

July 16, 2019

PROFESSOR DENNIS TRINIDAD, Director
Public Health Program

SUBJECT: Undergraduate Program Review for Public Health

Dear Professor Trinidad,

The Undergraduate Council discussed the Public Health Program's 2019 Undergraduate Program Review. The Council supports the findings and recommendations of the review subcommittee and appreciates the incredibly thoughtful and detailed response from the Program.

The Council will conduct its follow-up review of the Program in Spring Quarter 2020. At that time, our goal is to learn about the Program's progress in implementing the recommendations of the program review subcommittee. The Council extends its thanks to the Program for their engagement in this process and we look forward to the continued discussion.

Sincerely,

Anthony Burr, Chair
Undergraduate Council

Attachment

(1) Undergraduate Program Review Report and Response for Public Health

cc: M. Corr
R. Horwitz
J. Moore
R. Rodriguez
M. Sidney
J. Teranes

Public Health, Undergraduate Program Review Report

Program Review Chair, Jane L. Teranes, LSOE, UC San Diego
Professor Thomas Csordas, UC San Diego
Professor Lorena Garcia, UC Davis

May 13th, 2019

Overview

The Family Medicine and Public Health (FMPH) department at UC San Diego launched the Bachelor of Science in Public Health (BSPH) in 2013. The BSPH has since grown rapidly to become a thriving and popular undergraduate major. This Review Committee was impressed by the dedication and excitement brought by the faculty teaching in the program, and the devotion brought by the department administration and student advising staff. It was evident that students are excited about this public health major and that they benefit from access to faculty and the researchers in the numerous offerings of relatively small classes in the major, particularly in the developing capstone series. The major is guided by robust learning outcomes and students are completing the major with strong preparation for diverse career paths. The average time-to-degree for public health majors aligns with the UC San Diego campus average.

Many of the challenges faced by the BSPH program relate to managing the large student interest in the major and the demands being placed on existing space and faculty efforts. Some of these challenges are expected, as the BSPH is the first undergraduate program within the School of Medicine that has been predominately focused on research and graduate education. The faculty, administration and staff are aware of these current challenges and have taken appropriate steps to cap the major and carefully manage course enrollments to ensure that students graduate in time.

Below we highlight the identified strengths and weaknesses in the BSPH program with respect to the (A) operations of the program, (B) curriculum and (C) broader campus context and policies. At the end of each section we provide some possible recommendations for improvements. We intend our comments to be useful to the BSPH program and hope that this review will encourage continued development and growth of undergraduate curriculum in this field.

Finally, based on the current success of the program and the clear dedication of involved at all levels of the public health major, we strongly recommend increased campus support and awareness for this major to insure adequate resources, including dedicated student-centered space. Given student interest, we also encourage the program to explore options to integrate more fully with the main campus by optimizing available campus resources (e.g. lecture rooms, teaching resources in Teaching and Learning Commons) and exploring options for joint programs and activities.

A. Operations of the Program

After several years of initial rapid growth, the BSPH program is now stable and running smoothly. Or, as one faculty member put it during the review, the major is now “in a good place.” The faculty, program administration and advising staff all seem extraordinarily dedicated to the program. The BSPH program administration is led by the chair and vice-chair of the

FMPH department, and much of the effort in launching and running the program falls to the very capable leadership of the program director, Dr. Dennis Trinidad. The program additionally benefits from an active faculty steering committee and several highly effective faculty subcommittees.

Faculty spoke of being deeply invested in their teaching and reported overall satisfaction with the preparation and the skillset of the students in the major. A strength of the major is the current teaching model that seems to allow senate faculty and adjunct-series faculty to largely self-select to engage in the undergraduate major in order to satisfy their teaching expectations. The program director has included the undergraduate teaching and service expectation of faculty as part of the School of Medicine Compensation Plan, giving added value to these areas in the merit and promotion process for both senate faculty as well as adjunct-series faculty. This model promotes engaged and high-quality teaching from faculty that are also recognized experts in their research fields. It was clear that the administration and the staff were also extremely committed to supporting their faculty and students. Students, faculty, administration and staff all reported strong and effective communication within the program.

There is a robust pool of TAs from graduate students from the Joint Doctoral Program with San Diego State and from the PhD program in FMPH. The TAs that we spoke with in the review indicated that course placement worked well, the workload was manageable and that communication and the working relationships between the faculty and TAs were good.

A main challenge of the BSPH program operations seems to be space related. There is internal tension within the School of Medicine for how to prioritize space, with faculty reporting that scheduled undergraduate lectures were occasionally bumped from their assigned location, often with little notice, to allow for other school of medicine seminars or events. The issue of space came up again with respect to adequate space for off-campus adjunct faculty and TAs to hold office hours and for students advising staff to meet with students.

