Program Description

Doctoral Program in Global Health Leadership (DrPH)
To Be Offered by IUPUI at Indianapolis
(Date Submitted: December 21, 2015)

1. Characteristics of the Program

a. Campus Offering Program: Indiana University-Purdue University Indianapolis (IUPUI)

b. Scope of Delivery: Global

c. Mode of Delivery: Synchronous online

d. Other Delivery Aspects: 3 brief campus visits in each of years 1 and 2 of the program

e. Academic Unit Offering Program: Richard M. Fairbanks School of Public Health, Department of Health Policy and Management

f. Anticipated starting semester: Fall 2016 if approval is obtained on time to recruit students, otherwise Fall 2017

2. Rationale for the Program

a. Institutional Rationale

The Doctoral Program in Global Health Leadership (DrPH) prepares mid-career professionals for senior-level positions in organizations working to improve the public's health. The three-year, 45-credit hour, cohort-based distance program confers a Doctorate in Public Health (DrPH) in global health leadership.

The Program targets diverse individuals working full-time in the U.S. and internationally with substantial leadership responsibilities in communities, organizations and institutions. Examples include domestic or international health directors, mid-career managers in government agencies and foundations, leaders in nonprofit and non-governmental organizations, program officers and other mid- to senior-level managers, and others working within the health field, including entrepreneurs and individuals working in nontraditional settings affecting the health of the public.

Students remain working full time, in country as they complete their degrees. With the exception of three short visits to Indianapolis or an alternate domestic or international site in each of years one and two, learning takes place in participants' homes and offices, away from the IUPUI campus.

The program uses state-of-the-art technology and innovative pedagogy. Students connect to faculty and peers mainly via computer, making substantial use of technology that allows students and faculty to interact productively and which supports live video, audio, and data sharing.

The Doctoral Program in Global Health Leadership responds to the urgent, unmet need to develop better leaders to improve the health of the public both domestically and internationally. We define leadership as the ability to influence those over whom one has no control. Graduates of this program will have the capacity – and to will to apply it – to identify public health problems at the organizational or policy levels, use real-world methods to understand the change mechanism needed for improvement, and create a plan for change that applies evidence and leadership principles and, if implemented, has a high probability of improving the public's health.

The DrPH is consistent with the mission of IUPUI to advance the intellectual growth of Indiana citizens to the highest levels nationally and internationally through research and creative activity, teaching and learning, and civic engagement. By offering a distinctive DrPH degree, the Fairbanks School of Public Health is promoting educational, cultural, and economic development through innovative collaborations, external partnerships, and a strong commitment to diversity.

The DrPH is consistent with the mission of the Fairbanks School of Public Health by cultivating innovative, interdisciplinary, community engaged education that prepares leaders in public health and health care.

The DrPH fits into IUPUI's strategic plan that includes a commitment to Indiana and beyond with a continued national and global engagement to improve the quality of life in communities worldwide. In 2020, Indiana University will commemorate its bicentennial, marking 200 years of providing educational excellence to individuals from around the nation and world. As both a core campus of IU and the state's only academic health and life sciences center, IUPUI plays a key role in advancing IU. The new DrPH program will be widely recognized for accomplishments in teaching and learning, scholarly activity, and community engagement. As IU's 200th anniversary approaches, this new program will strengthen global connections for the campus and university. The Indiana Chamber of Commerce's Indiana Vision 2025: A Plan for Hoosier Prosperity calls for Indiana to become a global leader in innovation and economic opportunity.

This program also fits into the strategic plan of the Fairbanks School of Public Health by supporting the four primary goals of the plan: (1) Deliver a portfolio of outstanding educational programs, (2) Develop and implement a distinctive research program, (3) Advance service in public health by building partnerships and engaging communities to improve health outcomes of the population, and (4) Provide an environment that supports diversity. After the June 2015 site visit for the inaugural accreditation of the Fairbanks School of Public Health, site visitors wrote that the school's national and international collaborations are developing into new and strong programs as a key benefit of the established connections of the faculty. They also wrote that long-standing interdisciplinary coordination and collaborations are strengths of this school with important connections established over the past decade and global health efforts forming.

The Fairbanks School of Public Health is uniquely positioned to develop this program. The program model was created and launched in 2005 at the University of North Carolina at Chapel where for ten years it has been the UNC system's flagship distance program. The IUPUI program will be developed and directed by Suzanne Babich, former director of the UNC program, now FSPH Associate Dean of Global Health and Professor of Health Policy and Management. The program model has received international recognition, influencing programming at Harvard University and the London School of Hygiene and Tropical Medicine. Published papers describing the program model used at UNC-Chapel Hill are provided in Appendix 1.

In addition, the Rockefeller Foundation is now funding adaptation of the program model by four top African universities for a Pan-African doctoral program in health leadership. In addition to the four African partner universities, Sue Babich is P.I. on a subcontract originally awarded to UNC and now extended to IUPUI/FSPH as a "Northern partner" in the development of the Pan-African program. The parties anticipate that the partnership will provide rich opportunities for faculty and student interaction and collaboration across programs with the potential of extension to the Kenya-based AMPATH program at IUPUI. Current African partners include the University of Ghana, Makerere University in Uganda, the University of Cape Town and the University of the Western Cape, both in South Africa.

As at UNC-Chapel Hill, the curricular home of the program is the Department of Health Policy and Management (HPM). The FSPH HPM faculty have expressed their enthusiastic support for the program. At the December FSPH Faculty Assembly meeting, the full faculty voted to move ahead with the program proposal. Key HPM subject matter experts have been identified to teach in the program. In addition, the program will include international adjunct faculty who will contribute diverse global perspectives to teaching and mentoring students.

*See Appendix 1: **Institutional Rationale** for additional detail*

b. State Rationale

This proposal supports the priorities outlined in *Reaching Higher, Achieving More* by utilizing an innovative model to offer a practice degree in health leadership that is valued and relevant to students and employers in Indiana, throughout the U.S., and around the globe. This competency-based program enables students to learn from and with each other in various places around the world. The distance education instruction prepares students from various public health disciplines for leadership positions in global heath.

c. Evidence of Labor Market Need

i. National, State, or Regional Need

The Doctoral Program in Global Health Leadership responds to the urgent need to develop better leaders to improve the health of the public both domestically and internationally. The Institute of Medicine's landmark 1988 report, The Future of Public Health brought this need into sharp focus. The report concluded, "public health will serve society effectively only if a more efficient, scientifically sound system of practitioner and leadership development is established." Since 1988, the Bureau of Health Professions, the Joint Council of Governmental Public Health Agencies, and the Centers for Disease Control and Prevention, the World Health Organization, among others, have called for improved training of top health leaders.

In 2003, the Institute of Medicine in two major reports renewed and strengthened its call for improved training of future health leaders. One of these reports, The Future of the Public's Health in the 21st Century, recommended that "leadership training, support, and development should be a high priority." The other report, Who Will Keep the Public Healthy, focused on "Educating Public Health Professionals for the 21st Century", as its subtitle states. The report notes that much has changed since the original 1988 IOM report was issued, and these changes require modification and improvement of the education of top health leaders and other professionals. The report also notes that the DrPH degree should be

designed specifically for advanced training in health leadership. The DrPH program pedagogy and curriculum respond to this need.

ii. Preparation for Graduate Programs or Other Benefits

This program targets working professionals with demonstrated leadership ability and substantial work experience in positions with substantial management responsibility. Successful applicants will be working full time in mid- to senior-level positions. Benefits to students apply primarily to opportunities for career progression. In fact, we expect successful applicants to this program to aspire to and be prepared to assume top jobs in which they may have maximum impact on the public's health.

Graduates of the program at the University of North Carolina at Chapel Hill have realized impressive career advancement and have cited the program as the reason for their success. One graduate, for example, became Secretary of Health for the State of Washington immediately after program completion. Another was immediately recruited by the Gates Foundation for a senior-level policy position. Another, a branch chief at the Centers for Disease Control and Prevention, was moved into the Director's office and given responsibility for implementing health reform for the agency.

iii. Summary of Indiana DWD and/or U.S. Department of Labor Data

See Appendix 2: ***Summary of Indiana Department of Workforce Development and/or U.S. Department of Labor Data*** *for additional detail.*

According to the U.S. Department of Labor: Bureau of Labor Statistics, the occupations related to health care and social assistance, and construction are projected to have the fastest job growth between 2010 and 2020. In occupations in which a graduate degree is typically needed for entry, employment is expected to grow by 21.7 percent, faster than the growth rate for any other education category. Industry employment projections indicate that the health and social assistance sector is projected to gain the most jobs (5.6 million).

Global health refers to "an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Global health emphasizes transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration; and is a synthesis of population-based prevention with individual-level clinical care." J.P. Koplan, T.C. Bond, M.H. Merson, et al. Towards a common definition of global health. Lancet, 373 (2009), pp. 1993–1995

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According to Science Careers from the journal of Science, global health now means thinking about challenges for the whole planet to protect individuals from emerging health problems and to combat existing challenges that stem from poverty. The World Health Organization and the Gates Foundation

believe that solving such complicated problems will require an international effort that involves the public and private sectors and creative people who work in health, science, engineering, policy, and business.
http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2008_03_21/caredit.a0800041

In recent years, there has been dramatic growth in the number of global health programs at both the undergraduate and graduate levels. This growth reflects a number of related trends including greater student awareness and interest in global issues; a demand for educational opportunities to meet this interest; heightened public awareness of the global health agenda, secondary to the HIV/AIDS epidemic and influenza outbreaks; and expansion of public and private funding for international health initiatives. Some global health programs exist as stand-alone research and education centers to advise trainees drawing from different schools and professions, whereas other programs have been developed by individual academic institutions or departments. Many of these programs offer trainees opportunities to focus on global health as part of a degree program, or "minor area of study," whereas others grant certificates following the completion of a global health concentration embedded within previously established training programs such as medicine residencies. Identifying Interprofessional Global Health Competencies for 21st-Century Health Professionals. Annals of Global Health. Volume 81, Issue 2, March–April 2015, Pages 239–247

Indiana University has achieved historic and globally-praised success in global health through partnerships in Kenya, Honduras, Mexico, Botswana, China, the Dominican Republic, Thailand, Liberia, Jamaica and other underserved areas. The Indiana University Center for Global Health is poised to build upon our international leadership position in this burgeoning field and expand collaborations within our institution. Its approach to furthering the health of underserved populations is based on over 20 years of action and reflection in this area. http://globalhealth.iu.edu/

iv. National, State, or Regional Studies

The program model is unique; there are very few programs anywhere in the world that address the needs of this program's target market, mid- to senior-level health professionals working full time out in the field. We know of no national, state or regional studies citing the need for the program, but the need has been well-described in major national and international reports from the Institute of Medicine, World Health Organization, international assemblies, and the like since at least 1988. Demand for the UNC-Chapel Hill program has remained strong for more than ten years, with admission rates stable at about 15 percent of applicants. Numerous highly qualified applicants are turned away every year. Graduates have been actively recruited to new positions or promoted within their own organizations after finishing the doctoral program. A 2015 survey of more than 100 UNC alums found high levels of satisfaction with the program itself and with professional and career benefits after program completion.

See Appendix 3: ***National, State, or Regional Studies*** *for additional detail.*

v. Surveys of Employers or Students and Analyses of Job Postings

See Appendix 4: ***Surveys of Employers or Students and Analyses of Job Postings*** *for additional detail.*

The UNC-Chapel Hill doctoral program, upon which the current program proposal builds, has undergone extensive evaluation over the past ten years, including a first-time UNC Graduate School Program

Review in 2010 in the program's fifth year of operation, an independent, two-year comprehensive program evaluation during 2010-2011, and another extensive survey of current students and alums in 2015. The program enjoys an excellent reputation among faculty, students, alums, and employers, with graduates going on to progressively higher-level positions in the field in the varied work settings that characterize the program's target audience. Since the program is highly selective and admits only those applicants who are currently employed full-time in mid- to senior level positions with substantial management responsibility, it may not be surprising that alums tend to continue to excel within their own organizations or find new positions elsewhere.

Examples of positions accepted by recent grads of the UNC program include Secretary of Health for the State of Washington, Director of the Hawaii State Department of Human Services, Director, National Prevention and Health at the U.S. Centers for Disease Control and Prevention, and Director, Program Advocacy and Communications for the Bill and Melinda Gates Foundation.

Appendix 4 includes the results of the most recent UNC program survey of current students and alums conducted in June 2015. Results continue to be highly favorable.

118 surveys were sent to members of Cohorts 1-10. Of these, 95 were opened, and of the surveys that were opened, 78 were completed (82% completion rate among those opened). All of the people who participated in the survey were currently employed, most in domestic (US focused) positions (79%). The rest practiced in international settings (15%) or both domestically and internationally (6%). One-fourth of the participants work for a college or university (25%), others work for public health agencies at the federal, state or local level (18%), global health organizations (13%), other nonprofit (8%), consulting firms (6%), long-term care/home health (5%), foundations (5%), hospital or health systems (5%), domestic non-public health governmental organizations (4%), or other. More than half are in senior management positions (CEOs, Executive Directors, Associate Directors, Chiefs). Slightly more than half (54%) of the respondents were alumni, and 41% were current students.

Students were extremely supportive of the DrPH program. 96% reported that they would make the decision again to seek out a DrPH degree from UNC (77 students). Only 3 (4%) reported that they would not make that decision again. Similarly, 96% reported that they would very strongly recommend the program (81%) or strongly recommend the program (15%). Among the alumni, almost four-fifths (79%) reported that the DrPH program helped to accelerate their career or promotion path. Somewhat more surprising, more than half of the current students (59%) also reported that the DrPH program has already helped accelerate their career or promotion path.

Full survey results are provided in Appendix 4.

vi. Letters of Support

Five letters of support are included in Appendix 5. Letters were provided by:

1) Gil Latz, Ph.D., Associate Vice Chancellor for International Affairs, IUPUI Professor of Geography and Philanthropic Studies, IUPUI Associate Vice President for International Affairs, Indiana University.
2) Philip Cochran, PhD, Associate Dean of the IU Kelley School of Business, Director of the Randall L. Tobias Center for Leadership Excellence, Thomas Binford Chair in Corporate Citizenship, and Professor of Management and Professor of Philanthropic Studies.

3) Mary E. Riner, PhD, RN, CNE, FAAN, Associate Dean for Global Affairs, Indiana University School of Nursing.
4) Stephen Hundley, PhD, Chair and Professor, Department of Technology Leadership & Communication, Associate Vice Chancellor for Strategic Initiatives, Office of the Executive Vice Chancellor & Chief Academic Officer.
5) Robert Einterz, MD, Donald E. Brown Professor of Global Health and Director, Indiana University Center for Global Health.

The individuals expressed strong support for the proposed program because of its potential to engage diverse units across the IUPUI campus, respond to the need for multidisciplinary, doctoral-level, professional degree development at IUPUI and to meet the University's strategic goals for development of innovative online and global initiatives. Indeed, once this program is established, there is good potential to expand it substantially through collaboration with the other health affairs schools on campus as well as business, engineering and technology, and potentially other units.

*See Appendix 5 for **Letters of Support**.*

3. Cost of and Support for the Program

a. Costs

i. Faculty and Staff

Most of the teaching and student dissertation committee service will be provided by full-time faculty already on staff at the FSPH. No new full-time faculty are required to support the program. Direction of the program will be provided by Suzanne Babich, for whom administrative and teaching time is built into her position at FSPH. We estimate that faculty effort to support the program totals approximately 3.0 FTE.

We will also use existing staff to support the program. No new staff hires will be required. We estimate that staff time required to support the program totals approximately 0.5 FTE, and that effort is spread out across several people in Student Services, instructional technology support and departmental administrative support. Current staffing is adequate to absorb this load.

In addition, we plan to use some adjunct faculty, particularly practitioners, as appropriate given the nature of the program, to teach and mentor students. Among those adjunct faculty will be international colleagues representing diverse global perspectives, an important consideration in the design of this program.

*See Appendix 6: **Faculty and Staff** for additional detail.*

ii. Facilities

This proposed program will have no impact on renovations of existing facilities, requests for new capital projects or the leasing of new space.

*See Appendix 7: **Facilities** for additional detail.*

iii. Other Capital Costs (e.g. Equipment)

There is no impact on other capital costs by offering this program. No new equipment is needed.

*See Appendix 8: **Other Capital Costs** for additional detail.*

b. Support

i. Nature of Support (New, Existing, or Reallocated)

No reallocation of resources has been necessary to offer this program. No programs will need to be eliminated or downsized to provide resources for this program. The proposed inaugural program director is Suzanne Babich, FSPH Associate Dean of Global Health and Professor of Health Policy and Management at FSPH. The Department has capacity to teach the program courses and supervise the doctoral dissertations using existing faculty and international collaborators who are another strength of the program as adapted by FSPH.

ii. Special Fees above Baseline Tuition

N/A

*Appendix 9: **Articulation of Associate/Baccalaureate Programs***

N/A

4. Similar and Related Programs

a. List of Programs and Degrees Conferred

i. Similar Programs at Other Institutions

Programs like the one proposed are in short supply around the world. In the U.S., the University of Illinois at Chicago used the UNC curriculum model to add a distance option to an extant residential DrPH program. The closest other competitors in the U.S., besides the original UNC program, include programs at Central Michigan University, the Medical University of South Carolina, Tulane University, and the University of Alabama-Birmingham. All of these programs use a modified executive design and target a narrower range of applicants focusing on applicants interested primarily in hospital or practice management or consulting. There is no similar program in Indiana.

