



Condensed Self-Study Report of Northeastern University

Northeastern University

Bouve College of Health Sciences, School of Pharmacy

140 The Fenway

Boston

Massachusetts - 02115

Submitted to the Accreditation Council for Pharmacy Education 9/8/2015 at 7:32 p.m. Eastern time

Table of Contents

[College or School Profile](#) on page 4

Self Study Summary

[College or School's Overview](#) on page 6

[Summary of the College or School's Self-Study Process](#) on page 8

[Summary of Compliance Status](#) on page 10

Mission, Planning, and Evaluation

[1.College or School Mission and Goals](#) on page 11

[2.Strategic Plan](#) on page 15

[3.Evaluation of Achievement of Mission and Goals](#) on page 19

Organization and Administration

[4.Institutional Accreditation](#) on page 24

[5.College or School and University Relationship](#) on page 26

[6.College or School and Other Administrative Relationships](#) on page 29

[7.College or School Organization and Governance](#) on page 33

[8.Qualifications and Responsibilities of the Dean](#) on page 38

Curriculum

[9.The Goal of the Curriculum](#) on page 43

[10.Curricular Development, Delivery, and Improvement.](#) on page 47

[11.Teaching and Learning Methods](#) on page 53

[12.Professional Competencies and Outcome Expectations](#) on page 58

[13.Curricular Core - Knowledge, Skills, Attitudes and Values](#) on page 62

[14.Curricular Core - Pharmacy Practice Experiences](#) on page 67

[15.Assessment and Evaluation of Student Learning and Curricular Effectiveness](#) on page 73

Students

[16.Organization of Student Services](#) on page 78

[17.Admission Criteria, Policies, and Procedures](#) on page 82

[18.Transfer of Credits and Waiver of Requisites for Admission with Advanced Standing](#) on page 87

[19.Progression of Students](#) on page 89

[20.Student Complaints Policy](#) on page 93

[21.Program Information](#) on page 95

[22.Student Representation and Perspectives](#) on page 97

[23.Professional Behavior and Harmonious Relationships](#) on page 100

Faculty and Staff

[24.Faculty and Staff - Quantitative Factors](#) on page 104

[25.Faculty and Staff - Qualitative Factors](#) on page 108

[26.Faculty and Staff Continuing Professional Development and Performance Review](#) on page 113

Facilities and Resources

[27.Physical Facilities](#) on page 117

[28.Practice Facilities](#) on page 121

[29.Library and Educational Resources](#) on page 125

[30.Financial Resources](#) on page 129

Pharmacy College or School Profile

Northeastern University

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

140 The Fenway

Boston

Massachusetts - 02115

Departmental/Divisional Structure

Pharmaceutical Sciences (PharmSci)

Pharmacy and Health Systems Sciences (PHSS)

Branch/Distance Campus

Main Campus

President Information

Joseph Aoun, PhD

President

716 Columbus Place, Suite 620

Boston

Massachusetts - 02120

presidentaoun@neu.edu

617-373-2101(Ph.)

Provost Information

James Bean, PhD

Provost

Churchill Hall

312 Huntington Avenue

Boston

Massachusetts - 02115

jbean@neu.edu

617-373-4517(Ph.)

Dean Information

David Zgarrick, PhD

Acting Dean

140 The Fenway

Boston

Massachusetts - 02115

d.zgarrick@neu.edu

617-373-4664(Ph.)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| |
|--|
| College or School's Overview |
| College or School's Overview (since last comprehensive on-site evaluation) |

(School comments begin here)

MISSION, PLANNING, EVALUATION

[Northeastern University](#) has continued its transition to a nationally visible, research-oriented institution. Bouve College of Health Sciences (BCHS) reaffirmed its commitment to interprofessional education and expanded its graduate programs and research enterprise. The School of Pharmacy remained true to its mission through the most recent revision of the strategic plan in 2012 and enhanced its programmatic evaluation efforts.

ORGANIZATION AND ADMINISTRATION

The school's organizational structure has expanded to include directors of assessment and undergraduate and professional programs and an assistant director of operations. In the Office of Experiential Education, an additional staff member was added and IPPE/Co-op coordinators were transitioned from the university's Co-op office. The school remained under the leadership of Dean Reynolds until fall of 2014 when he assumed the role of Interim Vice Provost for Undergraduate Education, followed by his transition to Interim Dean of BCHS in May of 2015. Dr. Zgarrick has served as Acting Dean since 2014.

At the college level, Terry Fulmer was appointed as BCHS Dean in 2011 and new associate dean positions were created to provide support to all programs in the college. The college established a new office for research to support our research enterprise. Additionally, the college built a new simulation laboratory suite in 2013 to support its interprofessional education mission.

CURRICULUM

In 2012 a new curriculum was approved that improved course and content sequence. Additional elective credits and capstone options provide students the opportunity to develop a personalized education plan and achieve a minor in a second discipline. A joint PharmD/Masters in Public Health (MPH) curriculum was also approved. In 2014, the school voted to replace the existing curricular outcomes with the 15 educational outcome statements approved by the Center for the Advancement of Pharmacy Education (CAPE). New curriculum mapping to 2013 CAPE outcomes and a gap analysis were performed resulting in some further modifications to courses and a significant revision to the professional student progression portfolio.

