

**Program Review and Assessment Report for Undergraduate Programs
Department of Public Health
Indiana University School of Medicine
2011-2012 Academic Year**

INTRODUCTION

The Department of Public Health has two undergraduate degree programs, two minors, and two certificates. These programs were transferred from the School of Public and Environmental Affairs to the School of Medicine in July 2010, and the 2011-2012 academic year marks the second academic year for these undergraduate programs in the School of Medicine. Overall, the first two years have been building years in which we established the undergraduate programs and academic policies and procedures in the School of Medicine.

OUTCOMES (What will students learn? How will we know it and measure it?)

General Outcomes: Undergraduate students who earn one of our degrees will have the knowledge, skills and abilities:

- 1) needed to enter and advance in the professions relevant to their majors (measure by tracking student employment through recent graduate/alumni surveys)
- 2) embodied in the IUPUI Principles of Undergraduate Learning (PULs) (measure by faculty assessment of student mastery of the major emphasis PUL)
- 3) needed to enter advanced degree programs appropriate to their chosen fields of study (measure by tracking student entry into graduate programs)

Degree-Specific Outcomes: Degree-specific learning outcomes are provided in each degree program summary listed below. Students will demonstrate mastery of the competencies and learning outcomes defined for their major. Each degree program includes a capstone experience and an internship or experiential requirement.

ASSESSMENT OF LEARNING (How do we help students learn and measure their learning?)

Each of our majors has degree-specific learning outcomes, and these are linked to the IUPUI PULs for the BSPH – Environmental Health Science major and the BS Health Services Management degree. The BSPH – Environmental Health Science major is an accredited degree and the learning outcomes and competencies for this degree are also linked to those specified by the degree accrediting body. Our newest degree program - the BSPH Community Health major – has been withdrawn to provide additional development time for needed courses.

Each course within a given degree program also has course-specific learning outcomes that are established by the faculty and approved by the undergraduate curriculum committee. The faculty also determines which PUL is the major emphasis PUL and how student mastery will be determined. Faculty members use a variety of approaches and tools to evaluate student learning within their courses; these include exams, case studies, papers, presentations, problem-solving, projects, etc.

We measure degree-specific outcomes primarily through performance in capstone courses in each degree program, faculty PUL ratings, supervisor evaluation of internship performance or other experiential, program reviews, and feedback from employers. We may also consider feedback from recent graduate/alumni surveys, retention and graduation rates, and DF rates as these data become available to us. Because of our recent move to the IU School of Medicine, some of these tools (for example campus surveys of student and alumni satisfaction) are not immediately available to us, but they

will be integrated into our reporting in future reports after we transition to school status (Richard M. Fairbanks School of Public Health).

The learning outcomes and assessment of learning activities for each undergraduate program is given below.

1. B.S. in Health Services Management (BSHSM)

Learning Outcomes: A student who graduates with a major health services administration can: recognize, evaluate, and solve problems in health services organizations using knowledge, tools, and skills appropriate to entry- and mid-level health services management positions. At the completion of the degree program, a student will demonstrate the following learning outcomes:

- 1) Communicate effectively with diverse stakeholders, including public health and health care professionals, individually and in group settings using verbal, written, and electronic modes of communication. (Linked to PUL 1)
- 2) Use statistical and other quantitative analysis tools and techniques to understand issues and problems in health care organizations and systems. (Linked to PULs 1d, 2, 3, 4)
- 3) Use basic financial tools, principles and practices to review and analyze financial performance of organizations and implement controls as required. (Linked to PULs 1d, 2, 3,4)
- 4) Apply human resource best practices for management of human capital in an organization. (Linked to PULs 4, 5)
- 5) Use marketing concepts and skills to analyze markets, develop marketing plans, and measure the impact of marketing activities to raise awareness and increase growth of the organization's market share. (Linked to PULs 2, 3, 4)
- 6) Participate in developing and implementing plans and policies to improve the delivery of health services. (Linked to PULs 2, 3, 4, 5, 6)
- 7) Work individually and within a team-setting by applying organizational knowledge and leadership skills. (Linked PULs 1, 2, 3, 4, 5, 6)
- 8) Recognize and demonstrate sensitivity to diverse points of view. (Linked to PUL 5)
- 9) Seek principled solutions to health services delivery issues. (Linked to PUL 6)

Program Interventions and Improvements: Our assessment activities this past year focused on improving employers' evaluation of internship students in the BSHSM and improving the capstone course. A summary of the issues, implementation of strategies to deal with these issues, and results is given below.