A list of similar programs and their key characteristics is summarized in an attachment to this proposal.

In addition, globally, only two programs are somewhat similar. A program at the London School of Hygiene and Tropical Medicine attracts many of the same students who apply to the UNC program. However, the curriculum is substantially different and it lacks the leadership component. That program is currently undergoing an internal program review at LSHTM, and

Sue Babich is serving as the external reviewer of the program. The LSHTM has for several years been considering changes to the program design to incorporate elements similar to the UNC program model. A second global program was recently launched at the University of Geneva in Switzerland. Sue Babich is a permanent external member of the steering committee. That program has the same mission and target audience but is substantially different in design and includes little of the same course content.

Campuses offering (on-campus or distance education) programs that are similar: None

ii. Related Programs at the Proposing Institution: None

b. List of Similar Programs Outside Indiana

As discussed above, other similar programs outside Indiana include:

University of Illinois at Chicago
Central Michigan University
Medical University of South Carolina
Tulane University
University of Alabama-Birmingham
London School of Hygiene and Tropical Medicine (England)
University of Geneva (Switzerland)

c. Articulation of Associate/Baccalaureate Programs

Not applicable

d. Collaboration with Similar or Related Programs on Other Campuses: None

5. Quality and Other Aspects of the Program

a. Credit Hours Required/Time To Completion

Program credit hours total 45 (36 credit hours for coursework in the first two years; 9 credit hours for dissertation in year 3). Those admitted without prerequisite coursework in the core MPH disciplines (Epidemiology, Biostatistics, Environmental Health, Health Policy and Management and Health Behavior) will be required to complete up to 15 additional credit hours prior to beginning doctoral coursework.

Average time to completion in the program model at the University of North Carolina at Chapel Hill is 3.5 years. The program can be completed in 3 years, and students will be permitted up to 5 years to finish.

*See Appendix 10: **Credit Hours Required/Time to Completion** for additional detail.*

b. Exceeding the Standard Expectation of Credit Hours

The program will not exceed 120 semester credit hours.

See Appendix 11: Exceeding the Standard Expectation of Credit Hours for additional detail.

c. Program Competencies or Learning Outcomes

The program will adopt the DrPH competency model developed using a modified Delphi process by the Association of Schools and Programs of Public Health (ASPPH). A link to the model and program competencies is provided below:

http://www.aspph.org/wp-content/uploads/2014/04/DrPHVersion1-3.pdf

See Assessment (below) for additional detail

d. Assessment

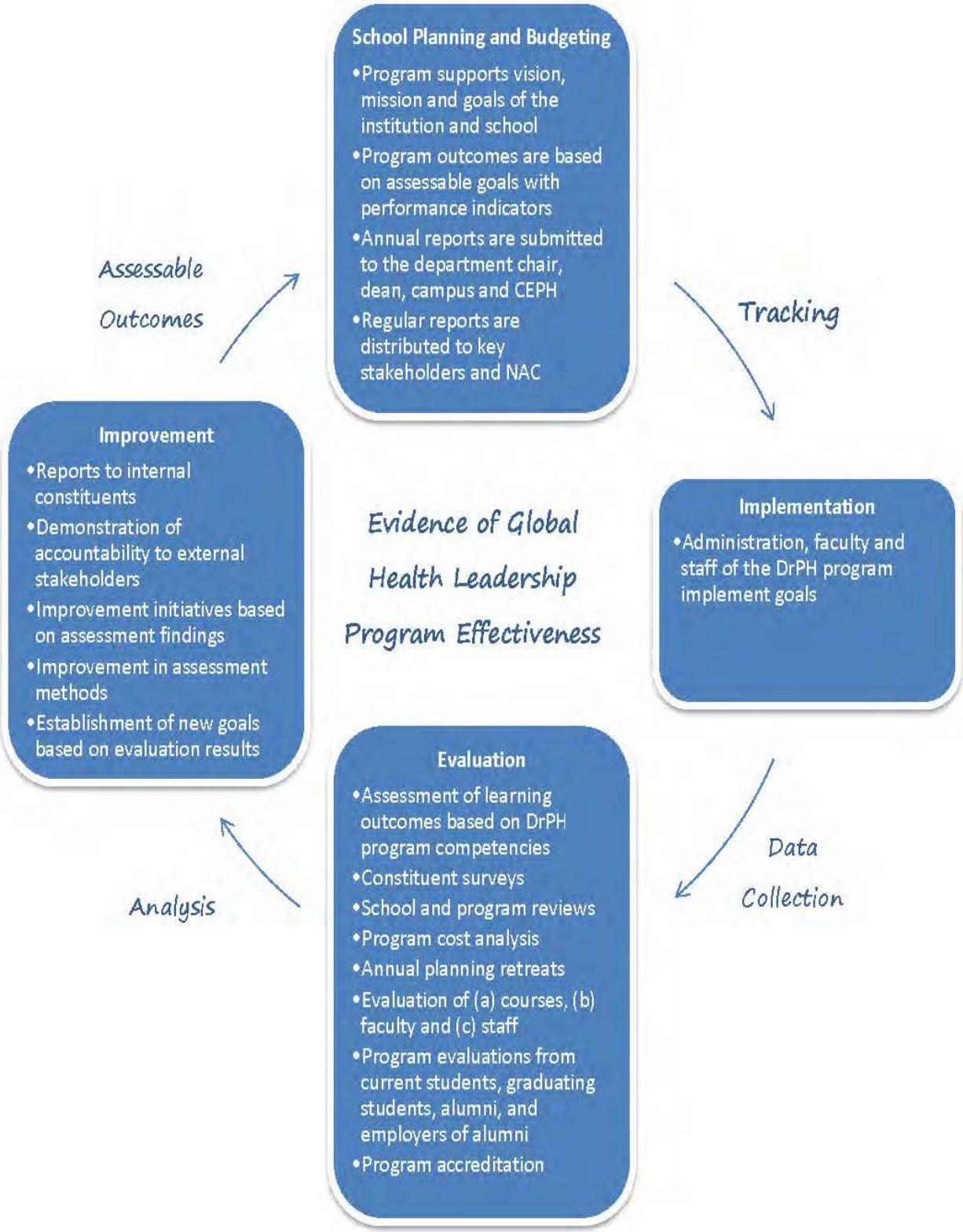
Dr. Suzanne Babich will serve as the inaugural program director. She brings extensive experience in directing and assessing a DrPH program in Global Health Leadership, having created and directed a similar program in another state. The school's doctoral program committee consists of the directors of each doctoral program, associate dean for education, and program support staff. This program meets monthly to ensure that the evaluation measures for the doctoral programs meet the highest standards.

Many program indicators are required by the national accrediting agency (CEPH) on an annual basis. Quantitative and qualitative measures of performance to determine success of the doctoral program include, but are not limited to, the following:

- Applicant to Enrollee Ratio
- Number and Diversity of Active Students
- Flexibility of Program Design
- Student Performance in Required and Elective Courses
- Student Performance in the Program's Practical Experiences
- Student Performance in the Minor
- Student Performance on the Preliminary Exam, Qualifying Exam, Dissertation Defense
- Faculty to Student Ratio
- Student Feedback
- Research Opportunities and Funding
- Quality and Level of Journals in Which Students' Research is Published
- Student Presentations, Awards, Recognition at Scientific Conferences
- Average Length of Time to Complete Degree
- Number of Graduates Per Year
- Employment Rates of Graduates
- Feedback from Campus and Institution
- Feedback from Employers of Graduates
- Feedback from Alumni
- Feedback from the Public Health Community

This program is designed with the expectation that students will matriculate after completing an MPH degree and having achieved competencies of an accredited MPH program. This program will build on the competencies achieved at the master's level. The major evaluation and assessment for any public health program in the Fairbanks School of Public Health is through the Council on Education for Public Health (CEPH), the national accrediting body for schools and programs in public health. In addition, the school's National Advisory Council (NAC), comprised of leaders in academia and public health practice, will ensure continuous assessment and improvement of this program. Information about the school's NAC is available at:
http://news.iu.edu/releases/2014/04/public-health-opportunities-chalenges.shtml

The figure below summarizes our approach to assessment, quality assurance and continuous quality improvement of the doctoral program.


School Planning and Budgeting
•Program supports vision, mission and goals of the institution and school
•Program outcomes are based on assessable goals with performance indicators
•Annual reports are submitted to the department chair, dean, campus and CEPH
•Regular reports are distributed to key stakeholders and NAC
Tracking
Implementation
•Administration, faculty and staff of the DrPH program implement goals
Data Collection
Evaluation
•Assessment of learning outcomes based on DrPH program competencies
•Constituent surveys
•School and program reviews
•Program cost analysis
•Annual planning retreats
•Evaluation of (a) courses, (b) faculty and (c) staff
•Program evaluations from current students, graduating students, alumni, and employers of alumni
•Program accreditation
Analysis
Improvement
•Reports to internal constituents
•Demonstration of accountability to external stakeholders
•Improvement initiatives based on assessment findings
•Improvement in assessment methods
•Establishment of new goals based on evaluation results
Assessable Outcomes
Evidence of Global Health Leadership Program Effectiveness

Again, the mission of the Doctoral Program in Global Health Leadership is to prepare mid-career professionals for senior-level positions in organizations working domestically and internationally to improve the public's health. Our goal is to produce graduates with the motivation, knowledge, and skills – and the ability to use those skills effectively – to become top leaders committed to improving the public's health.

We will accomplish our goals via an innovative curriculum that addresses key learning elements depicted around the circle in Figure 1. These elements plus those on the borders of the large triangle in Figure 1 interrelate with one another. Coursework in years 1 and 2 of the program enables learners to acquire competencies in these areas, which are integrated and applied in the dissertation produced during year 3.

Figure 1

DrPH Dissertation

The DrPH program is designed to be completed in three years. The program includes two years of coursework and a third year for work on dissertation. In addition to assessment of student competency attainment within each course, student assessments occur at key junctures within the program, following completion of the coursework, at the time of dissertation proposal defense, and at the final dissertation defense, as follows:

Written Comprehensive Examination

A written comprehensive examination is administered at the end of the second year of the program. The examination integrates key concepts from the overall program curriculum. Learners have forty-eight hours in which to take the exam. Specific details about the examination are provided to learners at least one week before the exam is scheduled to take place. Exams are blinded and then graded independently by two HPM faculty members familiar with the program curriculum and course content. Exams are graded pass or fail. In cases in which faculty graders disagree about the final assessment of an exam, a third faculty member is asked to independently grade the exam as well.

Dissertation

The DrPH dissertation is the ultimate academic test of a learner's competency. It requires the learner to apply key aspects of the curriculum to improving the understanding of or resolving an important public health-related administrative or policy issue.

The dissertation should demonstrate the candidate's mastery of the skills and knowledge required to lead an important health-related program, to create a substantial change in policy for the public's health, or to develop new methods that accomplish either of these two goals. The dissertation should be of publishable quality in either the scholarly literature or applied literature in health care delivery or public health.

Guidelines for the Dissertation

Learners have flexibility in designing a dissertation project, but all projects highlight a potential strategy for addressing a current or past health policy or organizational issue or problem. The dissertation outlines a plan to guide implementation of organizational or policy change. The objective of the DrPH dissertation is to combine research with an understanding of the role of leadership in creating an implementation plan to improve the public's health. All dissertation proposals are reviewed by the IU Institutional Review Board on Research Involving Human Subjects (IRB).

OUTLINE OF DRPH DISSERTATIONS

Chapter 1: The Topic. The topic must be innovative and significant. "Innovative" means the dissertation must either identify new approaches to existing or past problems or apply existing approaches to new problems. "Significant" means that the dissertation's implementation plan must have the potential to create one or more important improvements in the health of the public, or that the identification and understanding of past failures and successes illuminates principles of organizational change or policy implementation that have application in improving future health policy.

Focus: Most dissertations will focus on either:

- A change at the top level of an organization or a set of organizations that improves the organizations' ability to improve the public's health; or
- Policy development and implementation at the local, regional, state, or national level aimed at improving the public's health

Researchable: The topic must be able to be stated as a research question.

Chapter 2: Literature Review. The dissertation must produce a scholarly analytical synthesis that demonstrates the learner's ability to critically evaluate the relevant literatures on leadership and organizational or policy change as they relate to understanding the issue or problem and identifying alternative courses of action.

Chapter 3: Methodology. This chapter identifies and describes the appropriate tools to study the issue being examined. The methods used in the dissertation fall under the general rubric of "mechanisms for social change" and may include one or more of the following, as is appropriate for the topic: quantitative data analysis, including large data sets; qualitative analysis; or policy analysis. Policy analysis should include an analysis of the problem (needs statement), establishment of goals and evaluation criteria, identification of alternative policies to address the problem, evaluation of the alternative policies using the evaluation criteria, and a description of the implementation and evaluation plans.

Chapter 4: Results. This chapter describes what was found as a result of studying the issue using the methods described in Chapter 3.

Chapter 5: The Implementation Plan. This section is the centerpiece of the DrPH dissertation and should be comprehensively detailed. This chapter presents an explicit strategy for addressing the issue with a focus on the resources, players, and contextual parameters affecting the change and should include a proposed evaluation methodology.

This section includes an application of the core elements of the DrPH leadership curriculum depicted on the triangle's borders in Figure 1, including:

1) The resources necessary to implement and maintain the organizational change or policy including people, funds and other infrastructure elements.
2) The players affecting the change including key stakeholders (i.e. populations, communities) and key decision-makers.
3) The contextual parameters affecting the change including law and policy, organizational or situational authority, ethics, political and public feasibility, and the prevailing social environment and norms.

Other topics covered in the curriculum (communications, informatics, policy analysis, social forecasting, scheduling, negotiation, assessment, planning, assurance, public relations, marketing, and evaluation) should be incorporated as applicable. (See inner circle, Figure 1). The implementation plan combines the various elements of the curriculum in a coherent and comprehensive strategy for making organizational or policy change.

Chapter 6: Discussion. This chapter explains how the plan will improve the public's health if implemented, incorporating the principles identified in the analysis in Chapter 5. It identifies any drawbacks/limitations and explains why the advantages outweigh the disadvantages. It also describes the plan's potential for further dissemination.

Oral Comprehensive Examination – Dissertation Proposal Defense and Final Defense

The dissertation committee reviews and approves the dissertation proposal, provides guidance to the learner in conducting the dissertation, and ultimately judges whether the dissertation meets the criteria for a scholarly work as outlined above. Specific areas of concern include the significance and appropriateness of the issue chosen, the appropriateness and execution of the methodology used, whether the results logically follow from the findings, the completeness and feasibility of the proposed implementation strategy and evaluation plan, and the appropriateness and utility any principles identified.

For all dissertations, the committee should be able to answer relevant questions about the dissertation, such as:

Overall Dissertation Evaluation Criteria:

- Considered as a whole, is the dissertation, its methods and findings, significant and innovative?
- Is the literature review thorough and applicable, and has it been synthesized effectively?
- Are relevant leadership theories cited and explained?

Needs or Problem Statement:

- Is the need for the project clearly identified?

Goals and Evaluation Criteria:

- Does the dissertation include a description of policy goals and relevant evaluation measures (e.g., cost, resources needed to implement, feasibility of implementation, political feasibility)?

Generating Alternative Options:

- Does the dissertation identify appropriate options that could be used to address the problem?

Data or Policy Analysis:

- Have appropriate research and data analysis methods been employed? (For example, has the learner used appropriate quantitative, qualitative, or policy analysis methods to evaluate competing options?)
- Does the project describe how populations and communities will be affected by the change? Are the pros and cons in terms of effect on populations thoroughly analyzed?
- Are considerations of the ethical implications of the change adequate and appropriate?

Implementation Plan:

(Learners should address some or all of the following, as appropriate to the dissertation):

- What resources (financial, human and other) are/were needed to implement and maintain the change?
- Have the effects of the laws and policies that bear on this issue been adequately addressed?
- Are/Were the relevant policy makers and stakeholders identified? What are/were their positions? Has the learner described a plan to obtain stakeholder support and/or reduce stakeholder opposition? For dissertations focusing on past policy, has the learner identified the role that stakeholder groups played in the project being evaluated?
- Is/Was the proposed schedule of implementation realistic? Does/Did it make sense in the context of the project's budget and resources?
- Have the appropriate policy analyses, social forecasts, assessments, negotiations, communications, and other applications methods been identified and integrated appropriately into the plan? Are the marketing and public relations plans sound? For projects focusing on historical policies, have these facets been examined?