The TAs expressed frustration that hires were often done at the last minute, sometimes just days before the start of the quarter. This last-minute hiring had many adverse effects on the TAs' ability to plan, for even things like getting health insurance for the quarter. The TAs were also disappointed that there was very little TA training in the program. There is an existing teaching methods course, but it is not currently offered regularly. The TAs also felt that very basic training in campus systems (i.e. class scheduling, class lists, TritonEd and clicker software, etc.) would be extremely helpful for first-time TAs as it would save them significant time and allow them to focus more on student instruction.

To manage student demand, BSPH has formally capped its enrollments. It seems that some students can be accepted into the major at the time of admission to UC San Diego (as a freshman or as a transfer student), using screening criteria that were not discussed as part of this review. This review did discuss the process of admitting current UC San Diego students, who can only declare a major in public health if they have completed the lower division courses FMPH 40 "Introduction to Public Health" **with a grade of B or higher**. Both faculty and current majors during the review raised issues with the equity of this criterion. Their concerns included (1) the stress that this placed on students, whose major choice was based on only one grade in one lower

division quarter course, and (2) the resulting inequalities in this system, which allowed other students in FMPH 40, who were already admitted into the major, to continue on even if they did not earn a grade of B or higher. Additionally, the review committee saw a potential for skewing the grading curve based on how many students could be managed in the major (although there was no indication that was happening now). The review committee recognizes that some selection process has to be in place in order to effectively be able to cap the number of students in the major, but we wonder if other more comprehensive criteria could be used.

Recommendations:

1. Actively petition for a dedicated student-centered BSPH space on main campus.
The review committee strongly agrees with the department's identified need for additional student-centered space, preferably on the main campus. This space would incorporate the current student advising with expanded space dedicated to teaching, student meetings, places for instructors and TAs to schedule office hours, and to simply give the BSPH a student-centered presence on this campus. This space is warranted given the current student demand for the BSPH program, and is necessary for future expansion of this popular program.
2. Schedule more courses with the UC San Diego registrar in dedicated campus classrooms and lecture halls.
The BSPH program is fortunate to have access to School of Medicine classrooms and lecture halls for convenient scheduling of undergraduate courses. However, this space is also heavily utilized and reports of conflicting needs are common. Some conflicting priorities can be avoided by scheduling more FMPH undergraduate courses in registrar-scheduled classroom space and lecture halls on the UC San Diego main campus. Scheduled courses always have priority in campus classrooms and lecture halls. Moving some of the courses out of the School of Medicine should relieve some pressure on room space.
3. Hire TAs well before the start of the quarter in which they will TA.
We recommend that TAs at least know that they will be hired well before the start of the quarter in which they are going to TA. The program should consider announcing tentative TA assignments in late spring for the incoming fall quarter and then announce TA staffing for the entire academic year by the late summer. This allows the TAs to better plan their funding sources (including health benefits), and schedules.
4. Implement a TA training program.
We recommend regularly offering TA training sessions that not only cover topics in pedagogy, but also give basic training in campus teaching logistics (i.e. class lists, TritonEd, clicker software etc.). We recommend that the department also research the various programs, workshops and other resources within the Teaching and Learning Commons, and then advertise appropriate resources specifically to their TAs and graduate students.
5. Review the process by which continuing UC San Diego students enter the BSPH major.
While this committee does not have a strong opinion on what specific changes are needed, or even *if* specific changes are needed, we are raising awareness that aspects of the current process are perceived as inequitable. We recommend that the department

review existing policy, research other approaches in other departments, and consider possible improvements.

B. Program Curriculum

The public health major has thoughtfully planned and executed a rigorous BS curriculum that, starting in 2016, is aligned with the Council on Education for Public Health accreditation requirements and designed to prepare students to enter careers in public health and related fields. The major offers courses in all the core knowledge areas in public health, including epidemiology, biostatistics, social and behavioral sciences, environmental and occupational health sciences, and health policy and management. The program has successfully negotiated many of the challenges associated with rapid growth in enrollments and rapid implementation of many new courses and rapid growth in enrollments. The program now regularly offers the required lower division courses twice a year and offers the five upper division required courses every quarter, to enrollments of about 60-70 students. There was positive feedback at every level on the value added by new programming in the capstone courses (now a requirement for the major) which allow for more project based work, writing and increased exposure to opportunities, career paths and professionalism. Student surveys and the students that we spoke to during the review all expressed satisfaction with the curriculum and high approval for the courses offered and their ability to access required courses to graduate.

Some confusion regarding choices in the curriculum came out in student comments during the review. Both students that we spoke with acknowledged that the “B.S.” aspect of the degree was important to them in choosing UC San Diego and the public health major. However, as one student put it, “this doesn’t seem like a B.S. degree.” Another student (who seemed largely otherwise satisfied with her choice of major), stated that she was planning to enroll in community college courses after graduation in order to complete some natural sciences requirements that she felt she needed to pursue her career plans, but didn’t realize soon enough to integrate into her major. This confusion doesn’t seem to result from oversight on the part of the department or the student advising staff, as pre-med tracks are highlighted in the major. Rather, these might be issues that are inherent to an undergraduate degree in a broad field like public health that traditionally has many access points. Students also indicated significant issues with planning their upper division electives, particularly in regard to (1) what courses were available each quarter and (2) which additional prerequisites were needed for upper division electives.