A systematic curricular revision process provides ongoing review of all courses. A comprehensive plan for evaluation of educational outcomes has been developed. The school implemented ExamSoft e-testing and rubric software to aid in the evaluation of student outcome achievement.

STUDENTS

The university admits students into the undergraduate pre-pharmacy cohort. Progression requirements must be met and students must pass an interview to enter the P1 year. A recent decrease in number of students admitted to the pre-pharmacy program led to the establishment of the direct-entry post-baccalaureate admission track in 2014 to maintain our enrollment targets.

Efforts to ensure student success, including strengthened admission standards and student support, have resulted in improvements in student progression and on-time graduation. A new professionalism code of conduct and policy

has been developed by the student government organization and approved by the faculty. Continued growth of professional student organizations has provided increased student opportunities for leadership development, community engagement and networking with faculty, preceptors, and alumni.

FACULTY AND STAFF

New faculty and staff positions have been added since 2009 and the school has been successful in recruiting and developing faculty and staff. The faculty-student ratio has improved and there is a balance of academic ranks in both departments. Many faculty continue to be innovative educators who actively engage students in the learning process. Scholarly productivity has continued to increase and many faculty serve in leadership positions in professional organizations and societies. The university, college, and school provide faculty and staff with many opportunities for professional development.

FACILITIES AND RESOURCES

The school has moved to a recently renovated building, which provides office and research laboratory space for the majority of faculty and staff and is located on the university campus near teaching laboratories and classrooms. The university has made enhancements to classrooms, academic technology, and library facilities and resources. Practice facilities remain one of our strengths. Our signature Co-op program has long-standing practice partnerships in Boston's medical area, throughout the state, nationally, and internationally.

The university has transitioned from a traditional budgeting system to a hybrid responsibility centered management (RCM) system. The RCM model is designed to increase unit level accountability by giving units, in our case BCHS, control of revenue as well as expenses.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

Summary of the College or School's Self-Study Process

Summary of the College or School's Self-Study Process

(School comments begin here)

Planning began in the fall of 2013 with appointment of Margarita DiVall and David Zgarrick as co-chairs of the self-study. At that time the executive committee developed and approved the self-study process and timeline. Six self-study committees aligned with six sections of the standards were formed to ensure broad-based input from faculty, staff, students, preceptors, administrators, health sciences colleagues and employers (See Committees Roster in Appendix S.1.1). The co-chairs of the self-study, in consultation with Dean Jack Reynolds, assigned faculty and staff and appointed a chair for each committee. Members of the PharmD class of 2016 were invited to serve on each self-study committee. The Office of Experiential Education provided a list of preceptors/employers who were invited to participate. Alumni were identified and invited by the dean. Finally, we engaged several of our BCHS colleagues and representatives of the Office of Student Services in the self-study process due to the close collaboration at the college level on issues such as strategic planning, organization, interprofessional curriculum development, faculty and student affairs and resources.

The self-study began with a retreat held on January 31st 2014 (see agenda and timeline of the self-study in Appendix S.1.2). Self-study participants received an overview of ACPE accreditation, plans for the self-study process and our timeline. The committees then began their work, discussing meeting schedules, collaboration tools, and reviewing standards for their respective sections. Subsequently, committees conducted their business using face-to-face meetings and web conferences. Committee chairs were encouraged to accommodate student class schedules and use technology to ensure engagement from alumni, preceptors, and employers. A web portal was created for the self-study effort to enable access to pertinent documents and communication among committee members. In September 2014 Dr. Zgarrick transitioned into the acting dean role and Dr. DiVall chaired the self-study effort alone from this point on.

The self-study began with a comprehensive strength-weaknesses-opportunities-threats (SWOT) analysis of standard compliance conducted by each committee. This analysis allowed the groups to quickly identify areas for improvement and communicate these needs to the executive committee. The dean and the executive committee used the results of the SWOT when charging school committees for academic year (AY) 2014-15.

The six chairs and the chair of the self-study comprised a steering committee, which met monthly to discuss self-study progress, data needs, challenges, and deliverables. A standing item for self-study updates was added to the agendas of the executive committee and school faculty meetings. A separate team of three faculty with accreditation experience was appointed to provide feedback to the steering committee during the ongoing self-study process and to provide critical review of the final document. A working draft of the self-study was distributed to all stakeholders in March 2015. The draft was sent to the self-study team and all PharmD students via email and posted on the school's web site. A self-study update with a link to the posted draft was included in the alumni and friends newsletter distributed in April 2015. In April 2015, town hall meetings were held for students and faculty. Additionally, a Qualtrics web survey was developed to collect anonymous feedback. Feedback was incorporated into the self-study and faculty approved the content and the self-assessment of the standards at a school faculty meeting on June 10, 2015. Additional editorial and data updates were completed over the summer, which resulted in a substantive change to Standard 16. This change was endorsed by a faculty vote at a school meeting on September 9th, 2015. The final self-study report is available to all faculty, staff, students and external stakeholders on the [school's web site](#).