Program Assessment

In addition to routine course evaluations conducted at the end of each semester, we will also conduct ongoing evaluation of the DrPH program. We will use both short- and long-range approaches:

Short-range approaches:

- Informal, in-person debriefings will be conducted at the conclusion of each on-campus session with each cohort, led by the program director or designee.
- An in-depth learner evaluation of the coursework and program will be conducted midway through the first year of the program, during the January on-site visit. A focus group consisting of learners in the first cohort will be conducted by a department faculty member with substantial experience in executive education. Evaluation will include learner feedback on the experience in general as well as specific questions about program administration, use of technology, and the curriculum and fall courses. Learners will also be asked to describe ways in which the program had affected their lives.
- An annual program report will be prepared addressing such topics as demographic characteristics of each cohort, assessment methods, assessment findings, changes made in the program based upon assessment findings, program successes, and barriers to continued success.

Longer-range approaches:

- A database will be maintained to track several items of interest that will be used to assess our success in meeting our stated objective of preparing top-level leaders committed to improving the health of the public. We anticipate that this database will be maintained indefinitely – we want to be able to document our graduates' career development from position upon graduation to five and ten years post graduation and beyond. In addition to contact information, we will collect and update such items as: dissertation topic, years of matriculation and graduation, and current position titles and employers.
- We will survey graduates' employers – and graduates themselves – over time (2 years, 5 years, 10 years post-graduation) to determine the extent to which graduates possess necessary competencies relevant to their current positions.

Information gathered through the assessment process will be used to help determine the summative effectiveness of the program in meeting its intended learning outcomes and to inform any adjustments that are determined to be needed to help with continuous programmatic improvement.

Student Outcome	**Where will students learn this knowledge or skill?**	**How will student achievement of the outcome be assessed?**	**Relationship to Mission, PULs, and RISE?**	**In what setting will the assessment take place?**
Outcome 1 Influence decision-making regarding policies and practices that advance public health using scientific knowledge, analysis, communication, and consensus-building.	Courses 1, 2, 5, 13, 14, 15 Practice settings	Individual course assessments Comprehensive exams Dissertation	NA	Courses 1, 2, 5, 13, 14, 15 Practice settings
Outcome 2 Communicate and interact with people across diverse communities and cultures for development of programs, policies, and research.	Courses 1, 2, 13, 14, 15, 16 Practice settings	Individual course assessments Comprehensive exams Dissertation	NA	Courses 1, 2, 13, 14, 15, 16 Practice settings
Outcome 3 Synthesize and apply evidence-based research and theory from a broad range of disciplines and health-related data sources to advance programs, policies, and systems promoting population health.	Courses 3, 4, 6, 7, 8, 9, 12, 17 Practice settings	Individual course assessments Comprehensive exams Dissertation	NA	Courses 3, 4, 6, 7, 8, 9, 12, 17 Practice settings
Outcome 4 Create and communicate a shared vision for a positive future; inspire trust and	Courses 1, 2, 13, 14, 15, 16 Practice settings	Individual course assessments Comprehensive exams	NA	Courses 1, 2, 13, 14, 15, 16 Practice settings

motivate others; and use evidence-based strategies to enhance essential public health services.		Dissertation		
Outcome 5 Provide fiscally responsible strategic and operational guidance within both public and private health organizations for achieving individual and community health and wellness.	Courses 5, 8, 9, 11, 13, 15 Practice settings	Individual course assessments Comprehensive exams Dissertation	NA	Courses 5, 8, 9, 11, 13, 15 Practice settings
Outcome 6 Identify and analyze an ethical issue; balance the claims of personal liberty with the responsibility to protect and improve the health of the population; and act on the ethical concepts of social justice and human rights in public health research and practice.	Courses 2, 3, 14 Practice settings	Individual course assessments Comprehensive exams Dissertation	NA	Courses 2, 3, 14 Practice settings
Summative Outcome(s) Lead an important health-related program, create a substantial change in policy for the public's health, or develop new methods that accomplish either of these two goals.	Courses 10, 18 Practice settings	Comprehensive exams Dissertation	NA	Courses 10, 18 Practice settings

List of courses:

<u>Year 1, Fall</u>

Course 1: Organizational Leadership Theory and Practice (2 credit hours)
Course 2: Leadership in Global Health Law and Ethics (2 credit hours)
Course 3: A Population Perspective for Global Health (1 credit hour)
Course 4: Initiating the Research Process (1 credit hour)

<u>Year 1, Spring</u>

Course 5: Leadership in Global Health Systems (2 credit hours)
Course 6: Essentials of Practice-based Research (2 credit hours)
Course 7: Literature Review and Appraisal (2 credit hours)

Year 1, Summer

Course 8: The Science of Global Health Implementation (2 credit hours)
Course 9: Leadership Challenges in Global Health Informatics (1 credit hour)
Course 10a: Dissertation Planning and Preparation (2 credit hours)

Year 2, Fall

Course 11: Financing Global Health (3 credit hours)
Course 12: Fundamentals of Research Analysis (3 credit hours)

Year 2, Spring

Course 13: Executive Communication for Global Health Leaders (2 credit hours)
Course 14: Global Health Policy Analysis and Advocacy (3 credit hours)
Course 15: Strategic Theory and Practice in Global Health Leadership (2 credit hours)

Year 2, Summer

Course 16: Leadership for Global Marketing, Public Relations and Fund-raising (2 credit hours)
Course 17: Program Evaluation for Global Health Leaders (3 credit hours)
Course 10b: Dissertation Planning and Preparation (1 credit hour)

Year 3, Fall Doctoral Dissertation (3 credit hours)

Year 3, Spring Doctoral Dissertation (3 credit hours)

Year 3, Summer Doctoral Dissertation (3 credit hours)

e. Licensure and Certification

This doctoral degree does not prepare graduates for a license or certification.

f. Placement of Graduates

Graduates of the program are already employed full-time when they matriculate into the program. They come from diverse settings including domestic and international government agencies, nonprofit organizations, NGOs, foundations, healthcare industries such as pharmaceutical companies, hospital systems and insurance companies as well as nontraditional settings related to health care. After graduation, graduates remain in their organizations, typically moving to higher-level positions, or they move on to higher-level positions in other similar organizations.

g. Accreditation

The FSPH accrediting agency, CEPH, does not accredit individual doctoral programs per se. The School is accredited. However, CEPH is currently finalizing guidelines for DrPH programs, and the proposed program conforms to those guidelines. At FSPH, Dean Halverson and Sue Babich are both on a special advisory committee within the Association of Schools and Programs in Public Health working to provide input to CEPH as curriculum recommendations for DrPH programs are finalized.

6. Projected Headcount and FTE Enrollments and Degrees Conferred

Institution/Location:	Indiana University-Purdue University Indianapolis
Program:	Doctor of Public Health in Global Heatlth Leadership
Proposed CIP Code:	51.2207
Base Budget Year:	2015-16

	Year 1 2016-17	Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21
Enrollment Projections (Headcount)					
Full-time Students	-	-	-	-	
Part-time Students	15	30	45	45	45
	15	30	45	45	45
Enrollment Projections (FTE)					
Full-time Students	-	-	-	-	
Part-time Students	11	23	28	28	28
	11	23	28	28	28
Degree Completion Projection	-		12	12	15

CHE Code:
Campus Code:
County Code:
Degree Level:
CIP Code:

Appendix 1: Institutional Rationale

IUPUI Core: Vision, Mission, Values & Diversity

https://www.pbhealth.iupui.edu/index.php/about/mission-and-values/

The proposed program applies state-of-the-art technology using an innovative approach that permits mid- to senior-level working professionals around the globe complete a professional doctoral degree program without leaving their home countries or their jobs. The program model at UNC-Chapel Hill was the first of its kind in the world, and the admission rate in that program is still very low (about 15 percent). Indiana University has a unique opportunity to build on and adapt this model to respond to the urgent need for leadership training among health professionals around the world using an interprofessional program model that builds in diversity and principles of experiential learning.

Attached papers describe the program model and its rationale.

The Changing Pattern of Doctoral Education in Public Health From 1985 to 2006 and the Challenge of Doctoral Training for Practice and Leadership

We examined trends in doctoral education in public health and the challenges facing practice-oriented doctor of public health (DrPH) programs. We found a rapid rise in the numbers of doctoral programs and students. Most of the increase was in PhD students who in 2006 composed 73% of the total 5247 current public health doctoral students, compared with 53% in 1985. There has also been a substantial increase (40%) in students in DrPH programs since 2002.

Challenges raised by the increased demand for DrPH practice-oriented education relate to admissions, curriculum, assessment processes, and faculty hiring and promotion. We describe approaches to practice-based doctoral education taken by three schools of public health. (*Am J Public Health.* 2008;98:1565–1569. doi:10.2105/AJPH.2007.117481)

Eugene Declercq, PhD, Karen Caldwell, MPH, Suzanne Havala Hobbs, DrPH, RD, and Bernard Guyer MD, MPH

THERE HAS LONG BEEN concern expressed in research and commentaries about how best to train experienced public health professionals for leadership positions.[1] Several themes have emerged in the past two decades from this literature, including the need to incorporate new subject matter (e.g., informatics, genomics, ethics) into public health education[2]; the need to meet training[3] and continuing education needs, including possible certification of the large proportion of the public health workforce without formal training in public health[4]; and the need to more thoroughly integrate practice skills into public health education, particularly in master of public health (MPH) programs.[5] At the same time, there has been rapid growth in the number of and enrollments in schools of public health, with the total number of public health students more than doubling between 1985 (n=9494) and 2006 (n=20 907).[6]

There has also been a substantial increase in the number of students seeking doctorates in public health. We examined trends in doctoral education in public health with particular attention to the doctor of public health (DrPH) degree and the challenges associated with developing doctoral-level, practice-oriented degree programs. Data for this commentary have been drawn from the annual reports of the Association of Schools of Public Health (ASPH).[7] These reports contain a compilation of data supplied by every accredited school of public health on the characteristics of applicants, students, and graduates. Data are summarized by ASPH staff overseen by a data advisory committee comprising deans and staff at schools of public health.

THE GROWTH OF DOCTORAL EDUCATION IN PUBLIC HEALTH

Between 1985 and 1995, there was a slight increase in the number of ASPH-accredited schools of public health (from 24 to 27) and doctoral programs (from 21 to 25; Table 1). However, there was a 59% growth in the total number of doctoral students and a 33% increase in average program size. Between 1995 and 2006, the number of schools increased by 37%, whereas the number of doctoral students increased by 64%.

Virtually all of the increase in students from 1995 to 2006 was generated by the development of additional doctoral programs, with average program size staying the

TABLE 1—Trends in Doctoral Programs and Students in Schools of Public Health, 1985–2006

	1985, No.	1990, No.	1995, No.	2000, No.	2006, No.	1985–1995 % Change	1995–2006 % Change
Total ASPH schools of public health	24	24	27	28	37	13	37
Schools having students in degree program							
PhD	16	18	20	24	29	25	45
DrPH	17	17	18	18	25	6	39
ScD/DSc	5	4	5	4	4	0	–20
Other doctorate	3	4	2	2	6	–33	200
Any doctorate	21	23	25	27	37[a]	19	48
Total doctoral students	2010	2558	3198	3772	5247	59	64
Average doctoral program size	96	111	128	140	142	33	11

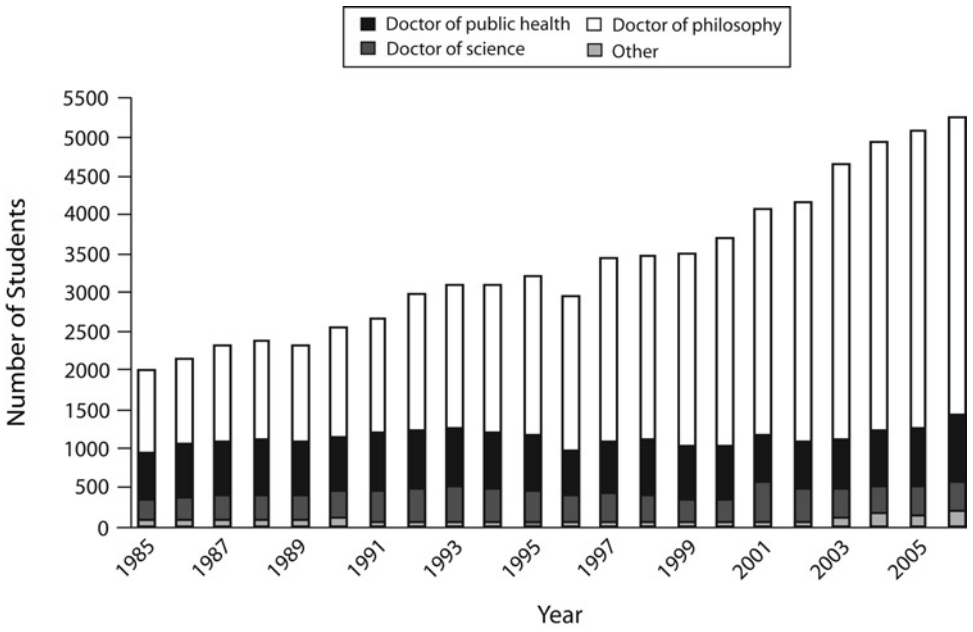
Note. ASPH = Association of Schools of Public Health; DrPH = doctor of public health; ScD/DSc = doctor of science.
[a]ASPH accreditation requires schools to offer doctoral degree programs.

Appendix 1a

same between 2000 and 2006 (Table 1). Seven more DrPH programs and nine more PhD programs existed in 2006 compared with 1995. The overall addition of 12 schools with doctoral programs included 11 new schools, two new doctoral programs at existing schools—Emory University Rollins School of Public Health (PhD) and University of Puerto Rico Graduate School of Public Health (DrPH)—and the loss of the University of Hawaii School of Public Health. Of the 11 new schools, five offered only a DrPH program (University of Arkansas for Medical Sciences Fay W. Boozman College of Public Health, Drexel University School of Public Health, George Washington University School of Public Health and Health Services, New York Medical College, and University of North Texas Health Science Center School of Public Health), three had only a PhD program (University of Arizona Mel and Enid Zuckerman College of Public Health, University of Iowa College of Public Health, and Ohio State University College of Public Health), and three offered both (University of Kentucky College of Public Health, University of Medicine and Dentistry of New Jersey—School of Public Health, and Texas A&M Health Science Center School of Rural Public Health).

Rapid overall growth in the number of doctoral students since 1985 has come almost entirely from PhD programs (Figure 1). Although PhD students made up slightly more than half (53%) of all public health doctoral students in 1985, they accounted for almost three fourths (73%) of the total by 2006. The number of doctor of science (ScD) students reached an all-time high in 2001 (509 students) but has decreased since to only 369 students in 2006.

Over the course of the past two decades, the number of DrPH students has fluctuated, with an early peak of 755 students in 1992 and a low of 569 students in 1996, increasing to 702 in 2000, then declining again to 605 in 2002. The number of DrPH programs was relatively stable between 1985 and 2000, and causes of this pattern are unclear. From 2002 to 2006, however, the number of DrPH students increased by 40% to 846 DrPH students, and the growth in the number of DrPH programs suggests this increase is likely to continue. This growth also comes at a time when the number of DrPH graduates (72 in 2003; 129 in 2006) has increased rapidly.



Note. Association of Schools of Public Health's reported total of doctoral students for 2005 was 4892; Tulane University School of Public Health and Tropical Medicine (which did not report 2005 data) had a total of 193 doctoral students in 2004 that were added for comparability over time for a total of 5085.
Source. Data are from the Association of Schools of Public Health's Annual Data Reports.[6]

FIGURE 1—Number of public health doctoral students, by degree type: United States, 1985–2006.

The increase in DrPH students from 2002 to 2006 was the result of adding students in new programs at University of Kentucky College of Public Health (n=52), Drexel University School of Public Health (n=26), Boston University School of Public Health (n=24), University of Arkansas for Medical Sciences Fay W. Boozman College of Public Health (n=14), New York Medical College School of Public Health (n=8), and Texas A&M Health Science Center School of Rural Public Health (n=5), as well as increases in DrPH students in some existing programs, specifically Johns Hopkins Bloomberg School of Public Health (+34), Loma Linda University School of Public Health (+27), University of Alabama at Birmingham School of Public Health (+19), University of Pittsburgh Graduate School of Public Health (+18), and University of North Carolina at Chapel Hill School of Public Health (+18). These increases were somewhat offset by major declines in DrPH students at Harvard School of Public Health (–17) and Columbia University Mailman School of Public Health (–14).