Many of the upper division elective courses in the BSPH major are currently satisfied with courses in other departments and programs across campus. Both faculty and students indicated a desire for more FMPH course electives (i.e. FMPH 140-179 course options) to fulfill the upper division electives for the major, if possible.

Recommendations:

1. Review the lower division biology prerequisites

We recommend that the department review the lower division biology requirement, including an analysis of how many students currently choose each option, and why.

Based on this analysis, we suggest that the department consider deleting option 2, if warranted, thus effectively requiring all majors to take BILD 1, 2 and 3. This would guarantee that students would have a minimal background in biology and would be prepared to enroll in upper division biology courses as electives.

2. Provide quarterly planning documents.

We recommend that advising staff prepare detailed quarterly planning documents, listing the various elective courses being offered in any given quarter, including any course prerequisites. Students reported that they often spent hours with the schedule of classes, just researching and creating spreadsheets to help them figure out what available electives would be offered in any quarter. Even when students felt prepared at their registration time, they would occasionally miss what prerequisites were needed, and not be able to register for the courses that they planned.

3. Better understand students' post-graduate plans and then capture their success.

As a broader consideration, we recommend that the department gain and continuously update their understanding of students' post-graduation plans and career goals, and consider ways to better integrate this context within the curriculum. Some of this integration might be in the form of adding more lower-division course work into the existing curriculum. Also, some of this understanding can certainly be integrated into the capstone series.

4. Develop upper-division FMPH electives for the major.

Both faculty and students commented that the department has been slow to develop upper division electives in the major (i.e. FMPH courses 140-179). The committee recognized that this should be expected, due to the need to prioritize regular scheduling of required courses. As the program matures, we recommend that the department shift to also encouraging development of more FMPH upper-division elective courses.

5. Stress the importance of attending problem sessions in the biostatistics course.

TAs and students both commented that the problem sessions in the biostatistics courses should be formalized to ensure that students are able to attend and reap the benefits in attending.

C. Broader campus context and policies

The BSPH is notable as the first undergraduate program in the UC San Diego School of Medicine. This review committee enthusiastically commends the vision and the efforts of the department faculty and staff in mounting this major, which has successfully connected the School of Medicine to the overall undergraduate education mission of main campus.

The very rapid growth of the public health major indicates that this program fills an important, previously unmet demand for undergraduate instruction and practice in this area. The BSPH major has become a uniquely attractive feature of UC San Diego undergraduate curriculum, and has the potential to recruit talented students from across California, the U.S. and internationally. This is even more likely to be the case with the recent launch of a Master in Public Health (MPH), that opens up an eventual pipeline possibility in public health for a combined five-year BS + MPH degree.

It was evident in the demographic data provided (FA13-FA17) that student diversity in the major is higher than all-campus averages. In particular, the BSPH major has higher percentages of

underrepresented minorities, first generation, low income, and lower percentages of Asian students, respectively, than the all-campus averages for the years provided. The major has a large enrollments of female students (around 80%). We advise the department to continue to monitor their demographic data, especially as the selection criteria for the capped major status are in place.

While the committee recognizes that a pioneering spirit was necessary to launch the BSPH program, we also strongly recommend that the program now look for ways to better integrate into the main campus operations on undergraduate education, with the goals of identifying resources and potential for collaborations. There are numerous ways that the program could pursue this, and below we share just a few initial ideas.

Recommendations:

1. Better integrate the BSPH program into the culture and general policies of main campus.
 - a. Orient the faculty and the TAs to centralized teaching resources and services available in the Teaching and Learning Commons.
 - b. Integrate the BSPH program into existing campus resources for undergraduate students (e.g. the Academic Enrichment Program, Faculty Mentor Program, hiring Undergraduate Instructional Assistants, etc.).
 - c. Consider ways to integrate public health curriculum across campus. Although the major is capped, the BSPH program can expand its reach to undergraduate students at UC San Diego with other strategies including cross-referencing their core courses in other majors on campus and by offering specializations within other natural sciences degrees (Biology or Environmental Systems). The department might also consider offering a minor in public health that could complement a variety of disciplinary majors on campus. Finally, many courses in public health align with the academic theme of “A Changing Planet” for the proposed Seventh College and could be proposed as general education electives within the college requirements. Together, these strategies might alleviate some of the student demand for the major (and, thus, some of the necessary training in the capstone courses), while expanding the scope of undergraduate education in public health on campus and preparing a larger number of students for careers in this field.
 - d. Encourage faculty participation in senate and other campus committees that share information on undergraduate teaching, resources and policies at UC San Diego.

In summary, we have a highly positive view of the state of the BSPH program at UC San Diego. This committee was particularly impressed with the dedication of the faculty, administration and staff that had the vision to create and launch this successful major. Finally, we would like to thank everyone who provided their input and time to assist with this review.