To assist the site team with identifying places in the standard narratives where specific focused questions are addressed, the end of each paragraph has a reference to one or more focused questions addressed by the paragraph. The use of abbreviations was unavoidable due to character space restriction in AAMS, and while each abbreviation is defined the first time it appears in each of the six sections of standards, the list of commonly used abbreviations is included as Appendix S.1.3. We provided a number of appendices that are required for onsite review with the self-study submission to allow the team ample opportunity to review these documents.

Summary of Compliance Status

| Standards | Compliant | Compliant With Monitoring | Partially Compliant | Non Compliant |
|---|-----------|---------------------------|---------------------|---------------|
| Mission, Planning, and Evaluation | | | | |
| 1. College or School Mission and Goals | ✓ | | | |
| 2. Strategic Plan | ✓ | | | |
| 3. Evaluation of Achievement of Mission and Goals | ✓ | | | |
| Organization and Administration | | | | |
| 4. Institutional Accreditation | ✓ | | | |
| 5. College or School and University Relationship | | ✓ | | |
| 6. College or School and Other Administrative Relationships | ✓ | | | |
| 7. College or School Organization and Governance | | ✓ | | |
| 8. Qualifications and Responsibilities of the Dean | ✓ | | | |
| Curriculum | | | | |
| 9. The Goal of the Curriculum | ✓ | | | |
| 10. Curricular Development, Delivery, and Improvement. | | ✓ | | |
| 11. Teaching and Learning Methods | ✓ | | | |
| 12. Professional Competencies and Outcome Expectations | | ✓ | | |
| 13. Curricular Core - Knowledge, Skills, Attitudes and Values | ✓ | | | |
| 14. Curricular Core - Pharmacy Practice Experiences | ✓ | | | |
| 15. Assessment and Evaluation of Student Learning and Curricular Effectiveness | ✓ | | | |
| Students | | | | |
| 16. Organization of Student Services | | ✓ | | |
| 17. Admission Criteria, Policies, and Procedures | ✓ | | | |
| 18. Transfer of Credits and Waiver of Requisites for Admission with Advanced Standing | ✓ | | | |
| 19. Progression of Students | ✓ | | | |
| 20. Student Complaints Policy | ✓ | | | |
| 21. Program Information | ✓ | | | |
| 22. Student Representation and Perspectives | ✓ | | | |
| 23. Professional Behavior and Harmonious Relationships | | ✓ | | |
| Faculty and Staff | | | | |
| 24. Faculty and Staff - Quantitative Factors | ✓ | | | |
| 25. Faculty and Staff - Qualitative Factors | ✓ | | | |
| 26. Faculty and Staff Continuing Professional Development and Performance Review | | ✓ | | |
| Facilities and Resources | | | | |
| 27. Physical Facilities | | ✓ | | |
| 28. Practice Facilities | ✓ | | | |
| 29. Library and Educational Resources | ✓ | | | |
| 30. Financial Resources | | ✓ | | |

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| 1. College or School Mission and Goals | |
|--|--|
| <p>The college or school of pharmacy (hereinafter "college or school") must have a published statement of its mission, its goals in the areas of education, research and other scholarly activities, service, and pharmacy practice, and its values. The statement must be compatible with the mission of the university in which the college or school operates. These goals must include fundamental commitments of the college or school to the preparation of students who possess the competencies necessary for the provision of pharmacist-delivered patient care, including medication therapy management services, the advancement of the practice of pharmacy and its contributions to society, the pursuit of research and other scholarly activities, and the assessment and evaluation of desired outcomes.</p> | |

2. College or School's Self-Assessment

| | |
|---|--------------|
| The college or school has a published statement of its mission; its long-term goals in the areas of education, research and other scholarly activities, service, and pharmacy practice; and its values. | Satisfactory |
| The mission statement is compatible with the mission of the university in which the college or school operates. | Satisfactory |
| The college or school's vision includes the development of pharmacy graduates who are trained with other health professionals to provide patient care services as a team. | Satisfactory |
| The college or school's vision and long-term goals include fundamental commitments of the program to the preparation of students who possess the competencies necessary for the provision of pharmacist-delivered patient care, including medication therapy management services, the advancement of the practice of pharmacy and its contributions to society, the pursuit of research and other scholarly activities, innovation, quality assurance and continuous quality improvement, and the assessment and evaluation of desired outcomes. | Satisfactory |
| The college or school's vision and goals provide the basis for strategic planning on how the vision and goals will be achieved. | Satisfactory |
| For new college or school initiatives, e.g., branch campus, distance learning, or alternate pathways to degree completion, the college or school ensures that: <ul style="list-style-type: none"> • the initiatives are consistent with the university's and the college or school's missions and goals • the same commitment to the instillation of institutional mission and academic success is demonstrated to all students, irrespective of program pathway or geographic location • resources are allocated in an equitable manner | Satisfactory |

3. College or School's Comments on the Standard

| Focused Questions | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | How the college or school's mission is aligned with the mission of the institution |
| <input checked="" type="checkbox"/> | How the mission and associated goals address education, research/scholarship, service, and practice and provide the basis for strategic planning |

- How the mission and associated goals are developed and approved with the involvement of various stakeholders, such as faculty, students, preceptors, alumni, etc.
- How and where the mission statement is published and communicated
- How the college or school promotes initiatives and programs that specifically advance its stated mission
- How the college or school supports postgraduate professional education and training of pharmacists and the development of pharmacy graduates who are trained with other health professionals to provide patient care as a team
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

OUR MISSION:

The School of Pharmacy is dedicated to excellence in pharmacy-related education, research and service, including the provision of patient care. We prepare students with knowledge, skills and values for careers in pharmacy practice and the pharmaceutical sciences. Our programs promote intellectual growth, professionalism, and lifelong learning. The school contributes to improved individual and population health through the generation and dissemination of new knowledge and through scholarship and community service.