The annual ASPH reports also present limited background data on doctoral students, and in 2006, DrPH and PhD students in public health differed markedly. The DrPH students were much more likely than were PhD students to attend classes on a part-time basis (52% vs 26%) and to be a race or ethnicity other than White (43% vs 29%). The PhD students were more likely to be foreign born (26% vs 18%). There were no differences by gender (68% women in each case).[7]

The programmatic distribution of public health doctoral students (Table 2) has changed in the past

Appendix 1b

TABLE 2—Distribution of Doctoral Students by Program Area, 1995 and 2006

Program Area	PhD Students 1995 (n = 2038), %	PhD Students 2006 (n = 3826), %	DrPH Students 1995 (n = 714), %	DrPH Students 2006 (n = 846), %
Biostatistics	15	16	5	7
Epidemiology	29	29	11	12
Health services	12	14	26	19
Health policy and management	0	0	3	11
Health education/behavioral sciences	6	11	16	26
Environmental sciences	18	12	8	8
International health	1	4	11	3
Nutrition	3	3	2	1
Biomedicine	9	7	0	0
Maternal and child health	3	2	3	6
Other	4	3	15	7

Note. DrPH = doctor of public health.

decade, although the extent to which the changes represent shifts in program interest or merely shifts in program names (e.g., from Health Services to Health Policy and Management) is unclear. Almost half of PhD students (44%) were registered in epidemiology or biostatistics programs during each period. In the case of DrPH students, the major change was in health education and behavioral sciences programs, which accounted for 16% of DrPH students in 1995 compared with 28% in 2005.

CHALLENGES OF PRACTICE-ORIENTED DRPH EDUCATION

Three interesting trends emerged from this brief examination of doctoral study in public health. The first was the rapid growth in public health doctoral students, with numbers increasing at a rate even faster than the substantial growth in MPH students during the same period. The second is the overall dominance of the PhD degree as the doctoral degree of choice in schools of public health, with 73% of all public health doctoral students now enrolled in PhD programs. The third is the recent (2002–2006) and rapid growth (40%) in the number of DrPH students. The increase in public health doctoral students is likely to continue as the number of those graduating with an MPH (4392 in 2006 compared with 2803 in 1995) grows.[7]

Although there is clearly demand for doctoral education in public health, schools of public health now must determine the content of their doctoral curriculum.[8] For those seeking a PhD in a research field (epidemiology, biostatistics, health services, and environmental sciences accounted for 71% of all PhD students), the development of highly skilled researchers is a difficult but fairly straightforward process. In a sense, this is what faculty do best—mentor students to become future public health faculty.

The DrPH programs that emphasize training in leadership and practice face a different challenge. Although a large proportion of DrPH students (44%) were in research skills areas (epidemiology, biostatistics, health services, and environmental sciences), most programs emphasize advanced, practice-oriented training. The Council on Education for Public Health requirements and the accreditation process make clear to schools the content requirements for master's degree programs. However, the only requirement associated with doctoral programs is that schools must offer at least three doctoral degree programs related to any of the five core areas of graduate public health education.[9]

Several challenges arise for DrPH programs interested in emphasizing practice skills and leadership. First, who should be admitted to a practice-oriented doctoral program? At the MPH level, public health education has shifted from a concentration on clinicians and midcareer public health practitioners to significantly younger students, often including those directly out of undergraduate institutions.[10] Evaluation of applicants at the MPH level resembles that of other professional schools, with an emphasis on grades, scores on standardized tests, essays, and letters of recommendation. The DrPH programs that emphasize practice use the same metrics, but they typically also consider a student's experience in the field. How does one assess public health experience and potential for leadership and weigh that against intellectual ability and classroom skills?

Second, what do we mean by training for leadership in policy and management?[11] Schools claim to address these issues in the master's-level curriculum, but what higher-level training in these areas means is unclear. It is unlikely that leadership skills can be taught didactically. How much emphasis should be placed on research and statistical skills? Schools of public health are organized to provide research training, but does a public health commissioner or the director of a nongovernmental organization need to be a skilled SAS programmer? The challenge for schools of public health is to seriously address the question of how much of what we offer in a DrPH program is the result of the needs of the field and how much is a repackaging of our research training. Related to this question is the third challenge: What are the appropriate assessment tools for leadership and practice? What is the appropriate format for a comprehensive examination? What criteria define a doctoral-level practicum? What do we mean by an applied or "practice-relevant" dissertation?

Finally, schools face a fourth serious challenge as they implement practice-oriented DrPH programs: Who will teach in them? The problem was anticipated in the 2003 Institute of Medicine report, *Who Will Keep the Public Healthy?*[3] The report recommended major changes in the criteria used in hiring and promoting school of public health faculty, rewarding "experiential excellence in the classroom and practical training of practitioners."[3(p127)] Building a practice-oriented faculty involves a change in the current culture of schools of public health, where research is the primary source of revenue. Recruiting practitioners as public health faculty also raises challenges in identifying

Appendix 1c

individuals who are truly committed to full-scope teaching in a contemporary graduate setting, as well as establishing criteria for their tenure and promotion.

THREE APPROACHES TO DOCTORAL-LEVEL, PRACTICE-ORIENTED EDUCATION

Starting a New DrPH Program at Boston University

The Boston University School of Public Health 1999 Strategic Plan included the objective, "Develop an interdisciplinary DrPH degree," which would complement four existing, department-based, research-oriented doctoral programs. The program would involve three different departments: International Health, Maternal and Child Health, and Social and Behavioral Sciences. A faculty committee with representatives from all departments in the school developed the program over a four-year period, and the first nine students were admitted in the fall of 2004.

Several key decisions were made in implementing the program. To acquire experienced students, the program requires applicants to have a master's degree and at least three years of practice experience. The school-wide program involves the three departments noted previously but is centrally administered. With regard to curriculum, although using existing courses would have decreased startup costs, it was felt that a new, integrated curriculum that emphasized management and leadership would be more appropriate (a summary of the curriculum is available at http://sph.bu.edu/drph).

Also, rather than having students study how to develop a major research project, the program emphasizes public health practice and focuses on how to run organizations, necessitating the identification of practice-oriented faculty. To link assessment to practice, the comprehensive examination is a case study requiring students to develop a plan in response to a problem. The dissertation, although it involves rigorous research, has to be applicable to contemporary public health settings, and a practicum emphasizing leadership training is required, regardless of prior experience. The biggest challenges faced thus far have been finding financial support for students, because they are not eligible for most traineeships that emphasize research careers, and recruitment of appropriate faculty to teach high-level management courses.

Developing an Online DrPH at the University of North Carolina

The nation's first executive doctoral program in health leadership was launched in August 2005 by the Department of Health Policy and Administration at the University of North Carolina, Chapel Hill, School of Public Health. The three-year, cohort-based distance program prepares midcareer professionals for top positions in organizations working to improve the public's health. The program confers a DrPH in Health Administration. Students may be based in the United States or abroad, providing they have access to high-speed Internet services.

One new cohort is admitted annually and each comprises 10 to 12 diverse individuals from a wide range of academic backgrounds and experience in traditional and nontraditional settings. Coursework is completed in the first two years and the dissertation in year three. Students come to Chapel Hill three times per year, for three to four days each time, in years one and two. Between visits, learning occurs from students' homes and offices off campus. Students communicate with their cohort, faculty, and guest discussants by using state-of-the-art computer technology that supports live video, audio, and data sharing.

The executive program replaced a freestanding, interdisciplinary, residential DrPH program that, for 12 years, admitted applicants via several departments in the school. An ongoing challenge of the residential program was finding midcareer professionals able and willing to leave their jobs to return to school. In late 2002, the administrative home of the program was transferred to the Department of Health Policy and Administration, because most students in the residential program matriculated through that department. The transition from residential to distance format was aided considerably by the department's extensive experience in distance education dating back to the 1970s and by its close working relationship with the school's information technology experts.

All aspects of the DrPH program were reworked, including the pedagogical approach, admissions policies, curriculum, course content, and dissertation design, and the residential program was dissolved in 2004. As of 2007, a total of 30 students have been admitted in three cohorts. The number of highly qualified applicants has exceeded the capacity to admit. Details about the executive program are available at: http://www.sph.unc.edu/hpaa/executive_drph.

Revamping an Existing DrPH Program at Johns Hopkins

The DrPH program at Johns Hopkins Bloomberg School of Public Health evolved over a period of 10 years from a doctoral degree that was virtually indistinguishable from the research PhD to a doctorate focused on public health practice and leadership. That transition was codified in 2005 by the definition of educational objectives, eligibility, degree requirements, and the conditions for a part-time degree program.

The DrPH degree is unique in being a hybrid departmental and school-wide program. The departments that offer the degree (Environmental Health Sciences; Epidemiology; International Health; Health Policy and Management; Population, Family, and Reproductive Health) define all disciplinary requirements and provide the specialized course work in the field as well as supervision of dissertation research. The school-wide program defines common school-wide requirements, including those in leadership and other crosscutting areas.

The greatest challenge to the DrPH program has been clarifying the distinctions from the PhD program while maintaining the standards for rigor that ensure equality between the two doctoral degrees. The PhD is a full-time degree that prepares students for independent careers as research scientists and teachers. To accomplish this, the program is entirely departmentally based and emphasizes disciplinary skills and knowledge. Table 3 shows the way the distinctions and similarities are presented to faculty and students.

The DrPH, in contrast, can be a full- or part-time program that applies analytic skills to the solution of real-world public health

Appendix 1d

TABLE 3—Differences in PhD and DrPH Programs at Johns Hopkins Bloomberg School of Public Health

PhD	DrPH
Problems emerge from scientific inquiry and research literature	Problems emerge from the public arena, including policy debates and the news media
Emphasis on the scholarship of the discovery of new scientific knowledge and on hypothesis-driven research	Emphasis on the scholarship of application of scientific knowledge to solve real-world public health problems; may also use hypothesis-driven methods
Contributions to theory in a discipline	Contribution to public health practice that is most often multidisciplinary and integrative
Strong analytic skills used in basic science research	Strong analytic skills used to assess and evaluate public health problems and programs
Leadership in a substantive or methodological area	Leadership in public health practice settings
Future careers in academic and research institutions	Future careers in public health agencies and programs; may include academia
Communicates findings to scientific literature	Communicates findings to the public and policymakers

Source. Guyer.[12]
Note. DrPH = doctor of public health.

problems. The DrPH applicants are admitted with at least three years of public health experience as well as an MPH or equivalent master's degree. They maintain their connections to the practice world through their faculty mentors; involvement of practitioners in their comprehensive, preliminary oral, and final defense exams; and participation in a year-long DrPH seminar that emphasizes leadership, the history and theory of public health practice, professional communication, and translation of research to practice and policy. The latter seminar is taught by the director of the DrPH program and guests from the practice world.

The DrPH program continues to respond to requests for innovative part-time opportunities and for a distance-education version of the degree. The greatest challenge to developing these alternatives is convincing the full-time academic faculty that it is possible to maintain the high standards of analytic skills and disciplinary course work in such for- mats. In addition, the program is continually challenged to recruit practice-based faculty into an environment that is heavily research based and soft-money funded.

CONCLUSION

No one disputes the need for training the next generation of public health leaders,[13] and demand for such training is high among potential doctoral students. A key component of such training must include preparation for leading in a fast-changing environment. The challenge to schools of public health is to practice what they preach and to adapt DrPH program admissions criteria, curriculum, and student assessment processes—as well as faculty promotion and tenure policies—to better support the preparation of future public health leaders. ■

About the Authors

At the time of the study, Eugene Declercq was with the Maternal and Child Health Department of the Boston University School of Public Health, Boston, MA. Karen Caldwell was with Management Sciences for Health, Cambridge, MA. Suzanne Havala Hobbs was with the Department of Health Policy and Administration, University of North Carolina, Chapel Hill. Bernard Guyer was with Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

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Contributors

E. Declercq originated the commentary, analyzed the data, and wrote the first draft. K. Caldwell collected and organized the data. S.H. Hobbs wrote the profile of the Doctor of Public Health (DrPH) program at University of North Carolina at Chapel Hill. B. Guyer wrote the profile of the DrPH program at Johns Hopkins University. All authors reviewed and contributed to the final draft of the commentary.

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Appendix 1e

PubMed

Abstract

J Health Adm Educ. 2007 Summer;24(3):283-300.

Developing practitioner leaders in a distance education doctoral program: challenges and opportunities.

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Abstract

The nation's first executive doctoral program in health leadership was launched at the University of North Carolina School of Public Health in August 2005. The program confers a DrPH in health administration. This paper describes the program goals, admissions criteria, program structure and content, use of technology and results of initial program evaluations. Lessons learned during the planning and first three years of operation may assist others as they evaluate the feasibility and desirability of creating similar doctoral-level distance education programs. A critical need exists for additional programs able to attract and prepare top health leaders. This distance DrPH leadership program is one model for what may be the beginning of a promising new era in health leadership education.

PMID: 18476504 [PubMed - indexed for MEDLINE]

MeSH Terms

LinkOut - more resources

Appendix 1f

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The internationalisation of professional doctorate programmes: challenges and opportunities for networking by students of global health leadership

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Undertaking doctoral studies can be a solitary activity. Professional doctorates in specific fields, particularly those with taught and practice elements, provide students with opportunities for mutual support and encouragement. Related professional doctorates are now offered by several institutions in the same country, and in some cases by institutions in several countries. Many professional doctorates have an international focus, providing additional opportunities for doctoral students to network. One such programme is the doctorate in public health, now offered in Europe, North America and Australia. There is thus an opportunity to promote internationalisation by supporting students on different programmes in different countries to exchange information, experience and insight.

The International Network for Doctoral Training in Health Leadership (NETDOC) has been exploring ways in which such networking might be facilitated. This discussion paper reports progress to date and planned developments. Students from the US have joined students in London and Paris in shared activities. Additional mechanisms for networking considered include the use of established social networking services, a pre-existing discussion forum, annual face-to-face symposia and the creation of a bespoke online networking forum for professional doctorate students. The authors would be interested to hear about other professional doctorate programmes where opportunities for international networking by students have been developed.

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Appendix 1h

Keywords: professional doctorates, global health leadership, internationalisation, students, networking

Introduction

Professional doctorates in public health are now a well-recognised qualification in this field in many countries. In the United States doctoral education in public health has been evolving since 1985 (DeClerq et al 2008) whilst in the United Kingdom doctoral programmes in public health have been running for more than 15 years (Anderson, Jones and Huttly 2010). Those involved in developing and delivering such programmes have been discussing issues of mutual interest for a number of years, and indeed an international network for doctoral training in health leadership (NETDOC) is now firmly established (Hobbs and Brooks 2010).

Box 1: Strategies for international collaboration in doctoral training

- Delivering a structured programme that incorporates an interactive course element, a practice-based element, and original research in health leadership practice;
- Applying the most appropriate technology-enhanced learning (TEL);
- Using flexible learning approaches;
- Understanding and meeting students' needs;
- Contributing to developing curricula that anticipate and address vital issues;
- Contributing to original research in health leadership practice;
- Ensuring continuous quality improvement of the network's goals, processes and outcomes;
- Developing collaborations at multiple levels, including faculty; administration and students;
- Sharing evaluation outcomes and methods;
- Sharing best practices in global health leadership education;
- Advocating for the value of doctoral health leadership education programmes; and
- Expanding access to doctoral health leadership education.

The network has a range of aims, centred on mechanisms for increasing capacity and delivering more doctoral graduates in health leadership in what is now widely recognised as a vital pre-requisite for global development (Chen et al 2004). The network's charter notes that the world's complex, interdependent and ever-changing health environment creates a need for increased health leadership excellence and capacity. The network is an

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international, collaborative group of educational institutions that offer, or intend to offer, professional doctoral health leadership programmes. It currently has twelve member institutions committed to sharing objectives, materials and expertise to maximize access to and ensure the quality of doctoral health leadership education worldwide. They have agreed that they will achieve these outcomes by a range of strategies (Box 1).

These are ambitious goals and it will take several years to achieve them all. But progress is being made in a number of these areas with a view to increasing provider capacity. Early initiatives have included actions designed to make best use of learning technologies, developing common curricula (Hobbs, Marstein, Anderson and Cockerill 2011) and exchanging faculty. The challenges and opportunities of developing leaders in a distance education doctoral programme have previously been described (Hobbs, Brooks, Wang and Skinner 2007).

Background

Attention has now fallen on student participation in collaborations, and understanding and meeting students' needs. With this in mind steps have been taken to introduce a focus on internationalisation within the programme. Internationalisation refers to the movement of both staff and students to higher education institutions in countries other than their country of birth or secondary education. There have been many definitions of internationalisation; for many years it was considered to relate to the mobility of people in general and of students in particular. However, a widely accepted definition has been that of Knight, who described internationalisation as 'the process of integrating an international dimension into the research, teaching and services function of higher education' (Knight 1993).

The development of the network has fostered mobility of both staff and students. Meetings of institutional representatives have been arranged to coincide with teaching sessions of cohorts of students within particular countries. Staff from the UK, Canada, France and Norway have collectively contributed to teaching doctoral students in the US. In addition staff have contributed to the teaching of doctoral candidates in a number of US universities on an individual basis.

