ABSTRACT:
In September 2002 the Touro University, California – College of Education and Health Sciences (TU-C COHS) established a Joint MSPAS/MPH Program which sought to develop an integrated Medical and Public Health (PH) curriculum. Since its inception, the Joint Program has graduated seven cohorts of MSPAS/MPH graduates and is one of the first to have a mandated and integrated clinical and public health curriculum. The success of the program can be measured by the increasing number of applicants it attracts each year and survey data from the applicants which indicate that an overwhelming percentage apply because of the joint nature of the degree program.

The uniqueness of the Joint Program is that it makes clear that together both disciplines yield better overall health outcomes for prevention and population health, as one discipline does not exist without the other. We have successfully accomplished Phase 1 of “integrating public health and physician assistant disciplines” from a structural perspective and have instituted the expectation among students, faculty and staff, that medicine and public health work together on this continuum. Phase 2 is a necessary next step which we anticipate will further deepen this understanding and commitment to this educational and professional framework.

EDUCATIONAL METHODS OR APPROACHES USED:
The philosophical approach of the Joint MSPAS/MPH Program is to train health professionals to understand that medicine and public health are complementary professions. More specifically, the MSPAS/MPH curriculum stresses that treating individuals and diseases is not sufficient. Clinicians must also address the root causes of disease as it relates to socio-economic factors, environmental conditions as well as other factors which directly affect the health of communities. The Joint Program is a collaboration of two programs, the Master of Science in Physician Assistant Studies and the Master of Public Health, which is based on firm interdisciplinary collaboration, and the integration of public health and clinical courses into one curriculum.

PROJECT DESCRIPTION:
In September 2002 the TUC COHS established a Joint MSPAS/MPH Program after receiving provisional accreditation from the Accreditation Review Commission on the Education of the Physician Assistant, Inc. (ARC-PA). The Joint Program sought to develop an integrated Medical and Public Health (PH) curriculum unlike any other in the United States at the time. During the Joint Program’s early stages, there was a strong conviction that a mandated and integrated clinical and public health curriculum was essential for the delivery of healthcare in the 21st Century. The first class matriculated in spring 2003 and completed the program in spring 2006.

The philosophy behind the joint curriculum is to integrate the health of the individual with the health of the community and train health professionals who understand that a healthy individual is the product of a healthy community. The principal aim of the program is to produce clinicians with a public health foundation who prefer to serve in community-based settings. The curriculum strives to present public health subjects and clinical subjects with a coordinated approach, by addressing the clinical and public health issues as a continuum of one health issue instead of as separate topics.
This interdisciplinary collaboration is sustained by the requirement that students applying to the Joint Master of Science in Physician Assistant Studies Program must also enroll in the Master of Public Health Program. Students do not have the option of enrolling only in the PA curriculum. Furthermore, its model emanates from the university’s mission and addresses the current demand of the existing health care delivery system in the United States.

The Joint Program is currently in what is described as Phase 1, which translates to the integration of the two curricula primarily at the structural level. Both are distinct curricula (MSPAS and MPH) that prepare individuals to practice in two different health professions. In spite of this distinction, there is a tremendous amount of collaboration between faculty from both programs to deliver instruction that complement each other. Instruction within the Public Health courses ensures that relevant clinical examples and case studies are included for Joint Program students. Likewise, the Physician Assistant curriculum promotes the public health framework throughout a number of clinical courses to reinforce the need to integrate public health and medicine. Furthermore, faculty from the Public Health Program regularly lecture in certain PA courses, and four Physician Assistant faculty hold public health degrees and five Public Health faculty hold clinical degrees, all which helps to further highlight the relevancy of the integration within both disciplines.

Structurally, Phase 1 is delivered as a 32 month program (8 academic semesters). The first four semesters are didactic (pre-clinical) and clinical and public health coursework are completed concurrently. The clinical year includes 8 clinical rotations; students then return to campus for a final semester, which includes 1 public health field study, the physician assistant summative course and the culminating public health capstone course. The actual curriculum is outlined in companion materials to this case study.