OUR VISION

Northeastern University School of Pharmacy will:

- Secure a national and international reputation for excellence and quality in *all* of the school's disciplinary areas;
- Be recognized for excellence and distinction in the delivery of professional and interprofessional education that integrates campus-based learning and experiential education;
- Advance the profession of pharmacy through leadership and engagement; and
- Be a highly sought-after school in which to learn, work and conduct interdisciplinary scholarship in the areas of patient care and science.

The School of Pharmacy's (referred hereafter as "the school") mission and vision statements (Appendix 1.1.1) are available on the [school's web site](#) under the "About" section). The Bouve College of Health Sciences (BCHS) mission and vision statements (Appendix 1.2.1) can be found on the [college web site](#). [Northeastern University's \(NU\) mission statement](#) (Appendix 1.2.2) is also available on the web. (Q4)

The school's dedication to excellence in pharmacy practice education, research and service requires values that are consistent with contemporary pharmacy practice and a vision for the future of the profession. The school's vision and mission statements are used to frame the goals the school identifies in the strategic planning process. The most recent strategic planning process was initiated during a faculty retreat in 2012 with additional feedback obtained from alumni and students (see Standard 2). This process resulted in affirmation of the school's mission, and further development of its vision and goals. (Q3)

Our mission and vision statements are aligned with, and responsive to, the college and university mission and vision statements, particularly our focus on experiential education and use-inspired research. The school's mission statement also aligns well with the vision of the pharmacy profession and places a focus on practice, experiential education and research. The mission statement addresses lifelong learning and the contribution of the school to individual and population health. The identification of pharmaceutical sciences and pharmacy practice in the statement ensures that the core disciplinary areas identified by the profession, as well as both basic and applied research, are included and valued. Our assessment plan includes evaluation criteria and a feedback process to monitor progress toward achievement of our mission and goals (See Standard 3). (Q1, 2, 7)

The most recent revision of our vision in 2012 focused on better alignment with the pharmacy profession's vision for practice and the BCHS mission to prepare our graduates to work as members of an interprofessional (IP) health care team. Since 2012, the school has participated in three BCHS retreats focused on developing an interprofessional education (IPE) curriculum and fostering IP research collaborations. In 2013, BCHS opened a state-of-the-art simulation center that allows our students additional opportunities to learn with other health professions students (See Curriculum Standards for more IPE initiatives). AACP graduating student survey data and local surveys reveal that our students learn with other health professions students in several different settings, with the most common being APPE, IPPE/Co-op, lectures and simulations. Pharmacy students most often interact with nursing, physical therapy, medicine and physician assistant professionals. Compared with peer match mates our students report more agreement with being prepared to work with the health care team to implement patient care plans and to communicate with providers. (Q6, 8)

Our commitment to research is evident in a number of ways. Our faculty are consistently in the top 15 schools nationally and in the top two private schools of pharmacy in total and NIH grant funding (see Appendix 1.3.1 prepared based on 2014 [AACP Institutional Research Grant Data](#)). Nearly all faculty agree that the school encourages them to engage in scholarly activity. Faculty have made considerable efforts to involve students in their research activities. Our Rho Chi Student Chapter maintains a research compendium that informs students of research opportunities. Since we began to publish this compendium, student agreement that they were aware of opportunities to participate in research with faculty increased from 69% in 2009 to 84% in 2014, and a number of students have been awarded research funds through the [Provost Undergraduate Research and Creative Endeavor Program](#). (Q5, 9)

The school, through its faculty and students, contributes to the community in a variety of ways. Our faculty and students work with as many as 150 IPPE/Co-op and more than 200 APPE practice partners to deliver patient care and services regionally, nationally and internationally. Our student professional organizations, individual students, and faculty participate extensively in community service. Recently, the school shared the breadth of its community engagement at the 2014 AACP Annual Meeting Poster session (see Appendix 1.3.2). (Q5)

The school is committed to post-graduate education and development. Currently, the school has residency program affiliations with Walgreens and Federally Qualified Health Centers (FQHCs) / Program for All-Inclusive Care for the Elderly (PACE) with four residents in community and ambulatory-based programs. The school has fellowship programs in critical care at Tufts Medical Center and pharmaceutical industry fellowships in medical affairs and clinical research with Cubist Pharmaceuticals (October 2013 – June 2015; ended as the result of Merck acquisition) and Alnylam Pharmaceuticals. Additionally, clinical faculty are involved in post-graduate residency training programs at Beth Israel Deaconess Medical Center, Boston Medical Center, Brigham & Women's Hospital, Dana Farber Cancer Institute, Lahey Clinic, and Tufts Medical Center. The school has an active [Continuing Professional Education Office](#) that delivers live and online ACPE accredited programs. (Q6, 8)