To ensure that the student experience remains at the heart of what the network does, it has also established a student experience sub-committee. This body, with representation from NETDOC member institutions, has a broad remit which includes, among other functions, assisting in taking the internationalisation agenda forward, specifically the development, maintenance and promotion of networking opportunities among current and former students, and across cohort, school and national boundaries. The purpose of such networking has been envisaged as the identification and fulfilment of opportunities in the areas of field experience, career development, and fundraising, as well as the exchange of ideas and subject matter expertise.

Several initiatives aimed at facilitating mobility of student cohorts have been taken already. Students from the University of North Carolina at Chapel Hill have travelled to meet with doctoral students in both London and Paris. During these face-to-face, three to five day sessions, students have participated in such activities as poster sessions and oral presentations of doctoral dissertation work, joint lectures and highly interactive discussions of topics of mutual interest, field trips as well as meals and receptions for purposes of student and staff networking.

These sessions have provided rich opportunities for in-depth studies of health systems in other countries, alongside dialogues with students undertaking closely related doctoral programmes. Feedback from all students has highlighted the enormous benefits of this kind of exchange, including opportunities for broadening perspectives beyond national boundaries, allowing students to develop links with colleagues in other countries and enabling them to gain further insights into the challenges and opportunities of health leadership.

Current and future developments

The network is now looking at ways of consolidating and strengthening these links. Plans include databases of faculty able and willing to teach cohorts other than those in their own institution, links to alumni from different programmes, and opportunities for individual students to gain credits at another institution, including development of a common curriculum core. A number of mechanisms are being investigated.

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a) Use of established social networking services

Those students who have already participated in mobility programmes are now seeking ways of staying in touch with each other. One obvious consideration is the exploitation of social networking sites (such as Facebook, MySpace, or LinkedIn), as they are existing services with which many students are already familiar and no investment by the network is required. In fact, given social networking's pervasive use, such sites are generally available in multiple languages, have already established a global presence, and numerous, easily accessible resources exist to assist users with everything from setting up an account to employing advanced techniques to maximize the value of the platform.

A particularly promising social networking mechanism is LinkedIn. As of June 2012, more than twenty million students and recent college graduates worldwide were already members of LinkedIn; furthermore, the company's website indicates that this group is the network's fastest-growing demographic (LinkedIn 2012). In addition, because LinkedIn is positioned as a professional networking service, users can avoid the inherent risks and challenges to management of professional reputations that can sometimes occur in more socially oriented forums such as Facebook and MySpace. Finally, LinkedIn permits the establishment of membership-controlled, moderated affinity groups that enable the exploration of career opportunities and the exchange of ideas and subject matter expertise relevant to the interests of the group. Such groups also permit explicit identification with a brand, programme, university or other type of organisation.

b) Use of an existing discussion forum

The network has also considered developments taking place at a number of member institutions with regard to the development of 'forums' or e-discussion sites, usually with a wide remit. An example recently developed at the University of Minnesota, Minneapolis, USA provides a neutral platform for discussions from professionals involved in issues at the interface of animal, human and ecosystem health (or One Health); all NETDOC members are in fact part of this discussion under the auspices of the *One World, One Health* Initiative (One Health Initiative 2012).

The identification of topics for discussion is open to suggestions, and the forum currently has more than 400 registered participants. Again, advantages are that this site is now available and that all members of the Network have access to it. However, a key disadvantage is that it lacks identity as a site for the use of professional doctorate students in health leadership and faculty.

c) Creation of a bespoke networking forum for professional doctorate students in health leadership

The third option considered by the network has been the creation of a new social networking platform created at Kings College London. Anticipated uses of the platform have been discussed not only with regard to students, but also as a mechanism for handling NETDOC applications and in building infrastructure within developing countries. It has been suggested that NETDOC could develop a global DrPH student forum via such a social networking platform. Indeed, a social networking platform dedicated to NETDOC members could have cross-cutting utility with regards to the Student Experience, Membership and Content subcommittees.

Barriers include budgetary considerations (lack of funding available from NETDOC member schools), intermediate strategic steps that need to be identified as well as a need for market research to verify student need/desire for a social networking platform.

Discussion

As professional doctorate programmes have become increasingly popular and more institutions have started to provide them, networking amongst institutions involved in delivering related professional doctorate programmes has become common. Vocational network development within engineering professional doctorates has been described by Jeffrey (2009), and Plowright has highlighted the potential for collaborative, international research amongst students studying for professional doctorates in education (Plowright 2012). Barnekow Rasmussen and Rivett have previously described some of the challenges in setting up international networks between higher education institutions (Barnekow Rasmussen and Rivett, 2000).

The challenges of internationalisation in higher education have also received attention from researchers. Taylor has described a strategy for internationalisation based on lessons and practices derived from four universities (Taylor 2004). This was followed by a paper from Luijten-Lub and colleagues giving a comparative analysis of national policies for internationalisation of higher education in seven western European countries, in which the tensions between the need for co-operation on the one hand and the reality of competition on the other were spelled out (Luijten-Lub, Van der Wende and Huisman, 2005). These benefits and challenges of internationalisation and networking amongst institutions are similar to those experienced by NETDOC members in the realm of the professional doctorate in health leadership.

The need to build communication networks has also been the subject of some research, albeit in fields rather different to public and international health (Richet, Mohammed, Clifford McDonald and Jarvis, 2001). But as these networks develop, as the growth of participation in online networks continues to accelerate, as the technology advances, and as student expectations of what it means to complete a professional doctorate in a field with international applicability rise, so too will students' demands to be in touch with others undertaking similar programmes elsewhere. The challenge for those of us charged with delivering such programmes is to ensure that these expectations are met.

Conclusion

Internationalisation of higher education and increased networking amongst educational institutions provide opportunities to enrich the learning environment and improve the quality of education for students pursuing professional doctorates. The student experience is at the heart of doctoral training in health leadership, and the continuing development of strong international links is crucial to achieving this. Continuing efforts need to be made to strengthen the links between the students themselves.

At the same time, these efforts must mitigate inherent challenges and effectively apply technology and principles of programme design to meet students' expectations. In this paper we have described the experiences of members of an international network of institutions collaborating to advance doctoral health leadership education. As work

progresses, lessons learned may be helpful to other institutions striving to promote excellence and innovation in graduate education, and particularly to those seeking to strengthen internationalisation amongst professional doctorate students. The authors would be interested in hearing about other professional doctorate programmes where opportunities for international networking by students have been developed.

Acknowledgements

The authors gratefully acknowledge the comments and contributions from other members of the International Network for Doctoral Training in Health Leadership (NETDOC), especially Pat Reynolds of the Kings College London Dental Institute Centre of Flexible Learning in Dentistry, and Debra Olson, Associate Dean for Education at the University of Minnesota School of Public Health in Minneapolis, USA.

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Appendix 1o

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Appendix 1p

Notes on Contributors

Stuart Anderson is Associate Dean of Studies at the London School of Hygiene and Tropical Medicine. He is a former Taught Course Director in the Faculty of Public Health and Policy at the School and a former Teaching Programme Director. He has supervised PhD and Doctorate in Public Health (DrPH) students for a number of years. He obtained his first degree in pharmacy from the University of Manchester, and later obtained an MA in organizational behaviour and a PhD in organization theory in health care from the University of London. His research interests include the comparative analysis evaluation of health care organizations in the public, private and voluntary sectors and global health leadership. He chairs the NETDOC Membership Sub-Committee.

Suzanne Havala Hobbs holds a doctorate in health policy and administration from the University of North Carolina at Chapel Hill, where she is a clinical associate professor in the Departments of Health Policy and Management and Nutrition. She is also director of the executive Doctoral Programme in Health Leadership (DrPH). Her professional interests include global health management education, health care leadership, distance education, dietary guidance policy (domestic and international), cultural proficiency in health services delivery, and health policy development and advocacy. She has extensive experience in the application of distance technologies, with much of her classroom teaching employing such technologies. She chairs the NETDOC Steering Committee.

Susan Helm-Murtagh successfully defended her doctoral dissertation at the University of North Carolina Gillings School of Global Public Health at Chapel Hill. She holds an undergraduate degree in psychology and management science from Duke University, and a masters degree in management from the JL Kellogg Graduate School of Management at Northwestern University. She now works as Vice President of Information Management and Analytic Services at Blue Cross Blue Shield of North Carolina based in Durham, North Carolina, where she is responsible for the enterprise data warehouse and business intelligence functions, as well as the centre of excellence for analytics. She chairs the NETDOC Student Experience Sub-Committee.

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Appendix 1q

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Development of a global network of distance doctoral programs in health leadership

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Abstract

A global effort is underway to create a network of executive professional doctoral programs based on a model implemented in 2005 in the United States at the University of North Carolina at Chapel Hill. That model leverages Internet video technology and a highly interactive pedagogical approach applied to the Doctoral Program in Health Leadership. The program, which confers a DrPH in health administration, anticipated the potential for technology-enhanced learning to prepare mid-career professionals for senior-level positions in organisations working domestically and internationally to improve the public's health. Through the coordinated efforts of worldwide partner institutions, the International Network for Doctoral Training in Health Leadership (NETDOC) is working to extend the program model, accelerating the pace and reach of urgently needed doctoral-level leadership training for senior health professionals around the world. Member schools have committed to share curricula, distance learning technology and school resources. They will function as a well-coordinated network in which faculty may teach across universities and students may take courses or portions of courses from schools other

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than the schools in which they are enrolled. By addressing the critical need for global leadership development within the senior public health workforce, we have an opportunity to contribute substantially to efforts to improve the health of people worldwide.

Keywords: International; Doctoral education; Distance education; Health leadership

We are working with schools around the United States and world to create a network of executive professional doctoral programs based on the model we developed and implemented in 2005. That model – the first Internet video-based doctoral program in public health (DrPH) – anticipated the potential for technology-enhanced learning to prepare mid-career professionals for senior-level positions in organisations working domestically and internationally to improve the public's health. Through the International Network for Doctoral Training in Health Leadership (NETDOC), we are working with global partners to extend the program model and accelerate the pace and reach of urgently needed doctoral-level leadership training for senior health professionals around the world. Member schools will share curricula, distance learning technology and school resources. They will function as a well-coordinated network in which faculty may teach across universities and students may take courses or portions of courses from schools other than the schools in which they are enrolled.

By addressing the critical need for global leadership development within the senior public health workforce, we have an opportunity to contribute substantially to efforts to improve the health of people worldwide. This paper describes the significance, rationale and background for network development, current status of the network and future plans.

Significance and rationale

The International Network for Doctoral Training in Health Leadership (NETDOC) will increase capacity globally to produce first-rate future health leaders. The critical need for leadership training among the senior public health workforce worldwide has been well-documented.

In 1988, the United States Institute of Medicine (IOM, 1998) published a landmark report that concluded that to serve society effectively, it is imperative that the field of public health create a more efficient, scientifically sound system of practitioner and leadership development. A subsequent IOM report (2003) concluded that little progress had been made over the previous 15 years, again calling for leadership training for senior public health practitioners. At the same time, the World Health Organization (WHO 2010) and other groups (Canadian Health Leadership Network, 2006) articulated similar calls for health leadership training.

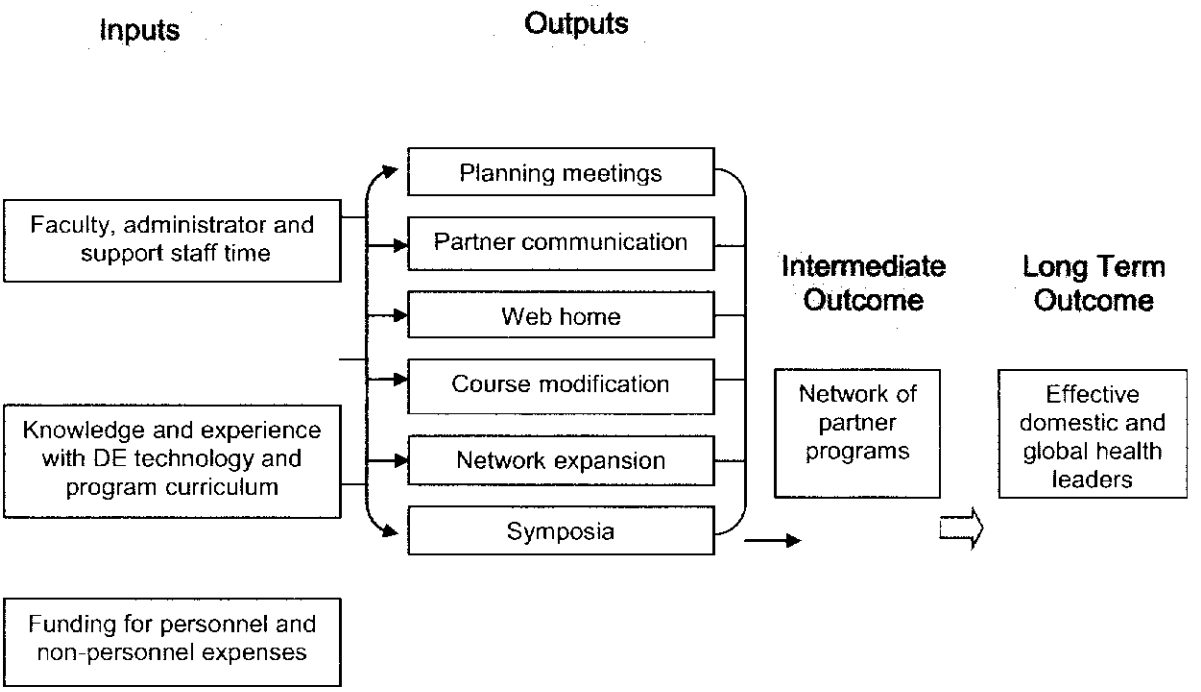
In addition to building global health leadership capacity, we believe that this cooperative network of partner programs will also maximise the quality of the individual doctoral programs included in the network. A very significant advantage for students in our own doctoral program is that the synchronous distance technology – a fundamental feature of the program – enables world-class health leaders and experts to teach courses regardless of where those individuals are located. At present, faculty from Boston, Massachusetts, Washington, DC, and Toronto, Canada teach courses in the University of North Carolina (UNC) program, in addition to our UNC-based faculty. Guest discussants also join class sessions from all over the world. The Network will enable UNC and other schools to expand their access to faculty expertise throughout the world. Diversity promotes excellence. We believe that opportunities for faculty and students to interact regularly with colleagues and peers around the world will enrich the learning experience for everybody and are, in fact, critical to training effective health leaders prepared to address global challenges that often have local implications.

The logic model depicted below illustrates the rationale for network development. Planning for the Network began in 2006 with inputs that included UNC faculty, administrators and support staff time devoted to establishing and pursuing relationships with receptive parties. Early efforts built on UNC program and technology experience and financial support provided by the Department of Health Policy and Management and a generous donor. Outputs have included a series of teleconferences and face-to-face meetings of partner institutions, as well as creation of a web home (http://www.sph.unc.edu/docglobal/),

establishment of a governance structure with steering committee and active subcommittees, and in 2009 the addition of three U.S. partner institutions. With the Network established, further development will include course and curriculum modifications, the launch of functional, Internet-based partner programs, and the establishment of annual symposia bringing together diverse faculty and students from partner programs around the world.

LOGIC MODEL.

Situation: There is an urgent need for doctoral-level leadership training for senior health professionals around the world.



Background

The UNC Doctoral Program in Health Leadership (DrPH) prepares mid-career professionals for senior-level positions in organisations working domestically and internationally to improve the public's health (Havala Hobbs *et al.*, 2007). The distance format allows working professionals to complete doctoral leadership training while continuing full-time employment, remaining in country throughout the duration of their education. The DrPH program was launched in 2005 with the intent of including only U.S. students, but due to demand from international students, advances in distance technology, and because we believe international students enhance the learning experience for all of us, we began in 2007 to admit international students. As of 2010, we have admitted students from Canada, France, Hong Kong, Indonesia, Lebanon, Papua New Guinea, Switzerland, Uganda, Ghana, Malawi, and Swaziland.

However, the UNC program can admit no more than 12 learners per year. Demand greatly exceeds this capacity. Importantly, too, we hope in 2010 to begin scheduling one of our program's three annual face-to-face meetings with students overseas. These between-semester, three- to four-day in-person sessions are key to program success, greatly enhancing cohort cohesion. In addition to discussions with top leaders, courses end and begin during these meetings. A cooperative network of partner programs would greatly enhance opportunities for in-person interactions for students and faculty across programs during these visits or at jointly planned annual symposia.

For all of these reasons, we believed the timing was right to enter into a phase of active planning for an international network of partner programs. In addition to UNC, initial participants included BI Norwegian School of Management; l'Ecole des Hautes Etudes en Santé Publique (EHESP), France, King's College, London; London School of Hygiene and Tropical Medicine; University of California at Berkeley; University of Georgia; University of Minnesota; University of Toronto; and the University of the West Indies, Mona, Jamaica.