Internship. Last year we were concerned about supervisor evaluations which showed that areas of needed improvement included quality of written work, ability to think independently, ability to set priorities, and reporting to work regularly, following attendance policies, and arranging for time off in advance. The last three items, while not academic in a strict sense, are important for professional development. The intervention that we initiated was to have the program director meet with each student to discuss expectations. We believe this intervention has been successful as shown by the results in Table 1; however, we will continue our efforts to improve student performance in all areas, especially quality of work, attitude, and attendance.

Table 1: BSHSM Summary Results: Percent of Student Interns Who Employers Agreed or Strongly Agreed Demonstrated the Stated Performance Indicators		
Outcome Area	2010-2011	2011-2012
Academic Knowledge (measured by 4 indicators) - linked to PULs 1a, 1b, 1c, 3, 4 - linked to BSHSM degree learning outcomes 1-6, 8	100%	100%
Judgment, Reliability, and Adaptability (measured by 4 indicators) - linked to PULs 3, 5, 6 - linked to BSHSM degree learning outcomes 4, 6, 8, 9	75%	100%
Quality of Work (measured by 5 indicators) - linked to PULs 2, 3, 4 - linked to BSHSM degree learning outcomes 1-9	75%	89%
Attitude (measured by 5 indicators) - linked to PUL 5 - linked to BSHSM degree learning outcomes 7, 8	88%	89%
Human Relations (measured by 3 indicators) - linked to PUL 5, 6 - linked to BSHSM degree learning outcomes 7,8	100%	100%
Attendance (measured by 3 indicators) - linked to PUL 5, 6 - linked to BSHSM degree learning outcomes 7, 8	50%	89%

Capstone Course, H472 Applied Health Administration: Last year, faculty identified concerns about the mastery of course outcomes in the BSHSM capstone course – specifically, student ability to apply concepts was not at the expected level and writing skills for a portion of the course needed improvement. Changes were made to this course to provide concept reinforcement early in the semester in areas such as management principles, governance of healthcare organizations, and to introduce public health organizational issues. This was done through the addition of a supplemental course text and the addition of a guest expert who spoke to students on state public health issues. The first two quizzes were then written to assess learning in those areas. A case competition was also added at the end of the course so students could receive feedback on their mastery of course content from outside experts. These interventions were made to address the prior year’s concern regarding students’ ability to effectively apply broad management decision-making to case studies, a key component of this course. The course changes early in the semester were incorporated to better prepare students to effectively analyze and provide strategic recommendations with the subsequent case studies in H472. In addition, the case scoring rubric was refined to provide a better point of comparison between academic years.

The Case Scoring Guide (Table 2) below reflects how effectively students applied what they learned earlier in the semester to a case study. The evaluation rubric below reflects student performance in Spring of 2012 (44 students enrolled). The guide below will be used as a baseline for future evaluations of student performance. The course instructor reports that the interventions were successful in helping students recognize, analyze and evaluate management issues more quickly and effectively than in previous semesters. The instructor also reports that the addition of the case competition was integral in achieving the outcome of demonstrating collaborative skills, and to make oral recommendations to an ‘organizational management team’ that served as evaluators for the student teams. In turn, including the external audience gave students another opportunity for feedback, but from outside authorities, who might be future employers.

Table 2: PBHL-H472 Case Scoring Guide						
Case 25: “A New Brand for Senior Health Plus”						
BSHSM Learning Outcome & IUPUI PUL	EVALUATION CRITERIA	Meets/Partially Meets/ Does Not Meet				
Learning Outcome: 7 PUL: 2	1. Defines and articulates key issue(s) or problem(s).	2 95%	1 5%	0		
Learning Outcome: 7 PUL: 2	2. Provides relevant background and context needed to appreciate the problem and consider remedies.	2 88%	1 9%	0 2%		
Learning Outcome: 4, 5 PUL: 4	3. Identifies major stakeholders, their key roles, perspectives and expectations.	2 70%	1 25%	0 5%		
Learning Outcome: 2, 3 PUL: 1B	4. Identifies and provides analysis of the impact of internal and external factors & barriers.	2 82%	1 18%	0		
Learning Outcome: 6, 9 PUL: 2-6	5. Delineates logical alternative solutions.	2 40%	1 55%	0 5%		
Learning Outcome: 6 PUL: 2-6	6. Defines and defends a recommended solution with key concepts, rationale and logic.	2 89%	1 9%	0 2%		
Learning Outcome: 8, 9 PUL: 5-6	7. Examines the recommended solution’s political feasibility and acceptance from multiple stakeholder perspectives.	3 50%	2 45%	1 5%		
Learning Outcome: 5, 6 PUL: 2-6	8. Provides plan for decision implementation, communication, and follow up.	2 65%	1 30%	0 5%		
Learning Outcome: 1 PUL: 1a	9. Uses proper sentence structure, grammar, punctuation, sentence structure and writing mechanics.	3 96%	2 2%	1 2%		
Learning Outcome: 1 PUL: 1a	10. Overall written in an organized, logical and professional manner with clear content. Compelling and informative. Follows proscribed format.	5 43%	4 43%	3 7%	2 2%	1
2012 Assignment Overall Average Score: 21.45/25 Rating Scale Points: meets or exceeds criterion (3); meets criterion at a basic level of competence (2); needs some improvement (1).						