Our commitment to post-graduate education is further demonstrated by the encouragement and preparation of our students for post-graduate programs. Faculty, in collaboration with local residents and fellows, deliver informational sessions and advise students throughout the application process. Since 2013 our placement rates into residencies and fellowships has averaged about 34% of the graduating class, which is well above national rates. (Q6)

In 2013 the school approved a new joint degree program, the PharmD/Masters in Public Health (MPH), in response to our 2009-2012 strategic plan. Needs assessments demonstrated student interest in obtaining this joint degree and we are able to leverage the existing BCHS MPH program resources and curriculum. The program was developed to ensure that students complete all PharmD requirements outlined by our curriculum plan, with students completing up to five MPH courses using their elective course allotment toward the MPH degree. Upon earning the PharmD degree, students will be able to earn the MPH degree within one additional year (see [PharmD/MPH program information web site](#) for more information). Students who elect to pursue this joint degree program can apply in their P1, P2, or P3 year and will fully benefit from all the opportunities offered in the school of pharmacy as well as the expertise and advising from the MPH program faculty and staff. (Q5-7)

AACP graduate, alumni and faculty survey data demonstrate that our students are generally satisfied with the education they receive. Compared with national data, our students and alumni more frequently agree or strongly agree that they would choose NU to study pharmacy again if they were given the opportunity. Close to 95% of our alumni rate the overall quality of the educational experience as very good. While we have noticed a growing number of students who say that they would not choose pharmacy as a career if they were to start again, or who would not recommend a career in pharmacy to a friend or a family member, our data are similar to national and peer comparisons and are likely a reflection of the changing market place, available job opportunities, and high student debt at graduation. (Q9)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| 2. Strategic Plan | |
|---|--|
| <p>The college or school must develop, implement, and regularly revise a strategic plan to facilitate the advancement of its mission and goals. The strategic plan must be developed through an inclusive process that solicits input and review from faculty, students, staff, administrators, alumni, and other stakeholders as needed, have the support of the university administration, and be disseminated in summary form to key stakeholders.</p> | |

2. College or School's Self-Assessment

| | |
|--|--------------|
| The program is in the process of or has developed, implemented, and regularly revises a strategic plan to advance its mission and long-term goals. | Satisfactory |
| The strategic planning process is inclusive, soliciting input and review from faculty, students, staff, administrators, alumni, and other stakeholders as needed, has the support of the university administration, and is disseminated in summary form to key stakeholders. | Satisfactory |
| The strategic plan of the college or school is aligned with the university's strategic plan. | Satisfactory |
| Substantive changes are addressed through the strategic planning process, taking into consideration all resources (including financial, human, and physical) required to implement the change and the impact of the change on the existing program. | Satisfactory |
| Consultation with ACPE occurred at least six months before recruiting students into new pathways or programs. | Satisfactory |
| The college or school monitors, evaluates and documents progress toward achievement of strategic goals, objectives, and the overall efficacy of the strategic plan. | Satisfactory |

3. College or School's Comments on the Standard

| Focused Questions | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | How the college or school's strategic plan was developed, including evidence of the involvement of various stakeholder groups, such as faculty, students, preceptors, alumni, etc. |
| <input checked="" type="checkbox"/> | How the strategic plan facilitates the achievement of mission-based (long-term) goals |
| <input checked="" type="checkbox"/> | How the college or school's strategic plan incorporates timelines for action, measures, responsible parties, identification of resources needed, and mechanisms for ongoing monitoring and reporting of progress |
| <input checked="" type="checkbox"/> | How the college or school monitors, evaluates and documents progress in achieving the goals and objectives of the strategic plan |
| <input checked="" type="checkbox"/> | How the support and cooperation of University administration for the college or school plan was sought and achieved, including evidence of support for resourcing the strategic plan? |
| <input checked="" type="checkbox"/> | How the strategic plan is driving decision making in the college or school, including for substantive changes to the program |
| <input checked="" type="checkbox"/> | How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |

- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACCP standardized survey questions, especially notable differences from national or peer group norms.

(School comments begin here)

The school, under the direction of the dean and the executive committee (EC), is committed to maintaining a strategic plan encompassing goals for a 3-5 year period. The previous plan was developed in 2008 and covered 2009-12 (See Appendix 2.1.2). Our most recent strategic plan was approved in December 2012 to cover a time frame of 2013 through 2017 (Appendix 2.1.1). In addition, both academic departments in the school engage in setting annual strategic goals that operationalize the plan. (Q1)