Current status

The first in-person meeting of twenty-two institutional representatives from nine schools was held in London, UK in late May 2009. This meeting followed a pre-meeting teleconference in March 2009 and was preceded by three years of informal discussions among parties to ascertain institutional interest in the creation of distance doctoral programs based on the UNC model. Informal discussions included a summer 2007 visit to London by UNC faculty for meetings at King's College London and the London School of Hygiene and Tropical Medicine; a December 2008 visit to Paris by UNC faculty for meetings in Paris and Rennes with l'Ecole des Hautes Etudes en Santé Publique (EHESP); and a February 2009 meeting with UNC faculty in Chapel Hill by faculty from the BI Norwegian School of Management and the Norwegian Knowledge Centre for the Health Services.

Meeting space and most meals for the May meeting were provided to participants by UNC, including support from a generous donor, but other travel expenses were borne by the respective institutions. Participants met for two and a half days for the primary purposes of learning about programming at others' schools, understanding barriers to distance doctoral programming at each school, and crafting an agenda for future meetings. One additional substantive discussion session was led by EHESP to educate participants about issues relating to higher education reforms underway in the EU, including the Bologna Process, with input from the North American schools. Another substantive discussion was led by the director of leadership at Kings Fund to facilitate a mutual understanding of the context, terminology, and content of leadership training programs for senior-level health professionals.

On the last day of the meeting, participants cooperated in drafting a brief statement of intent for the Network. With minor revision in late 2009, the Network charter now reads:

> "The world's complex, interdependent and ever-changing health environment creates a need for increased health leadership excellence and capacity. We are an international, collaborative network of educational

> institutions that offer, or intend to offer, professional doctoral health leadership programs. We are committed to sharing objectives, substance and expertise to maximise access to and quality of doctoral health leadership education worldwide" (NETDOC, 2009).

Network partners agreed to achieve these goals by:

- Delivering a structured program that incorporates an interactive course element, a practice-based element, and original research in health leadership practice;
- Applying the most appropriate technology-enhanced learning (TEL);
- Using flexible learning approaches;
- Understanding and meeting students' needs;
- Contributing to developing curricula that anticipate and address vital issues;
- Contributing to original research in health leadership practice;
- Ensuring continuous quality improvement of the network's goals, processes and outcomes;
- Developing collaborations at multiple levels;
    - Faculty;
    - Administration;
    - Students;
- Sharing evaluation outcomes and methods;
- Sharing best practices in health leadership education;
- Advocating for
    - The value of doctoral health leadership education programs;
    - Expanding access to doctoral health leadership education.

A governance structure was created, including a steering committee supported by four sub-committees. The steering committee is comprised of sub-committee chairs and an executive director. The executive director is currently a UNC faculty member, but the plan is for Network administration to eventually be rotated among partner institutions. Sub-committees include:

- Membership sub-committee;
- Content sub-committee;
- Technology and flexible learning sub-committee;
- Student experience sub-committee

Additional detail about Network governance, including meeting information, sub-committee charges, meeting agendas and notes, photos from the May 2009 meeting in London and contact information for key Network personnel are available online at http://www.sph.unc.edu/docglobal/.

The London School of Hygiene and Tropical Medicine in London hosted a second meeting of Network members in November 2009. Representatives of five schools met on site in London and others joined by teleconference. Participants met for two hours, working on coordination of efforts across committees, firming plans for further development, and discussing other operational matters.

Future plans

A five-year work plan will be finalised in 2010 and will serve as a blueprint for fulfilling the Network's charter going forward. A key initial activity will include identification of intended learning outcomes or competencies and development of a core set of courses that will serve as the focal point for student and faculty exchange. In addition, emphasis will be placed on the use of technology in course design and delivery, approaches to student support, and policies and procedures for expansion of the Network as additional potential partners are identified.

Through NETDOC, we look forward with great anticipation to working with colleagues around the world to build health leadership capacity within the senior public health workforce. Leveraging the model of the UNC Distance Doctoral Program in Health Leadership, and through the application of flexible learning approaches that take advantage

of new and emerging distance education technologies, we expect to contribute substantially to efforts to improve the health of people worldwide.

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Appendix 2: Summary of Indiana Department of Workforce Development and/or U.S. Department of Labor Data

N/A

The program model is unique; there are very few programs anywhere in the world that address the needs of this program's target market, mid- to senior-level health professionals working full time out in the field. We know of no national, state or regional studies citing the need for the program, but the need has been well-described in major national and international reports from the Institute of Medicine, World Health Organization, international assemblies, and the like since at least 1988. Demand for the UNC-Chapel Hill program has remained strong for more than ten years, with admission rates stable at about 15 percent of applicants. Numerous highly qualified applicants are turned away every year. Graduates have been actively recruited to new positions or promoted within their own organizations after finishing the doctoral program. A 2015 survey of more than 100 UNC alums found high levels of satisfaction with the program itself and with professional and career benefits after program completion.

Appendix 3: National, State, or Regional Studies

N/A

The program model is unique; there are very few programs anywhere in the world that address the needs of this program's target market, mid- to senior-level health professionals working full time out in the field. We know of no national, state or regional studies citing the need for the program, but the need has been well-described in major national and international reports from the Institute of Medicine, World Health Organization, international assemblies, and the like since at least 1988. Demand for the UNC-Chapel Hill program has remained strong for more than ten years, with admission rates stable at about 15 percent of applicants. Numerous highly qualified applicants are turned away every year. Graduates have been actively recruited to new positions or promoted within their own organizations after finishing the doctoral program. A 2015 survey of more than 100 UNC alums found high levels of satisfaction with the program itself and with professional and career benefits after program completion.

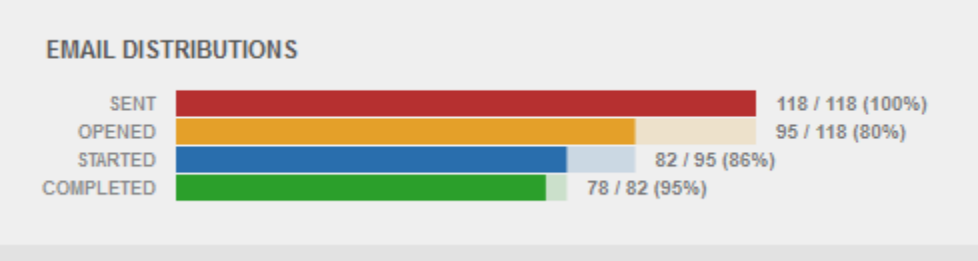
Appendix 4: Surveys of Employers or Students and Analyses of Job Postings

[Note: The survey below was conducted at the University of North Carolina at Chapel by current program director Pam Silberman, JD, DrPH, Clinical Professor of Health Policy and Management, Gillings School of Global Public Health]

DRPH SURVEY OF CURRENT STUDENTS AND ALUMNI (2015)

Overview

In June of 2015, the DrPH program administrators sent out a survey to current and former students of the DrPH program. In all, we sent out 118 surveys to Cohort 1-10. Of these, 95 were opened, and of the surveys that were opened, 78 were completed (82% completion rate among those opened).



All of the people who participated in the survey were currently employed,[1] most in domestic (US focused) positions (79%).[2] The rest practiced in international (15%) or both domestically and internationally (6%). One-fourth of the participants work for a college or university (25%), others work for public health agencies at the federal, state or local level (18%), global health organization (13%), other nonprofit (8%), consulting firm (6%), long-term care/home health (5%), foundation (5%), hospital or health system (5%), domestic non-public health governmental organization (4%), or other.[3] More than half are in senior management positions (CEOs, Executive Directors, Associate Directors, Chiefs).[4] Slightly more than half (54%) of the respondents were alumni, and 41% were current students.[5]

Program Satisfaction

Students were extremely supportive of the DrPH program. 96% of the students reported that they would make the decision again to seek out a DrPH degree from UNC (77 students).[6] Only 3 (4%) reported that they would not make that decision again. Similarly, 96% reported that they would very strongly recommend the program (81%) or strongly recommend the program (15%).[7]

Impact of DrPH program and degree in student professional career: Among the alumni, almost four-fifths (79%) reported that the DrPH program helped to accelerate their career or promotion path.[8] Somewhat

[1] Q 6. "What is your current employment status?"

[2] Q 7. "Where is your current employment located? If you have multiple jobs, think about the job where you spend the most time?"

[3] Q 8. "Which best describes the type of organization where you currently work? Please select the category that best describes your organization. If you have multiple jobs, think about the job where you spend the most time."

[4] Q 9. What is your current position? (Note: for analysis purposes, we identified any job title that included executive officer, director, associate director, or chief).

[5] Q 5. "What is your current affiliation with the DrPH program?"

[6] Q 28. "If you were to go back and make the decision again, would you still seek out a DrPH from UNC?"

[7] Q 30. "How strongly would you recommend the program to a colleague who expressed interest?"

[8] Q. 11. "Did your participation in the DrPH program accelerate your career and/or promotion path?"

more surprising, more than half of the current students (59%) also reported that the DrPH program has already helped accelerate their career or promotion path.

Some of the alumni reported:

> *The program accelerated my promotion to vice president (this was specifically mentioned as one of the reasons for my placement into the role) and created networking opportunities that have led to board positions that in turn, have created more visibility for me.*
> *I was working as an epidemiologist for the state health department. After graduation, I was hired as the executive director of the local health department.*
> *I now lead a unit. I've been told I have this leadership position because I joined the doctoral ranks.*
> *Because I had a doctorate I was able to take on roles that would not have been possible with only a master's or bachelor's degree. I was invited to sit at tables that had been unavailable to me.*
> *Promoted from VP to SVP and aligned with population health work.*
> *The degree provided me with new skills and resources that were evident in my then-position, and the degree opened doors.*
> *The tools I gained from the program and the credential of a doctoral degree positioned me for promotion from Assistant to Associate Director. There was a leadership transition two months after I graduated and I was asked to apply for the associate director position.*

Some of the current students also reported that the program helped them:

> *It provided tools and knowledge that improved my individual performance and as a member of a team.*
> *Bolstered perception of expertise; provided growth in systems thinking and management, added credibility in research and public speaking engagements.*
> *DrPH was helpful in my current leadership role by providing me leadership frameworks and materials to help with day to day challenges.*
> *I've leveraged the content and leadership skills acquired in the DrPH program in my exploration of other opportunities in global health, based in East Africa. It has solidified my credibility in the field, and also provided me with skills (often in real time with a class!) to apply to my various work projects.*

Among the alumni, 66% reported that they received a promotion during the program or within 3 years of when they completed the program, 76% reported taking on more leadership roles, 80% reported additional responsibilities.[9] Three-fifths (61%) reported that participation in the DrPH program contributed to their getting a new job. The DrPH program also helped contributed to the promotion of 13% of the current students. In addition, 56% reported that they obtained more leadership roles, 63% reported additional responsibilities, and 35% reported that their current participation in the program helped them obtain a new job.

Key elements of program structure: Students were also very positive about the key elements of the program's structure.[10] On a scale of 1-5, with 1 being not valuable, and 5 being extremely valuable, the students reported satisfaction with most components of the program (Table 1).

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[9] Q. 13. "Did (or has) your participation in the DrPH program contribute to your receiving a promotion, more leadership roles, additional responsibilities, or a new job?"
[10] Q 20. "How valuable were each of the following components of the program?"

Table 1: Satisfaction with Program Structure

	All Cohorts
Cohort model structure	4.74
Learning from cohort members	4.79
Online learning and teaching	4.70
Required courses	4.37
Engagement with faculty	4.58
Onsite visits	4.72
International visit	3.71
Working with dissertation chair	4.65
Dissertation process	4.74

Student's additional comments yielded more information about their opinions of the key program structure. There appeared to be overwhelming support for the cohort model and online learning structure of the program. However, there was more of a mixed feeling about the international visit. Some of the detailed student comments included:

> *Cohort model and online learning are the two strengths of the program.*
> *I do not think that the overall structure of the program needs changing. It was a wonderful program.*
> *The most important asset of the program may be what we learned from each other and the lifelong relationships we forge.*
> *All of the teaching and learning methods added together synergistically to create an optimal learning environment and sets this UNC program above and apart from other DrPH programs!*
> *My cohort inspired and challenged me in ways I didn't imagine and continues to be a very important part of my professional and personal growth.*
> *The structure of the program worked well for me. I would have found it challenging to complete a DrPH program if it meant not being able to maintain a full-time job during the program. As described elsewhere, MOST of the required courses were extremely valuable….Although engagement with faculty was valuable, I would have rated it as "extremely valuable" if the courses gave us exposure to more faculty members, even through guest lectures. The international visit was extremely well organized, informative, and an important element that cemented the ties within my cohort, and between students and the UNC participating faculty members. IT was also a lot of fun!*
> *International was very valuable.*
> *The international visit was not at all helpful for me personally…It could be extremely helpful if it were focused on global health (rather than European health).*
> *While the London visit was enjoyable and engaging, I felt it was probably less valuable for some in the program who were not focused on international health or interested in the UK system. Perhaps an international destination that allows people to interact with a more global network of health systems could be beneficial for more (eg, utilizing UNC's new partners in Africa). I did*

appreciate the thought and planning that went into the London trip, but I'm aware that it may have seemed like a vacation to many.
I am enjoying the dissertation process because I am learning a valuable skill that I will continue to use. Working with a dissertation chair could be extremely valuable. However, they may not be available to provide the necessary support as required. Onsite visits are also helpful—as they provide the opportunity to meet faculty face-to-face.

DrPH competencies: We asked students to rate the effectiveness of the program in developing competencies in 25 different competency areas.[11] The 25 competencies are based on the 54 competencies identified by the American Schools and Programs of Public Health (ASPPH) for DrPH programs. The current students and alumni were asked to rate the effectiveness of the program on a 1-5 scale, with 1 being very ineffective, 2 somewhat ineffective, 3 neutral, 4 very effective, and 5 very effective. Table 2 provides information about the rankings. The Table includes the average ranking across all Cohorts (those with the highest average score were competencies that the DrPH program taught most effectively). We also broke down the responses into two groupings: Cohorts 1-7 (who finished coursework before 2014), and Cohorts 8-10. The curricula of the DrPH program has changed over time, so we wanted to determine how well the current curricula addressed the core DrPH competencies. We also asked students which competencies were the most and least important for their current jobs.[12] A more complete description of the competencies is listed in Appendix A.

[11] Q 15. "Please tell us how effective the DrPH program was in developing your competency in each of the areas below. The competencies are based on those developed by the Association of Schools and Programs of Public Health (ASPPH) for the DrPH program. By 'competency' we mean capability of using the skill in an employment or career setting." We also gave student the option of hovering over each item to get a more detailed description of what the competency entailed.
[12] Q 19. "For each of the competencies below, please identify the five competencies from the DrPH program that were most important to your career and the five competencies least important."

Table 2: Ratings of DrPH Competencies

	Average Ranking of Effectiveness (with 5 being most effective) (Q15)			Competencies listed most often by current and former students as most or least important to their jobs (Q 19) (1 being most frequently mentioned).	
	Total (All Cohorts)	Cohorts 1-7	Cohorts 8-10	10 Competencies Students were Most Likely to List as ***Most Important*** for their Current Jobs	10 Competencies Students were Most Likely to List as ***Least Important*** for their Current Jobs
Leadership Skills	4.5	4.3	4.8	1	
Team work	4.2	4.2	4.3		10
Collaboration	4.2	4.1	4.3		
Systems Thinking	4.5	4.4	4.6	2	
Lifelong Learning	4.7	4.6	4.8		7
Policy Advocacy	4.0	3.8	4.4	10	
Policy Analysis	4.1	3.9	4.5	4	
Political Savvy	3.8	3.6	4.1		8
Communicating Outcomes	4.0	3.9	4.2		
Communication Strategies	3.9	3.8	4.1		
Evaluating Communication and Marketing	3.7	3.4	4.2		3
Community Collaboration	3.8	3.8	3.8		5
Community Engagement	3.7	3.7	3.8		
Population Health	4.4	4.4	4.4	6	
Implementation Science	3.9	3.9	3.9	7	
Research Methods	4.3	4.4	4.2	8	
Program Evaluation	4.3	4.3	4.3	5	
Financial Leadership	4.0	3.9	4.1	9	9
Strategic Thinking	4.4	4.4	4.5	3	
Information Technology	3.3	3.0	3.8		2
Quality Improvement	3.3	3.3	3.4		
Human Resources	3.2	3.2	3.2		1
Professionalism	4.5	4.4	4.6		4
Professional Ethics	4.5	4.5	4.7		
Community Protection and Ethics	4.3	4.1	4.5		6

The DrPH program appears to be doing a good job conveying key DrPH competencies, with 19 of the 25 competencies scoring a 4 or higher. Only 6 of the competencies scored less than a 4. Of these, implementation science was also rated as highly important by current and former DrPH students. We also asked students if there were other competencies or skills that were unaddressed or underdeveloped by the program.[13] About half (52%) reported gaps in what we taught. The most common gaps identified by students included quality improvement, implementation science, and advanced research skills.