2. B.S. in Public Health - Environmental Health Science major

Learning Outcomes: A student who graduates from the Environmental Health Science major can: anticipate, recognize, evaluate, and solve problems in environmental science and health using knowledge, tools, and skills appropriate to entry-level environmental science and health positions. At the completion of the degree program, a student will demonstrate the following learning outcomes:

- 1) Communicate effectively with diverse stakeholders individually and in group settings using verbal, written, and electronic modes of communication. (Linked to PUL 1)
- 2) Use statistical and other quantitative analysis tools and techniques to understand issues and problems in environmental science and health. (Linked to PULs 1d, 2, 3, 4)
- 3) Anticipate, recognize, evaluate, and solve environmental science and health problems by applying scientific and technical knowledge and principles. (Linked to PULs 2, 3, 4)
- 4) Monitor a community’s environmental health status using epidemiological tools, laboratory techniques, and field methods appropriate to individual issues. (Linked to PULs 1d, 2, 3, 4)
- 5) Participate in developing and implementing plans and policies to improve environmental health using scientific and technical knowledge. (Linked to PULs 2, 3, 4, 5 and 6)
- 6) Work individually and within a team-setting by applying organizational knowledge and leadership skills. (Linked to PULs 1, 2, 3, 4, 5, 6)

- 7) Recognize and demonstrate sensitivity to diverse points of view. (Linked to PUL 5)
- 8) Seek principled solutions to environmental problems. (Linked to PUL 6)

Program Interventions and Improvements: This past year, we focused on improving writing in PBHL-A316 and internship performance. We also examined mastery of learning outcomes in PBHL-A416, the capstone course.

Internship: Students are required to complete 240 contact hours of internship, which provides sponsoring organizations with ample opportunity to observe student performance. Internship supervisors continue to have high satisfaction with student interns as shown below in Table 3. One of the changes that we have made is a better screening of students to ensure a good match between student interests and expectations of the internship. Students are required to meet with the instructor prior to selecting the internship, and we believe this intervention has been important in maintaining high satisfaction among sponsoring organizations and students. Students also continue to have high satisfaction with the overall internship experience.

Table 3: BSPH-Environmental Health Science Summary Results: Percent of Student Interns Who Employers Agreed or Strongly Agreed Demonstrated the Stated Performance Indicators		
Outcome Area	2011-2012	2010-2011
Academic Knowledge (measured by 4 indicators) - linked to PULs 1d, 2-5 - linked to BSHSM degree learning outcomes 2-5	100%	100%
Judgment, Reliability, and Adaptability (measured by 4 indicators) - linked to PULs 1, 5, 6 - linked to BSHSM degree learning outcomes 1,7, 8	100%	100%
Quality of Work (measured by 5 indicators) - linked to PULs 1-6 - linked to BSHSM degree learning outcomes 1-8	100%	100%
Attitude (measured by 5 indicators) - linked to PUL 5 - linked to BSHSM degree learning outcomes 6, 7	100%	100%
Human Relations (measured by 3 indicators) - linked to PUL 5, 6 - linked to BSHSM degree learning outcomes 6, 7	100%	100%
Attendance (measured by 3 indicators) - linked to PUL 5, 6 - linked to BSHSM degree learning outcomes 6	100%	100%

During this past year, one student participated in a research RISE experience. Although this student's performance was not at the level we expected, we will initiate a more thorough screening to ensure that there is a better match between the student and the research project.

PBHL-A316: This course serves as a survey course for BSHSM and BSPH-Environmental Health Science students. This survey course emphasizes communication skills (PUL 1a), integration and application of knowledge (PUL 3) and critical thinking (PUL 2). During the Fall 2011 term, we focused on developing writing skills. Students were required to summaries of articles and a short research paper. For the research paper, they were provided with the option of submitting a draft for instructor review and comment. In addition, students were required to submit a certificate of completion of the IU School of Education plagiarism tutorial. About 30% of the class submitted the optional draft paper. Not surprisingly, the instructor reported that students who submitted the draft had much stronger writing scores on the grading rubric than those who did not (equivalent to about a letter grade). There were only two instances

of plagiarism detected, and these were on the draft papers, and students corrected issues before the final papers were submitted.

