committee, including recommended approaches for handling specific flexibility issues.

Questions	Answers
Overview questions	
When will the new MPH Core be implemented?	The approved MPH Core will be rolled out in Fall 2017. A much smaller cohort of BSPH, MS and PhD students can continue to take the current core 600 series.
How many credits will the new Core be?	12 credits in one year: 6 credits in fall and 6 in spring.
Will the Gillings MPH Core be offered in both face-to-face and online formats?	Initially, the Gillings MPH Core will only be offered in a face-to-face format. GOMPH , the School's completely new and online MPH Program, will be revised once the residential version is created such that core requirements are fully aligned. MPH students would then be permitted to enroll in these online formats.
What is the GO MPH program, and how does it relate to the MPH Core?	GO MPH includes: EPID 600 (3 credits), BIOS 600 (3 credits); Intro to Global PH (3 credits) and Fundamentals of PH Practice (4 credits). It can serve as a "back-stop" for unique student situations.
Who will teach the new core courses?	Interested faculty should let their department chairs know. The dean, associate dean for academic affairs, and chairs will make final decisions on who will teach in the new core.
How will we continue to serve the many BSPH students who take the current core courses?	We will continue teaching the 600 series alongside the MPH Core until we can redesign core courses for the BSPH and for the much smaller number of MS and PhD students who need to attain the core public health competencies.
Acceleration camp	
What do we mean by an "acceleration camp"?	We aim to bring students to an agreed-upon baseline set of skills in quantitative methods, computing skills, and writing.
Will we require all students to participate in the acceleration camp?	Yes, students will need to select at least one of three types of opportunities: writing, programming and/or basic quantitative skills.
Will students be charged or earn credit for participating in the acceleration camp?	No.
Will students need to come to Chapel Hill before fall semester opens?	Some students may take the course online; others may come to campus early. We have not yet finalized those details.
Flexibility	
How is flexibility being built into the new Core?	Reduced number of credits for some departments, from 15 credits to 12. Modular structure, with faculty teaching one- or two-credit modules focused on their specialty area(s). Students could pass or fail module(s) rather than be at risk for failing all 6 credits at one time.

Questions	Answers
What flexibility do students have in the sequencing of the courses/modules?	The entire sequence will be completed in one academic year, with most students completing it in Year One and with students in BIOS and EPID typically completing it in Year 2.
Flexibility	
Will students be permitted to waive out of courses?	Yes, an exam/previous course history will determine whether students can waive out of basic quantitative science modules. NOTE: All students are still exoected to complete integration components. Exceptions may apply. It may be possible, for example, that students who have taken other courses at the graduate level may exempt out of select module(s).
How will students in online programs complete the MPH Core?	They can take core courses through the GO MPH program, which currently has 13 credit hours.
What happens if a student fails a module?	Remediation/refresher plans will be structured into the curriculum to give students an opportunity to overcome deficiencies while still proceeding through the sequences of modules. Otherwise, students will need to repeat the module(s) in question until they attain the competencies.
Will students with a BSPH be able to waive out of the MPH Core?	No, but students with a BSPH may be able to exempt out of the 4-credit quantitative module in Semester 1. All students will take integrated modules.
How will you ensure high quality coordination and integration of material?	The Implementation and Evaluation Committee (& Core Instructors) will recommend strategies for ensuring high quality coordination and integration of core content. Many resources are available to assist: the School's Coordinator for Curriculum and Pedagogy, Information and Instructional Systems resources, and the Center for Faculty Excellence as well as oversight by the associate dean for academics.
Will you offer summer courses?	We are not currently considering this option. Students typically are doing their practicum placements in summer.
Will MSPH students be required to take the MPH Core?	The MSPH is a public health professional degree ; as such, students in these programs will need to complete the MPH Core.
Will MSPH-to PhD students be required to take the MPH Core?	The MSPH-to-PhD is an academic degree . As such, students in these programs are NOT required to complete the MPH Core. Instead, CEPH would require them to take EPID 600 and SPHG 600 (Intro to Public Health) or its approved substitute (PUBH 680).
Rigor	
What assurances do you have that students will get sufficient quantitative (or other types) of training to equip them as skilled practitioners?	The proposed prototype devotes 4 credits to building students' EPID/BIOS methods skills. Two additional credits worth of EPID/BIOS methods are woven into the curriculum to help students further develop/apply these skills, integrating them with public health core content. Each competency must be accompanied by one or more corresponding assignments that students must pass.

Questions	Answers
Since core requirements are reduced from 15 to 12 credits, will our students get the training they need?	Per CEPH guidelines, core courses should comprise no more than 1/3 of total credits toward the MPH degree; and , MPH programs need to be a minimum of 42 credits. These guidelines require that we examine what we can eliminate.
Rigor	
Some programs depend on Epid and Bios 600 to prepare them for higher level methods courses in subsequent semesters. Will the new core sufficiently prepare our students for these next level courses?	The Implementation committee will work with current instructors to understand what they currently teach and to identify essential content. Alternatively, these students could continue to take EPID/BIOS 600 courses alongside Gillings MPH Core courses.
Where will we cover information on study design, threats to validity, etc.?	We expect this to be covered in Methods 1 or 2, to be decided by the Core Instructors from BIOS/EPID.

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