While the coursework in the Joint Program contains more actual clinical courses, requirements for the MPH degree are maintained by virtue of the interdisciplinary nature of both curricula. Joint students must complete the equivalence of 42 credit units (required for independent MPH students) by completing 30 units of public health courses that include 15 units of core courses, 10 units of Community Health Track courses, five units of culminating coursework, transferring 12 units from the Physician Assistant Studies curriculum. Joint students are required to complete a 200-hour field study for two credit units and a three credit unit capstone project. In recognition of the relevance of the MSPAS coursework to the PH curriculum, the Public Health Program waives the MPH elective courses. Table 1 presents the transferrable courses from the Physician Assistant curriculum.

Phase 2 of integrating public health and physician assistant disciplines is currently being developed. Phase 2 moves to provide a series of seminars which explore strategies to address specific health issues from both clinical and public health perspectives. The seminars will be designed to simultaneously highlight relevant topics covered in the didactic courses. These seminars will further strengthen the students’ understanding of the synergistic approach of medicine and public health in solving health challenges that face many communities. Disease information organized into specific organ systems will be coupled by addressing the prevention and promotion of that particular organ system. For example, diseases specific to the cardiovascular system will include prevention of illness and promotion of healthy cardiovascular system. Similarly, beyond the clinical aspect of biological, genetic or environmental causative agents of diseases, public health will address the deeper socio-economic, cultural, and behavioral aspects.

In addition to the Joint MSPAS/MPH Program, the Public Health Program offers two dual degrees: (1) the Doctor of Osteopathic Medicine (DO)/MPH dual degree provides an interdisciplinary academic program of study that fosters skill acquisition and competency in key areas of public health practice,
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both current and emerging, by facilitating the articulation of a shared public health/health promotion and clinical practice approaches within the College of Osteopathic Medicine; (2) the PharmD/MPH dual degree offers students an integrated curriculum focusing on the knowledge and ingenuity of the delivery of pharmaceutical care within a population-based public health framework. PharmD/MPH students are provided with the expertise and competencies essential to comprehend population-based care, manage program planning and evaluation, assess the effects of emerging health issues and policies on the current healthcare environment, and provide care and services in order to promote the health and well being of local and global communities.

The mission of the Public Health Program includes service to the community. The program has successfully developed collaboration with local departments of health, community organizations and non-governmental organizations engaged in health promotion activities. These affiliations have also provided our students an abundant number of sites from which to gain field study experience where they draw lessons from the community, while helping to provide services that will enhance the wellness of its members. The Public Health Program maintains a well-established partnership developed with institutions in Bolivia and Ethiopia, which has also served to provide students the opportunity to engage in public health practice internationally. All joint and dual degree students participate in community collaborations through didactic classroom activities, volunteer efforts, as well as field study projects.

HEALTHY PEOPLE OBJECTIVE ADDRESSED:
ECBP-12-16: Increase the inclusion of core clinical prevention and population health content in health professions education.

The Joint MSPAS/MPH Program is directly tied to the objective “ECBP-12-16: Increase the inclusion of core clinical prevention and population health content in health professions education,” as it serves to develop and strengthen the necessary connections between clinical education and public health. As noted by Maeshiro R, et al. (2010), the health challenges that we face today require a public health approach that addresses epidemics of preventable chronic diseases, reforming the health care system to provide equitable high-quality care to populations, and responding to potential disasters in an increasingly interconnected world in addition to clinical skills. This concept is further supported by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) which now includes public health training as a core requirement for PA education. The ARC-PA Accreditation Standards for Physician Assistant Education, 4th Edition, state: “The program curriculum must include instruction in concepts of public health as they relate to the role of the practicing PA.” The annotation further states that “Instruction in concepts of public health includes an appreciation of the public health system and the role of health care providers in the prevention of disease and maintenance of population health. (Accreditation Standards for Physician Assistant Education - Fourth edition, 2010)

This framework is in direct alignment with the TUC MSPAS/MPH curriculum and the ECBP-12-16 2020 Objective.

PROGRAM OR COURSE GOALS:

Number of students enrolled/participating in 2010-2011 school year: 121
In 2010-2011, there were a total of 121 Joint Program students – 36 Class of 2011, 40 Class of 2012, and 45 Class of 2013. The entire Joint Program educational curriculum and syllabi are included in the companion materials to this case study.

Did you conduct a needs assessment as part of your planning process? ☑ Yes ☐ No
PROFESSIONS INVOLVED:
Medicine, Nursing, Physician Assistant, Public Health, Business Administration, a full list of faculty is contained in companion materials to this case study.