During the spring term, the instructor changed course requirements so that all students were required to submit a course topic, outline, and draft paper, and there was a grade penalty for those who did not. Students were also required to submit the plagiarism tutorial certificate as before. Even though the draft paper was required, only about half of the students submitted the draft. This intervention was successful, but additional improvements are needed. Those who did submit the draft performed at a much higher writing level than those who did not (equivalent to slightly more than 1 letter grade). For the future, it is clear that submission of draft papers will improve writing performance, but the challenge will be to ensure that all students submit a draft for review and comment. One option might be to consider increasing the penalty for not submitting the draft paper. An unexpected finding this term was significant plagiarism issues and poor understanding of what constitutes plagiarism, even after completing the plagiarism tutorial and classroom discussions. We are considering additional ways to ensure that all students understand their responsibilities in this area.

Capstone Course, PBHL-A416. This capstone experience emphasizes communication skills (PUL 1a and 1b), critical thinking skills (PUL 2), and integration and application of knowledge (PUL 3), and it provides insight into overall mastery of the BSPH-EHS degree learning outcomes. Table 3 shows a comparison between Spring 2012 and Spring 2010 (last time the course was offered) outcomes for the communication skills and knowledge (course debate, exams). During the fall semester, we will examine the capstone performance as part of our self-study for accreditation and determine what changes, if any, will enhance mastery of outcomes in this course.

Table 4: BSPH-Environmental Health Science Student Mastery of Learning Outcomes and IUPUI PULs

% of Students Demonstrating Mastery Level	Debate: Oral Communication (PUL 1b, Learning Outcome 1) Integration and Application of Knowledge (PUL 3, Learning Outcomes 2-8)		Exams: Integration and Application of Knowledge (PUL 3, Learning Outcomes 2-8) Critical Thinking (PUL 2, Learning Outcomes 2-8)	
	2010	2012	2010	2012
Very Effective	67%	56%	94%	74%
Effective	28%	44%	6%	21%
Somewhat Effective	5%	0	0	0
Not Effective	0	0	0	5%

3. B.S. Public Health – Community Health

Learning Outcomes: The Community Health major prepares students to provide health education, promote healthy lifestyles and healthy choices, prevent diseases, and enhance quality of life in communities. Students will obtain a foundation in understanding the social determinants of health, distribution of health and illness in diverse populations, and the disease risks among human populations. The focus of the major is on interdisciplinary efforts to address the physical, social, behavioral, mental, and environmental health concerns of communities and populations at risk for disease and injury. Graduates will plan and evaluate health services in communities. They will coordinate the community efforts of government agencies and private organizations.

The competencies for the BSPH in Community Health are

- 1) Assess individual and community health needs for health education.
- 2) Plan health education strategies, interventions, and programs.
- 3) Implement health education strategies, interventions, and programs.
- 4) Conduct evaluation and research related to health education.
- 5) Administer health education strategies, interventions, and programs.

- 6) Serve as a health education resource person.
- 7) Communicate and advocate for health and health education.

Program Interventions and Improvements: Community Health is a new major in the public health degree program, and we are currently enrolling those students who will graduate students in the spring term of 2014 or later. Because this is a new program, we will report on interventions and improvements in the future.

4. Student Services and Student Satisfaction with Program Elements

The Department of Public Health provides students with a strong mentoring program through an academic advisor that is available to answer routine advising questions and a faculty mentor who is available to address academic and nonacademic issues.

Program Interventions and Improvements: This past year, we revised our initial student survey from the Fall 2010 to target graduating seniors. An improvement to our original survey was to include questions related to mastery of the PULs. This survey will be given to graduating senior each year and will provide an additional source of information on which to assess our programs.

The survey results reflect mostly the opinions of BSHSM students (85% of respondents). Responses from the BSPH-Environmental Health Science students are lower (15%) because of the smaller size of the program.

Overall, 80% of graduating students reported being satisfied or very satisfied with their program and educational experiences at IUPUI; we interpret this as a high degree of satisfaction, but we recognize there are needed areas of improvement as shown in Table 5, which provides summary results for student satisfaction with different program elements. Table 5 includes comparisons of 2012 graduating students to 2010 data (all students), when available. Future reports will provide comparisons of graduating students only.

During the past year, we focused our student services interventions on improving our course rotations and program checklists, solidifying policies and procedures, and encouraging students to come for advising on a regular basis. Although we have made improvements as shown in Table 5, we will examine more closely our academic advising, career placement/counseling services, and course rotations and work to improve student satisfaction overall, but especially in these areas. We anticipate seeing continued improvement in these areas.

Table 5: Student Satisfaction Survey		
Satisfaction Item	Students who expressed being very satisfied or satisfied . . .	
	2010 (all students)	2012 (graduating students)
Course Rigor	79%	87%
Student Services	74%	69%
Academic Advising	45%	53%
Scheduling and Frequency of Courses	12%	47%
Graduation Application Process	NA	93%
Career Placement and Counseling	39%	33%