Students were also asked about emerging trends.[14] However, most students used this question to provide information on what additional content they would like in the program. Of the 50 people who responded to this question, the most common responses that were mentioned by at least 10% of the participants included:

- More emphasis on HIT and use of data, running the gamut from mobile apps (mHealth, personal wellness devices), EHRs, and big data analysis
- Population health including social determinants, common population health issues affecting both the US and international communities
- ACA generally and focused on new payment models
- Quality improvement and root cause analysis
- Systems thinking and integration of care across siloes

Other suggestions for improvement: While the students were generally very positive about their experiences in the DrPH program and how the DrPH program helped them advance in their careers, they did have suggestions for how the program could be improved.[15] Of the 31 people who responded to this question, the most common responses mentioned by at least 10% of the respondents fell into the following categories:

- Enhanced research skills, including more qualitative, quantitative, and coding assistance
- Greater emphasis on global health
- Better use of time and more content during the on-site meetings
- Greater flexibility in program design, including the ability to take electives and allow for greater specialization in the program
- Greater diversity of speakers, including speakers with more practical experience
- Greater ability to network across cohorts

While several students talked about how helpful the faculty had been to them throughout the DrPH program, others noted the need to increase access between the students and other HPM faculty who do not teach in the program. As one student noted:

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[13] Q 17. "Are there other competencies or skills in your field that were unaddressed or underdeveloped by the DrPH program?" Q 18. "Please specify any competencies that you feel were unaddressed or underdeveloped by the DrPH program?

[14] Q 22. "Please share your observations or thoughts about emerging trends in health care that you see in the marketplace that our program should address? Our program needs to stay abreast with changes to keep up with these changing times in our nation's and world's health care systems."

[15] Q 23. "If you could choose one thing to improve the program, what would that be?"

It would be great if the program could do more to educate non-DrPH faculty about the mechanics of participating in students' dissertations, and on the program itself.

Ongoing involvement with the program: As another indicator of how students felt about the program, we asked students if they would like to continue to be involved with the program after they graduated. Almost everyone who participated in the survey (99%) reported that they would like to continue to be involved in the program as either a guest lecturer (77%), through mentoring (63%), helping with student recruitment (52%), serving on an alumni advisory committee (57%), helping through donations, financial aid or scholarships (24%), or other (20%).[16]

Currently, the DrPH program does not have an active alumni network, but we have been discussing how we can create one. We asked students what services they would like to see in an alumni network.[17] In total, 63 current and former students responded (81% of respondents). A majority of those who responded noted that they would like the network to include information about job opportunities. Most also reported that they would like links to other students. Some of the examples that students gave was using a linked in system to identify where people were located and their current interests (so that students could reach out to others with their interests or expertise, or in their geographic area); having regional meetings; creating an alumni newsletter; or offering onsite activities at UNC (so that students who are in the area could meet the current students). A smaller group of students noted that they were interested in having an alumni network provide mentoring or career advice, and some also mentioned that they would like the network to serve as a source of continuing education (for example, by posting interesting articles, ongoing research, or reporting on students' published research).
We also asked students whether there was any other information they would like to tell us.[18] Most of the people who responded gave us thanks for the great experience. For example:

Excellent program and I'm proud to be an alumni! Thank you!
Thank you for creating an amazing program!
I cannot say enough good things about the program. My experiences learning with the students and faculty have been life-changing. I am grateful for the opportunity to have participated.

Other students reiterated some of the themes identified previously including the need to create a mechanism for networking across cohorts. Finally, a number of other students thanked us for sending out the survey and soliciting feedback from the students, and one of the students suggested that we send out a copy of the findings back to the students.

Summary
Both current and former students were very supportive of the Executive Doctoral Program in Health Leadership (DrPH) program at the Gillings School of Global Public Health. They appreciated the executive format, cohort structure, and course content. In general, students thought we did a good job covering the DrPH competencies. However, there were some common themes that were identified in a number of the different questions.

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[16] Q 24. "Please select the ways that you would like to be involved with the DrPH program and current students?" (Note: one of the options was unable or not interested in involvement with the program.)
[17] Q 26. "We are considering creating a network of current and past DrPH students. What service(s) would you find most valuable and maximize the potential for you to actively participate (eg, job announcements, linkages to other students)?
[18] Q 31. "Is there anything else you would like to tell us?"

Students noted that they would like more coverage of the following topics:

- Implementation science
- Quality improvement
- Advanced research skills
- Global health (including focus on global health systems, financial, existing and emerging health problems facing less developed countries)
- Greater emphasis on HIT and data to help improve population health
- Population health, including social determinants

Some students gave other suggestions about how the program could be strengthened, including:

- Greater ability to interface with faculty
- Greater flexibility in program design
- Greater ability to network across cohorts, including creation of an alumni network
- Better use of time and more content during the on-site meetings

These issues will be brought to the DrPH Advisory Committee for further discussion about how to incorporate some of the suggestions into the DrPH program.

APPENDIX A

Domain	Proposed Changes	Short title
Leadership		
	Communicate an organization's mission, shared vision, and values to stakeholders.	Leadership skills
	Develop teams for implementing health initiatives.	Team Work
	Collaborate with diverse groups, and influence others to achieve high standards of performance and accountability.	Collaboration
	Guide organizational decision-making and planning based on internal and external environmental research.	Systems Thinking
	Prepare professional plans incorporating lifelong learning, mentoring, and continued career progression strategies.	Lifelong Learning
Advocacy		
	Influence health policy and program decision-making based on scientific evidence, stakeholder input, funding alternatives, and public opinion data.	Policy Advocacy
	Analyze the impact of legislation, judicial opinions, regulations, and policies on population health.	Policy Analysis
	Design action plans for building public and political support for programs and policies.	Political Savvy
Communication		
	Employ evidence-based communication program models for disseminating research and evaluation outcomes.	Communicating outcomes
	Create and implement informational and persuasive communications, for lay, professional, and policy audiences.	Communication strategies
	Develop formative and outcome evaluation plans for communication and marketing efforts.	Evaluating communication and marketing
Community/ Cultural Orientation		
	Develop collaborative partnerships with communities, policy makers, and other relevant groups.	Community Collaboration
	Engage communities in creating and implementing evidence-based, culturally and linguistically appropriate programs, services, and research.	Community Engagement

	Assess cultural, environmental, and social justice influences on the health of communities, both domestic and international.	Population Health
Critical Analysis		
	Apply theoretical and evidence-based perspectives from multiple disciplines in the design and implementation of programs, policies, and systems.	Implementation Science
	Interpret and synthesize quantitative and qualitative data, and other sources of information, following current scientific standards for use in research and practice.	Analytical Thinking/Research Methods
	Evaluate the performance, impact, and unintended consequnces of health programs, policies, and systems.	Program Evaluation
Management		
	Implement strategic planning processes.	Strategic thinking
	Apply principles of human resource management.	Human Resources
	Use informatics principles in the design and implementation of information systems.	Information Technology
	Deploy quality improvement methods.	Quality Improvement
	Develop financial and business plans for health programs and services.	Financial Leadership
Professionalism and Ethics		
	Design strategies for resolving ethical concerns and conflicts of interest in research, law, and regulations.	Professional ethics
	Develop tools that protect the privacy of individuals and communities involved in health programs, policies, and research.	Community protection and ethics
	Demonstrate a commitment to personal and professional values.	Professionalism

Appendix 5: Letters of Support

This appendix includes letters of support for the program that were summarized in Section 2 (vi).

The proposed program targets a student market that is generally not served by any other programs in the state of Indiana. The courses in the program are customized for this particular program. To our knowledge, none of the courses overlap with existing courses. We are in the process of obtaining course approvals now.

Course descriptions, adapted and revised from the model curriculum at UNC-Chapel Hill, are included below. Letters of support follow.

<u>Year 1, Fall</u>

Course 1: Organizational Leadership Theory and Practice (2 credit hours)

This course provides an overview of the theoretical framework for organizational leadership as related to best practices in field settings. We will focus on specific leadership topics such as team leadership, change and innovation processes. Special emphasis will be placed on leadership styles and the relevance of context, e.g. private vs public organizations, and geographic location in the world. The significance of organizational structures, culture and scripts will be discussed relative to making an organization receptive to needs for change and improvement. Attention will be paid to the significance of professions within an organization as these have special significance relative to charting goals and objectives. Class discussions will seek to identify and link leadership theories to global health leadership, where the significance of culture and stakeholder objectives take on special significance.

Course 2: Leadership in Global Health Law and Ethics (2 credit hours)

This course is designed to provide students with an introduction and overview of critical issues relating to law, ethics, and global public health. While a goal of democratic governments is to protect and support the health of the public, implementation of health policies may infringe on the rights and liberties of individuals, including businesses. This conflict is sometimes characterized as "private interest versus public good." This course examines the legal foundations of the American public health system and resulting ethical dilemmas that must be reconciled when the interests of the larger community are at odds with those of individuals. Discussions will compare and contrast the American perspective with those of other countries and varying governance structures around the world.

Health law and ethics are inextricably linked. Throughout the course, discussion will center on conceptual foundations of health law, ethics and human rights and issues relating to these fields. From there, we will explore ways in which democratic government actions on behalf of the public's health may conflict with the Constitutional rights of individuals and businesses. This includes recognition of the scope and limitations of authority of health organizations, regulation of professions and tort litigation for the public's health. We will discuss current controversies in public health law and practice, including such topics as surveillance and privacy rights, and issues relating to health promotion, regulation of commercial speech, and First Amendment rights to freedom of expression. The course concludes by examining future issues and emerging problems in public health, including those related to infectious

diseases, bioterrorism, and public health genetics. Though the point of reference in this course is the U.S., we will seek to bring a global frame to discussions.

Course 3: A Population Perspective for Global Health (1 credit hour)

This course is designed to help students understand what "population health" means in the context of contemporary world politics and global public health. The goal of the course is to explore population health perspectives and differentiate them from discourse, programs and policies that relate to the health and care of individuals. The course provides learners with a basic familiarity of the use of epidemiology and aggregate measures in political and policy contexts.

Course 4: Initiating the Research Process (1 credit hour)

This course introduces doctoral students to the initial steps necessary to conduct organizational and policy inquiry. Students will take time in this course to establish their interest area for their dissertation and progress to development of a draft research question. Emphasis will be placed on the nature of inquiry and techniques for crafting a "researchable question," including sufficiently narrowing the topic and defining the boundaries of the specific inquiry. A distinguishing feature of this particular doctoral program is that students are required to identify a practical problem and, in a scholarly and systematic fashion, using "real world" research methods often characterized by imperfect data and conditions, assemble and analyze evidence and apply leadership principles to create a plan for change that, if implemented, would improve the public's health. Where the typical PhD dissertation aims for knowledge generation, the DrPH dissertation goes further. You will not only generate practice-based knowledge, but you will also design a plan for change that has a high likelihood of creating effective and sustainable results.

<u>Year 1, Spring</u>

Course 5: Leadership in Global Health Systems (2 credit hours)

This course introduces current day issues in global health systems and prepares students to confront organizational and policy challenges. Health leadership here covers the entire "value chain" from the inception of public health policies to health services delivery. Health leadership is therefore examined in terms of a comprehensive world view of public health issues and options. The course looks at health systems in selected countries outside the U.S. including examples in high-, middle- and low-income countries. We will examine trends in global health reforms and their governing structures. Health leadership, in the context of a professional career or an altruistic mission, requires knowledge, skills and commitment. The course will look at how leadership expectations are voiced by a diversity of stakeholders, inside and outside institutions, and how they may be met with critical thinking, analysis and application.

Course 6: Essentials of Practice-based Research (2 credit hours)

We review basic research techniques used in health services research, including qualitative and quantitative methods. Special emphasis is placed on applying these skills in "real world" settings where data may not be perfect and conditions may make it necessary to compromise in applying research techniques used in more controlled settings. The course prepares students to move from research question to preliminary ideas about research methods that would be appropriately applied in their dissertations. The course covers basic research designs, measurement scales and coding nomenclatures,

analytical techniques for qualitative data, research techniques for primary data collection and use of secondary data. Emphasis is placed on qualitative methods in this course. Given the nature of the dissertations completed in this program, the vast majority of students will use primarily qualitative methods in executive of their research.

Course 7: Literature Review and Appraisal (2 credit hours)

This course introduces methods for identifying, exploring and evaluating literature relevant to students' proposed dissertation topics in a scholarly and systematic way. The course also prepares students to effectively review research for decision-making and other applications in their roles as senior leaders in organizations.

Year 1, Summer

Course 8: The Science of Global Health Implementation (2 credit hours)

This course introduces concepts in global health program implementation and immediately applicable problem solving and analytical skills. Reflecting the trans-disciplinary nature of global health, the course will draw on and integrate qualitative and quantitative tools from a broad array of fields such as the social sciences (ethnography), engineering design (contextual inquiry), business (Voice of the Customer) and organizational behavior (appreciative inquiry). The focus will be on application, not on theory. Students will be encouraged to try out different tools and to reflect on their utility in the field.

Course 9: Leadership Challenges in Global Health Informatics (1 credit hour)

This course provides students with insights into timely issues relating to health informatics. The course helps students understand current global challenges and opportunities in health informatics and equips them with the skills and knowledge they need to effectively identify and address information needs in organizations. Health informatics initiatives have implications for stakeholders such as consumers, patients, practitioners, administrators, and policy makers. Students will consider informatics initiatives from varied stakeholder perspectives and evaluate them in the context of organizational strategies and operations.

Course 10a: Dissertation Planning and Preparation (2 credit hours)

This course guides students through the steps necessary to produce the outline – and to the extent possible, a first draft – of a dissertation proposal. In collaboration with faculty, learners will assess the current state of their research questions and literature reviews and generate workplans for revisions, additional refinements and the addition of preliminary ideas about methodology, culminating in brief oral presentations of dissertation proposal outlines in person in August. Emphasis is on making independent progress on components of a proposal draft, with support and guidance from faculty and peers over six class sessions during the summer.

Year 2, Fall

Course 11: Financing Global Health (3 credit hours)

Billions of dollars are provided each year for development assistance for health (DAH) to low- and middle-income countries. Savvy health leaders need to know where and how these funds originate and how they are spent. The first part of the course will focus on the current day discourse on the way DAH is changing. Once dominated by bi-lateral agreements and the UN system (WHO, UNICEF, UNFPA), non-state and non-UN actors are now prominent players posing challenges for long-term solutions to global health problems. The course explores the role of the political economy and the structures and governance of financing institutions as they serve to facilitate DAH worldwide.

The second part of the course takes a more micro view of financial competencies required of health leaders. Leaders of organizations, even those without financial backgrounds, are now expected to be knowledgeable enough to ensure accurate financial reporting in their organizations. This course will explore financial leadership from the standpoints of management and governance and prepare leaders to view their organizations through the lens of financial accountability and transparency.

Course 12: Fundamentals of Research Analysis (3 credit hours)

Students begin this course having already decided on a dissertation research topic, refined a research question, completed a literature review and given initial thought to the methods they might use to conduct their dissertation research. This course then helps students master the next steps of the research process, further developing their methods for conducting their research. They will refine their methodology, increasing their understanding of how specifically to implement it, including how to manage and organize data and how to present the data results. This course emphasizes collection of primary data through questionnaires or surveys, focus groups and key informant interviews. Students will be introduced to current technologies for qualitative data management and analysis such as MAXQDA or Atlas.ti software. By the end of the course, students will have finalized their dissertation methods section and have an IRB application ready for submission.

<u>Year 2, Spring</u>

Course 13: Executive Communication for Global Health Leaders (2 credit hours)

Communication within the field of health services and global public health requires special knowledge, abilities and skills. Executives must understand the value and role of organizational communication teams that manage and direct internal and external communication efforts. In addition, executives work with expert communicators to respond effectively during times of crisis. Media for communication include traditional outlets as well as new and emerging electronic media. Sensitivity to timing, context, culture, and best practices can maximize the effectiveness of executive communication within and outside their own organizations. This course introduces topics in executive communication necessary for senior leaders to be effective.

Course 14: Global Health Policy Analysis and Advocacy (3 credit hours)

Health policymaking is a complex process that varies around the world. It is affected by such factors as governance structures and systems, the relative influence of stakeholder groups, and the policy context including political, economic, social and organizational conditions. Making sense of the complex interplay of these elements requires skill, and there is no single correct way to approach such an analysis. In this course, we briefly review theories and frameworks for the policy process then take an in-depth look at one approach and its basic steps, applying them to select cases. The course concludes by

considering key concepts in development of an advocacy agenda using strategies tailored to the particular policy environment and designed to move policies in the desired direction.