In 2012 a SWOT (strengths, weaknesses, opportunities, threats) analysis was conducted by the EC with involvement of faculty, staff, student, and alumni stakeholders to initiate the strategic planning process. As part of the SWOT analysis, the EC reviewed previous accomplishments, accreditation guidelines, and institutional strategic plans and initiatives. This analysis was shared with the Bernard Consulting Group, who facilitated a school-wide strategic planning retreat. During a daylong retreat on September 7, 2012 (see agenda in Appendix 2.3.1), participants affirmed the current mission, vision, and core values and identified six strategic initiatives (Appendix 2.1.1). Retreat participants divided into six groups to continue developing goals, objectives, action steps, timelines, and responsible parties following the retreat. The plan includes 21 broad goals divided among the six initiatives and was approved by the faculty in December 2012. The strategic goals are broad-based and focus on areas for enrichment and enhancement toward our ultimate goal of graduating professionals dedicated to pharmacy practice, IP collaboration, lifelong learning and impacting communities. The plan also focuses on strengthening community engagement and maintaining productivity in a dynamic work environment. The school's engagement with its stakeholders is key to the success of our programs and graduates. (Q2)

After faculty approval of the current strategic plan it was then shared with all stakeholders via the school's web site. A survey link was provided to the stakeholders; however, no further comments were received and no major changes were made to the plan approved by the faculty. The current strategic plan is available to alumni, faculty, students and others through the [school's web site](#) under the "About" section. (Q1, 3)

Implementation of the strategic plan requires engagement of faculty, students, standing committees, and *ad hoc* working groups. The school's assessment committee (AC) and EC regularly discuss progress toward achievement of goals. Annually, the director of assessment collates information received from standing committee reports and administrators. As part of a continuous quality improvement process, this information is evaluated to chart progress with the strategic plan and utilized to shape the following year's planning and annual committee charges (see Appendix 2.3.2). (Q3, 4)

The strategic goal evaluation process incorporates a periodic review of compliance with accreditation standards (Appendix 2.1.1, last page). Beginning in 2013, the school used the internal program review feature available in AAMS to document areas of strength and areas for improvement as part of standards compliance reviews. We have also carefully reviewed Standards 2016 and are on track to be in full compliance by July 2016. (Q4, 8)

The information gathered and discussed as part of monitoring of the achievements of mission, vision and strategic plan is frequently communicated with faculty during school meetings, and discussed as part of the work of standing committees. Accordingly, many of the decisions made by the faculty and administrators are informed by the strategic plan. (Q6)

As an example of this process, the 2009-2012 plan, Objective 1.5 “Determine the needs for and value of new programs of study, including joint degree options, minor tracks and areas of specialization” led to the development of a joint PharmD/ MPH program as well as the expansion of residencies and fellowships. The development of this dual degree program was informed by a needs assessment, resource analysis, and collaboration with an established MPH program in BCHS. In the current strategic plan, under the strategic goal 1.3 “Develop and implement new graduate and joint degree programs that differentiate our students in the marketplace and respond to workplace needs” we will continue to oversee joint PharmD/MPH implementation and evaluation of enrollments, curriculum, and graduates’ success. (Q6, 7)

As admission of freshman into the pharmacy program has declined over the past five years, the school opened a direct-entry admission pathway into the P1 year. In 2014, the school enrolled our first class of 11 post-baccalaureate direct-entry students followed by 4 students in the fall of 2015. Additionally, the school accepts internal and external transfer students in the freshman (Pre-Ph1) and sophomore (Pre-Ph2) classes. These pathways (see Standard 17) will continue to help us meet enrollment goals and receive needed resources to sustain quality and diversity in the PharmD program as outlined by our strategic plan. The school will study the success of students who are entering the program via 2+4 or 4+4 pathways in terms of retention and on time graduation rates. (Q6, 7)

Effective strategic plans require support of the college and university administration, including appropriate resources. The school’s strategic plan aligns well with Northeastern University’s 2010-15 Long Range Academic Plan (Appendix 2.2.1), which focuses on the growth of academic programs, global student experiences, recruitment and retention of faculty, growing our interdisciplinary research enterprise, enhancing student experience and improving our infrastructure. The university commensed the development of its next strategic plan in August 2015 after the arrival of the new Provost James Bean. The school's plan also aligns with 2013-18 BCHS strategic plan (See Appendix 2.2.2), which emphasizes IPE, faculty recruitment and retention, globalization, quality improvement, and health sciences research. Due to these alignments, we have received the support of the administration including proper resource allocation. For example, during the recent U.S. economic downturn, we hired additional faculty and staff (See standard 24). Our research infrastructure has improved with the establishment of the Bouve College Office of Research (BCORe). BCORe was established to enhance the capacity for wide-ranging and impactful health-related research and provides a broad array of research support to members of the BCHS research community including assistance with grant development and submission, post-award management of grants, training workshops, and research management tools. BCORe staff members also provide assistance with identifying collaborators and research opportunities. With the support of BCORe, the school has seen a significant increase in grant funding since 2009. (Q5, 8)

Faculty agreement that the school is effectively using strategic planning has steadily increased from 71% in 2009 to 91% in 2014. This improvement in faculty perception is attributed to the described process improvements in both forming the plan and continuously evaluating and tracking progress toward achieving strategic goals. In 2014, 96% of faculty agreed or strongly agreed that the school sought their input on the current strategic plan reflecting broad involvement in the strategic planning process. It is notable that our AACP Faculty Survey data related to this standard are significantly better than both national and peer comparisons. (Q8, 9)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

3. Evaluation of Achievement of Mission and Goals

The college or school must establish and implement an evaluation plan that assesses achievement of the mission and goals. The evaluation must measure the extent to which the desired outcomes of the professional degree program (including assessments of student learning and evaluation of the effectiveness of the curriculum) are being achieved. Likewise, the extent to which the desired outcomes of research and other scholarly activities, service, and pharmacy practice programs are being achieved must be measured. The program must use the analysis of process and outcome measures for continuous development and improvement of the professional degree program.