LESSONS LEARNED/EVALUATION RESULTS:
The integration of the MPH and the MSPAS curricula is challenged by the fact that both programs are required to meet standards and guidelines set forth by their respective accrediting bodies as separate and individual programs. Despite the “reduction” in MPH coursework due to the transfer 12 units, completing two master degree programs is intensive and extremely challenging for many students within the 32 month period. Furthermore, the fact that there is no joint program model makes development and comparative assessment a challenge.

In spite of these challenges, the program continues to grow and develop a reputation as a leader in interdisciplinary education for health professionals. The Joint MSPAS/MPH Program is one of the first of its kind in the U.S. and the first to have a mandated and integrated clinical and public health curriculum. The success of the program can be measured by the increasing number of applicants it attracts each year and survey data from the applicants which indicates that the overwhelming percentage of applicants apply because of the joint nature of the degree program. Data from the 2010/11 applicants who were selected for interviews found 93% of 204 applicants applied to TUC for this reason. Anecdotal data also demonstrates their unique skill in the community as documented by the high evaluations given by clinical preceptors during clinical rotations. More specifically, of the 61 preceptors surveyed in 2010, 55% indicated that joint degree students from TUC were better prepared than the students they also precepted from stand-alone PA programs. Though the current data does not specify why students were better prepared, there is speculation among Program faculty that these jointly trained students have a better perspective on population health in addition to their clinical skills, as opposed to their stand-alone PA counterparts.

CONCLUSION:
Clearly the need for developing primary care clinicians with public health skills that can address individual and community level health needs is critical. The uniqueness of the Joint Program is that it makes it clear that together both disciplines yield better overall health outcomes for prevention and population health, as one discipline does not exist without the other.

The Joint MSPAS/MPH Program has maintained this philosophy since its inception and has continued to develop this integrated approach over the last eight years. We have successfully accomplished Phase 1 of “integrating public health and physician assistant disciplines” from a structural perspective and have instituted the expectation among students, faculty and staff, that medicine and public health work together on this continuum. Phase 2 is a necessary next step which we anticipate will further deepen this understanding and commitment to this educational and professional framework.

Recommendations for replication: Status at TUC
- Seek faculty who hold dual degrees; A number of faculty hold degrees in clinical medicine and public health/health education. These faculty coordinate courses in both programs, aiding in coordination and integration (Pediatrics course; Health Disparities course).
- Develop dual or joint degree committees to explore feasibility to institute an integrated education approach; All program committees within the MPH and Joint MSPAS/MPH Programs have at least one faculty from each program represented. Additionally, faculty from the Public Health Program regularly lecture in certain PA courses.
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<th>• Conduct a needs assessment among students, faculty, and health professionals; and</th>
<th>A Joint Degree Task Force was created to review and evaluate the efficacy of the Joint Degree Program in 2009. Student assessments were conducted over a six month period. Results found the integrated curriculum to be a valuable asset to students. Suggestions were made about the delivery of the joint curriculum which has led to changes, such as “frontloading” the public health courses, earlier in the curriculum, spreading out assignment deadlines and better integration of the material.</th>
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<td>• Pilot one or two seminar courses in the initial phases.</td>
<td>In development.</td>
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**COMPANION MATERIALS:** (Course syllabi, resource lists, tests, website, etc.)

- Behavioral Med Syllabus
- Clin Med I General Syllabus
- Clin Med II General Syllabus
- Clin Med III General Syllabus
- Ethics Course Syllabus
- Peds Syllabus
- MSPAS/MPH Curriculum

**PUBLICATIONS:**

1. Maeshiro, Rika MD, MPH; Johnson, Ian MD, MSc; Koo, Denise MD, MPH; Parboosingh, Jean MB ChB, MSc; Carney, Jan K. MD, MPH; Gesundheit, Neil MD, MPH; Ho, Evelyn T. MPH; Butler-Jones, David MD, LLD, MHSc; Donovan, Denise MB, MPH; Finkelstein, Jonathan A. MD, MPH; Bennett, Nancy M. MD, MS; Shore, Barbie; McCurdy, Stephen A. MD, MPH; Novick, Lloyd F. MD, MPH; Velarde, Lily Dow PhD; Dent, M Marie PhD; Banchoff, Ann MSW, MPH; Cohen, Laurence MD, MPH, Medical Education for a Healthier Population: Reflections on the Flexner Report From a Public Health Perspective. Academic Medicine: 2010 - Volume 85 - Issue 2 - pp 211-219.


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