Course 15: Strategic Theory and Practice in Global Health Leadership (2 credit hours)

This course focuses on the theories and principles of strategic leadership of organizations with a mandate to provide health care services, whether public or private. The complexity of strategic leadership may arise from the composition of staff employed, organizational structures and/or from the characteristics of an organization´s environment. Strategy development in an organization requires exploration of internal and external premises for conducting strategy processes. Coursework will address such strategic leadership issues as a basis for ensuring resource efficiency and effective operations. An expanding set of organizational stakeholders enters into the complex equation of strategy analysis. Students will identify them and draw on their findings in shaping strategy proposals. The course also addresses strategic challenges relevant in a global context, including frequent reforms and changing regulations in complex settings with pressures from a broad variety of stakeholders.

Year 2, Summer

Course 16: Leadership for Global Marketing, Public Relations and Fund-raising (2 credit hours)

Senior leaders in organizations that serve the public's health must be aware of key concepts in marketing and PR to effectively understand how experts manage internal and external images and stakeholder attitudes and perceptions. Fundraising efforts, while typically under the purview of organizational experts, must be supported by organizational leaders to advance the interests of the organization and serve the public good. This course provides students with insights into executive competencies related to external relationships influenced through marketing, PR and organizational development.

Course 17: Program Evaluation for Global Health Leaders (3 credit hours)

This course reviews key evaluation theories and frameworks, selection of evaluation questions, evaluation design and data collection strategies, reporting evaluation results, and the political, ethical, and interpersonal considerations in evaluation. Some topics, including research design and data collection strategies, reinforce previous course content.

Course 10b: Dissertation Planning and Preparation (1 credit hour)

This is the second in a two-part series to guide students through the steps necessary to produce a draft dissertation proposal. In close collaboration with course faculty and the students' dissertation committee chairs and committee members, students will refine their proposals in preparation for oral defense.

Year 3, Fall Doctoral Dissertation (3 credit hours)

Students work independently, in close collaboration with their dissertation committee chairs and committee members, to complete their dissertations. The DrPH dissertation is the ultimate academic test of a student's competency. It requires application of key aspects of the curriculum to improving the understanding of or resolving an important public health-related administrative or policy issue. The

dissertation should demonstrate the candidate's mastery of the skills and knowledge required to lead an important health-related program or organization, to create a substantial change in policy for the public's health, or to develop new methods that accomplish either of these two goals. The dissertation should be of publishable quality in either the scholarly literature or applied literature in health care delivery or global public health.

Year 3, Spring	Doctoral Dissertation (3 credit hours)
Year 3, Summer	Doctoral Dissertation (3 credit hours)

KELLEY SCHOOL OF BUSINESS

INDIANA UNIVERSITY

Office of the Dean

November 18, 2015

Suzanne Babich, DrPH, MS
Associate Dean of Global Health
Professor of Health Policy and Management
Richard M. Fairbanks School of Public Health
IUPUI

Dear Sue,

I am happy to support your proposal for the Doctoral Program in Global Health Leadership (DrPH) in the Department of Health Policy and Management at the IU Fairbanks School of Public Health at IUPUI. The mission of the Fairbanks School is critically important to this state, the nation and the world. I am confident that your program will be very successful.

There is tremendous potential for using technology to reach working health professionals and nontraditional students using the model you have developed. Our experience with Kelley Direct has demonstrated that there is a strong and growing market for programs such as these that target both a local and distant audience.

As we discussed, I am happy to share with you what we have learned through our experiences with Kelley Direct. Let me know how I can help.

Your efforts to launch an executive-style, professional doctoral degree program in global health at IUPUI are really exciting. I look forward to hearing about your progress and look forward to helping any way I can.

Best regards,

Philip L. Cochran

Philip L. Cochran, Ph.D.
Executive Associate Dean – Indianapolis
Thomas W. Binford Chair of Corporate Citizenship
Director – Randall L. Tobias Center for Leadership Excellence
Professor of Management - Kelley School of Business
Professor of Philanthropic Studies – Lilly Family School of Philanthropy

801 W. Michigan Street Indianapolis, IN 46202-5151 (317) 274-2147 fax (317) 274-2483

Indiana University-Purdue University Indianapolis

INDIANA UNIVERSITY
CENTER FOR GLOBAL HEALTH

13 December 2015

Suzanne M. Babich, DrPH, MS
Associate Dean of Global Health
Professor of Health Policy and Management
Richard M. Fairbanks School of Public Health
714 N. Senate Ave., EF 200
Indianapolis, IN 46202

Dear Dr. Babich:

I would like to express my enthusiastic support for the proposed doctoral program in global health leadership at the Fairbanks School of Public Health.

For the past 25 years, it has been my privilege to work with communities, academic institutions and health care systems in Indiana and in western Kenya. As the director of Indiana University's partnership with Moi University, Moi Teaching and Referral Hospital, and 10 other North American academic health centers that collaborate with us in western Kenya, I participated in the success of one of the largest HIV control programs in sub-Saharan Africa.

Effective Kenyan and American leaders were critical determinants of that success, and strong leadership will be a necessary element of its continued success and replication. The importance of investing resources in leadership development programs, particularly in sub-Saharan Africa, cannot be overstated. Your distance learning, executive program seems tailor made to meet the needs of mid-career professionals, particularly in sub-Saharan Africa and other low income areas of our world.

A number of my Kenyan colleagues will be excited to learn of your program. I will do my best to support them to enroll into it. The Fairbanks doctoral program is an important addition to the global health offerings at Indiana University. If I can be of assistance to you as it unfolds, please do not hesitate to call on me.

Kind regards,

Robert Einterz

Robert Einterz, MD
Donald E. Brown Professor of Global Health
Director, Indiana University Center for Global Health

702 Rotary Circle RO101 Indianapolis, IN 46202
Indiana University—Purdue University Indianapolis

IUPUI

DIVISION OF
UNDERGRADUATE EDUCATION

INDIANA UNIVERSITY–PURDUE UNIVERSITY
Indianapolis

December 14, 2015

Suzanne Babich, DrPH, MS
Associate Dean of Global Health
Professor of Health Policy and Management
Richard M. Fairbanks School of Public Health
IUPUI

Dear Sue,

As you know, I am a great supporter of the idea for a Doctoral Program in Global Health Leadership (DrPH) at the Fairbanks School of Public Health. The program you have described – and successfully built and directed at UNC-Chapel Hill for nearly ten years – would be an ideal fit at IUPUI. It meets our needs for professional doctoral programming, use of online technologies, focus on global curricula and target markets, interdisciplinary education, and benefits for the State of Indiana and the world.

It was for all these reasons that I awarded you $25,000 to help support you in getting the program launched through convening your global advisory board or any other use you feel would help strengthen your efforts from the start.

I am very happy to add my name to the list of those of us who enthusiastically await this exciting new program at IUPUI. The time and place are right, and I have great expectations for the program's success.

Please let me know if there is any other way I can help.

Best,

Stephen P. Hundley

Stephen Hundley, PhD
Interim Associate Vice Chancellor for Undergraduate Education and Dean of University College
Special Advisor to the Chancellor for Strategic Initiatives
Professor of Organizational Leadership and Supervision

Taylor Hall 815 W. Michigan St. Indianapolis, IN 46202 317-278-3635 *fax* 317-274-2437 due.iupui.edu

IUPUI
OFFICE OF
INTERNATIONAL AFFAIRS
INDIANA UNIVERSITY–PURDUE UNIVERSITY
INDIANAPOLIS

24 November 2015

Suzanne Babich, DrPH, MS
Associate Dean of Global Health
Professor of Health Policy and Management
Richard M. Fairbanks School of Public Health, IUPUI

Dear Sue,

Allow me to express my strongest support for the proposed Doctoral Program in Global Health Leadership (DrPH) at the Fairbanks School of Public Health. Development of this program at IUPUI is a very exciting prospect and one that we and others have been looking forward to with great anticipation since your arrival in Indianapolis.

After reviewing your brief proposal, and given our previous discussions about how this program developed and evolved under your leadership at UNC-Chapel Hill, I believe the program holds great potential for expanding the global dimension to professional doctoral education in our state and around the world. We are excited about the caliber and diversity of students this program will draw and the potential for this program to help us meet our global mission and IUPUI's strategic aims.

The program model makes it possible to bring students from around the world to the IUPUI campus virtually on a weekly basis and periodically in person. These are individuals who would otherwise not be a part of our campus community. Including them at IUPUI will enrich the learning environment at your School and beyond, bringing opportunities for other students, faculty and staff to interact with and benefit from the numerous and important global contacts that will result. In short, your proposal reinforces and contributes to the internationalization priorities of the *IUPUI Strategic Plan, Our Commitment to Indiana and Beyond*, which includes the goal of developing a Center for Curricular Internationalization to coordinate curriculum internationalization campus-wide and engage faculty in course development to meet campus-wide global learning goals for all students (Internationalization Strategic Action 4, http://strategicplan.iupui.edu/Indiana-and-Beyond).

The Office of International Affairs looks forward to supporting the progress of the proposed program. Please keep us apprised of your progress and let me know if there is any way we can help. We support this proposal wholeheartedly.

Sincerely,

Gil

Gil Latz, Ph.D.
Associate Vice Chancellor for International Affairs, IUPUI
Professor of Geography and Philanthropic Studies, IUPUI
Associate Vice President for International Affairs, Indiana University

902 W. New York Street, ES 2126 Indianapolis, IN 46202-5197 (317) 274-7000 fax (317) 278-2213 oia@iupui.edu http://international.iupui.edu
Indiana University–Purdue University Indianapolis

SCHOOL OF NURSING
INDIANA UNIVERSITY
Office of Global Affairs

December 21, 2015

Suzanne M. Babich, DrPH, MS
Associate Dean of Global Health
Professor of Health Policy and Management
Indiana University
Richard M. Fairbanks School of Public Health
714 N. Senate Ave., EF 200
Indianapolis, IN 46202

Dear Dr. Babich;

I write to provide support from the School of Nursing for the development of a doctoral program in Global Health Leadership in the Department of Health Policy & Management. This program will add to the diverse range of degrees provided by the Richard M. Fairbanks School of Public Health and further advance Indiana University's leadership in global health.

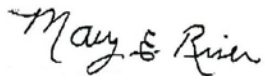
The need for advanced-level health leadership training among working health professionals is well documented. The program you are proposing will serve a great need within Indiana and around the world. Nurses are among those who would benefit from your program. The multidisciplinary approach your program takes will ensure that the broad range of persons working in the health field will benefit from the diverse perspectives of their peers. The global aspects of the curriculum are also critical to ensure that even those working domestically have a holistic perspective and appreciation for how health around the world affects us all.

Taking advantage of learning technology to recruit both domestic and international students including those living in their home countries, will capitalize on preparing the future leaders of global health. This mid-career program will build on the existing courses available and add specialty coursework and dissertation research in public health with a focus on global leadership.

The School of Nursing looks forward to continuing our collaborative work with the School of Public Health as you prepare the program. Once the program is approved, we anticipate sharing information with our doctoral nursing students who may want a concentration in global public health. Please let me know if I can be of future assistance.

1111 Middle Drive NU 107 Indianapolis, IN 46202 (317) 274-7749 tel

Sincerely,



Mary E. Riner, PhD, RN, CNE, FAAN
Associate Dean for Global Affairs
Indiana University School of Nursing

From: Riner, Mary Elizabeth
Sent: Monday, November 30, 2015 9:29 AM
To: Babich, Suzanne Marie
Subject: RE: letter of support

HI Sue, here is the letter of support from nursing. Both Dean Newhouse and Sue Rawl, PhD program coordinator are aware of your proposal and supportive.

Mary Beth

Mary E. Riner, PhD, RN, CNE, FAAN|Associate Dean for Global Affairs
Indiana University School of Nursing
1111 Middle Drive, NU 117
Indianapolis, IN 46202
(317) 274-4325 tel
(317) 274-2411 fax
mriner@iu.edu
Respect. Responsibility. Trust. Dialogue
A Legacy of Leadership: 1914-2014

Appendix 6: Faculty and Staff

Full-time faculty with appointments to teach in the program:

Suzanne Babich, DrPH, MS
Associate Dean of Global Health and
Professor, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/b/suzanne-babich-drph/

Brian Dixon, MPA, PhD
Assistant Professor, Epidemiology
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/d/brian-dixon-mpa-phd-fhimss/

Joan Duvwe, MD, MPH
Associate Dean of Public Health Practice
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/d/joan-duwve-md-mph/

Paul Halverson, DrPH, FACHE
Dean, School of Public Health and
Professor, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/h/paul-k-halverson-drph-fache/

Chris Harle, PhD
Associate Professor, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/h/chris-harle-phd/

Ann Holmes, PhD
Associate Professor, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/h/ann-holmes-phd/

Stephen Jay, MD
Professor, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/j/stephen-jay-md/

Nir Menachemi, PhD
Professor and Chair, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/m/nir-menachemi-phd/

Ross Silverman, JD
Professor, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/s/ross-d-silverman-jd-mph/

Lisa Staten, PhD
Associate Professor and Chair, Social and Behavioral Science
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/s/lisa-staten-phd/

Cynthia Stone, DrPH, RN
Clinical Associate Professor, Health Policy and Management

https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/s/cynthia-stone-drph-rn/

Joshua Vest, MPH, PhD
Associate Professor, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/v/joshua-r-vest-mph-phd/

Dennis Watson, PhD
Assistant Professor, Health Policy and Management
https://pbhealth.iupui.edu/index.php/about/faculty-and-staff/w/dennis-p-watson-phd/

Adjunct Faculty with appointments to teach in the program:

Philip Cochran, PhD
Associate Dean of the IU Kelley School of Business
Director of the Randall L. Tobias Center for Leadership Excellence
Thomas Binford Chair in Corporate Citizenship
Professor of Management and Professor of Philanthropic Studies

Egil Marstein, PhD, MBA, MA
Adjunct Associate Professor, Health Policy and Management

Judy Overall, JD, MSc, Med
Adjunct Professor, Health Policy and Management

In addition to the regular, full-time faculty in the Fairbanks School of Public Health, and selected adjunct faculty already appointed, we intend to make some additional ***international*** adjunct faculty appointments per our program design, which includes faculty with diverse global perspectives. We intend that some courses will be co-taught by Americans with international partners.

For example, courses for which we anticipate involvement (teaching, co-teaching, guest lectures) by international adjunct faculty include:

Leadership in Global Health Systems

Financing Global Health

Global Health Policy and Advocacy

Strategic Theory and Practice in Global Health Leadership

Leadership in Global Health Law and Ethics

Appendix 7: Facilities

N/A

The program will have no impact on facilities as courses are taught online. Students come to campus for not more than one week three times per year in each of years 1 and 2. Those campus visits are planned between traditional semesters when classrooms and other campus facilities are not being used for regularly scheduled courses.

Appendix 8: Other Capital Costs

N/A

There are no capital costs associated with the program. No additional library resources will be required.

Appendix 9: Articulation of Associate/Baccalaureate Programs

Not applicable

Appendix 10: Credit Hours Required/Time to Completion

The semester-by-semester, course-level summary of the program curriculum is provided below. The program is designed to be completed in three years, but students will have up to five years to complete the program should circumstances require an extension. The total number of credit hours in the program is 45. Students move through the program in step with the cohort with which they were admitted. Every student takes every course; there are no course exemptions permitted and no elective courses. Minimum GPA required for completion of the program is 3.0.

All courses are new, unique to this program and now undergoing the course approval process. Assigned CIP code is 51.2207.

List of courses:

<u>Year 1, Fall</u>

Course 1: Organizational Leadership Theory and Practice (2 credit hours)
Course 2: Leadership in Global Health Law and Ethics (2 credit hours)
Course 3: A Population Perspective for Global Health (1 credit hour)
Course 4: Initiating the Research Process (1 credit hour)

<u>Year 1, Spring</u>

Course 5: Leadership in Global Health Systems (2 credit hours)
Course 6: Essentials of Practice-based Research (2 credit hours)
Course 7: Literature Review and Appraisal (2 credit hours)

<u>Year 1, Summer</u>

Course 8: The Science of Global Health Implementation (2 credit hours)
Course 9: Leadership Challenges in Global Health Informatics (1 credit hour)
Course 10a: Dissertation Planning and Preparation (2 credit hours)

<u>Year 2, Fall</u>

Course 11: Financing Global Health (3 credit hours)
Course 12: Fundamentals of Research Analysis (3 credit hours)

<u>Year 2, Spring</u>

Course 13: Executive Communication for Global Health Leaders (2 credit hours)
Course 14: Global Health Policy and Advocacy (3 credit hours)
Course 15: Strategic Theory and Practice in Global Health Leadership (2 credit hours)

<u>Year 2, Summer</u>

Course 16: Marketing and Public Relations for Global Health Leaders (2 credit hours)
Course 17: Program Evaluation for Global Health Leaders (3 credit hours)

Course 10b: Dissertation Planning and Preparation (1 credit hour)

Year 3, Fall	Doctoral Dissertation (3 credit hours)
Year 3, Spring	Doctoral Dissertation (3 credit hours)
Year 3, Summer	Doctoral Dissertation (3 credit hours)

Appendix 11: Exceeding the Standard Expectation of Credit Hours*, Detail*

This program will not exceed 120 semester credit hours