2. College or School's Self-Assessment

| | |
|--|--------------|
| The evaluation plan describes a continuous and systematic process of evaluation covering all aspects of the college or school and the accreditation standards. The plan is evidence-based and embraces the principles and methodologies of continuous quality improvement. | Satisfactory |
| Individuals have been assigned specific responsibilities in the evaluation plan. | Satisfactory |
| The evaluation plan uses surveys of graduating students, faculty, preceptors, and alumni from the American Association of Colleges of Pharmacy (AACCP). | Satisfactory |
| The evaluation plan includes assessments to compare and establish comparability of alternative program pathways to degree completion, including geographically dispersed campuses and distance-learning activities. | N/A |
| The program assesses achievement of the mission and long-term goals. | Satisfactory |
| The analysis of process and outcome measures is used for continuous development and improvement of the professional degree program. | Satisfactory |
| The program measures the extent to which the desired outcomes of the professional degree program (including assessments of student learning and evaluation of the effectiveness of the curriculum) are being achieved. | Satisfactory |
| The program measures the extent to which the desired outcomes of research and other scholarly activities, service, and pharmacy practice programs are being achieved. | Satisfactory |
| The evaluation plan includes the college or school's periodic self-assessment using the accreditation standards and guidelines to assure ongoing compliance. | Satisfactory |

3. College or School's Comments on the Standard

| Focused Questions | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | How all components of the program's mission and goals are being followed and assessed |
| <input checked="" type="checkbox"/> | How the college or school periodically self-assesses its program using the accreditation standards and guidelines to assure ongoing compliance. |
| <input checked="" type="checkbox"/> | A description of the instruments used in assessment and evaluation of all components of the program's mission (e.g. in the areas of education, research and other scholarly activity, service, and pharmacy practice). |
| <input checked="" type="checkbox"/> | How assessments have resulted in improvements in all mission-related areas |

- Innovations and best practices implemented by the college or school
- Description of the members of the Assessment Committee (or equivalent structure/accountable person), charges and major accomplishments in the last academic year
- How the college or school makes available to key stakeholders the major findings and actions resulting from its evaluation plan
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements

(School comments begin here)

The assessment committee (AC) works closely with the dean, the director of assessment, and the EC to develop and regularly update an assessment plan (AP) that encompasses all of the elements of the school's mission and goals. Most recent major revisions to the AP were made and approved by the AC in the spring of 2014 and all faculty in the fall of 2014. Assessment and evaluation measures in the updated AP is reorganized into two main areas: programmatic and curriculum. Benchmarks, used to monitor progress since our previous 2009 accreditation visit, were also formally added to the AP. The current AP (Appendix 3.1.1) includes the following:

- Information regarding desired outcome with specific evaluation instrument or data source;
- Responsible party for data collection;
- How data are evaluated, shared, and how the results will be used for quality improvement;
- Resources required;
- Relevant stakeholders; and
- Benchmarks for national and peer comparisons or our own trends over time (Q1).

The AP specifies measures and outcomes for which data are routinely gathered and monitored to evaluate our curriculum (both didactic and experiential), student enrollments and progression, faculty quantitative and qualitative factors, research productivity, community engagement and leadership, and student support services. It uses both internal and external data sources and metrics to monitor progress in achieving goals including summative and formative measures. All relevant stakeholders, including students, faculty, alumni, preceptors, and the surrounding community are represented in this process. The AP was reviewed and updated in 2015 after the release of *Standards 2016*. Most notable changes are the alignment with Standards 2016 and the incorporation of annual Pharmacy Curriculum Outcomes Assessment (PCOA) administration in the evaluation of our curriculum with the first administration planned for the spring of 2016. (Q1, 9)

Processes used to evaluate the school's mission and goals include periodic SWOT analyses to inform our strategic planning, and annual committee reports to track progress in achievement of strategic goals and objectives. AACP curriculum quality surveys are administered to students (annually), faculty (every 1-2 years) and alumni and preceptors (every 2-3 years) to monitor our program, including curriculum quality, and to provide benchmark data for national and peer comparisons. Additionally, the AC monitors student exit surveys and North American Pharmacy Licensure Examination (NAPLEX) results and makes recommendations for improvement. Courses, faculty and preceptors are evaluated regularly using both formative and summative methods. Faculty are advised to triangulate course feedback from student, peer and self-evaluations. (Q3)

In the Department of Pharmacy and Health Systems Sciences (DPHSS), formative peer evaluation of teaching is mandatory (Appendix 3.3.1) for all faculty (conducted annually or biannually). In the Department of Pharmaceutical Sciences (DPS), peer evaluation is performed for tenure-track faculty by senior faculty. We have developed a

nationally recognized model and tool for peer observation of teaching and evaluation (Appendix 3.3.2) and provide ongoing training and development for peer observers. Student feedback for courses is solicited via formative mid-semester feedback (Appendix 3.3.3), a process that has been developed by the school and overseen by the director of assessment. This process engages student class representatives to collect and organize feedback from their class and discuss it with the coordinator of each course. The university administers electronic summative end-of-semester Teacher Rating and Course Evaluation (TRACE) for each course (Appendix 3.3.4). Faculty self-assessments are encouraged in annual performance reviews with summative feedback provided by a committee of peers and the department chair (see Standard 26). Preceptors receive feedback through accessing preceptor evaluation reports (see Standard 14). (Q3, 5)

The assessment committee evaluates data from AACP surveys annually. Agreement (combined 'agree' and 'strongly agree') and disagreement (combined 'disagree' and 'strongly disagree') are reviewed for each question. The committee uses a threshold of 5% or more difference in agreement or disagreement for the school data longitudinally and with national and peer comparisons to identify the school's strengths and areas for concern. These areas are discussed by the assessment committee and further communicated with responsible individuals. Assessment and curriculum committees collaborate closely with the chairs and respective directors serving on both committees. The director of the Office of Experiential Education (OEE) also serves on both committees. The chair of the assessment committee and/or the director of assessment assume responsibility for communicating recommendations from AACP survey analyses to the dean and department chairs, the executive and curriculum committees, the Office of Student Services (OSS), the OEE, and the assistant dean for academic affairs. Action plans with response to AACP survey results are documented annually and are shared with faculty on the school portal. (Q3, 8)

NAPLEX data over the past five years indicate the strength of our curriculum, with pass rates and individual domain scores at national averages. Our Multistate Pharmacy Jurisprudence Examination (MPJE) scores have been slightly below national averages. The curriculum and assessment committees have recently discussed strategies to increase first-time takers' pass rates on NAPLEX and MPJE (See Standard 15). (Q3, 5)

Evaluation of curricular outcomes is comprehensively described in Standard 15. One notable quality improvement initiative to assist with evaluation of curricular outcomes on an aggregate and individual student level is implementation of an electronic testing and assessment solution, ExamSoft (See Standard 15). As implementation of this software continues throughout the curriculum, the curriculum and assessment committees will have access to powerful analytics to further determine the level of competency achievement of our students and refine the curriculum. On the experiential side, standardized rotation performance assessments and student self-assessments provide data for achievement of competencies during IPPE/Co-ops and APPEs (Appendices 3.3.5-6, See Standard 14). (Q3, 8)

It is noteworthy that over the last 10 years, assessment activities have strengthened the culture of assessment among our faculty, staff, and students. Many quality improvement initiatives have been undertaken since the 2009 accreditation visit and are described throughout this self-study report. Such initiatives have been informed by data and discussion among faculty, students, alumni and preceptors. Some examples include (Q4):

- Revision of the entire curriculum to improve course sequences, flexibility, and opportunities for professional electives (See Curriculum Standards);
- Gap analysis of the most recent curricular mapping exercise in 2014 (to the Center for Advancement of Pharmacy Education (CAPE) outcomes) and data from AACP surveys, lead to recommendations to the curriculum committee to develop activities to address interprofessional and informatics competencies:
 - 1) Interprofessional Curbside Consult activity has been developed and added to the Comprehensive Disease

Management (CDM) Skills Lab 4 course in 2015; and 2) Drug Literature Evaluation course has been modified to include several lecture slots dedicated to informatics and a population health project has been added to CDM 3 seminar course;

- Development of new professional elective courses;
- Revisions of IPPE/Co-op and APPE performance assessment instruments (See Appendices 3.3.5-6 and Standard 14);
- Ongoing conversations with the Office of Student Financial Services and improved orientation to financial aid changes in the P4 year have lead to improved satisfaction of students with services (See Student Standards);
- Improved academic support with increase in tutoring services (See Student Standards);
- Improved organizational structure with appointments of the director of assessment and director of undergraduate and professional programs and additional staff support (See Standards 7 and 24);
- Recent evaluation of the OEE by an external consultant.

Assessment expertise exists in the school among many faculty with the leadership provided by Margarita DiVall, who was appointed as the Director of Assessment in 2010 based on needs for improvement identified during the 2008-2009 self-study. Dr. DiVall has committed significant effort to her continued professional development in the area of assessment and leadership. She completed the AACP Academic Leadership Fellows Program in 2010-2011. She participated in the Harvard Medical School/Macy Foundation course: "A Systems Approach to Assessment in Health Professions Education" in 2011 and many other professional development activities at national meetings. She also completed a Masters in Education in 2014. She has been recognized nationally for her expertise in assessment and has been invited to present on a variety of assessment related topics at other colleges of pharmacy, national meetings, and the AACP Institute. (Q6)

Dr. DiVall led the AC as the chair until 2014. Under her guidance and discussion with the EC and the AC, it was decided that it is best for the committee to be led by a faculty member. The bylaws were therefore amended and approved by the faculty to ensure faculty leadership of this important committee. The AC now consists of four faculty members (two from each department), a student representative (and alternate), a representative from the OSS, director of the OEE, and a IPPE/Co-op coordinator. All of these members are voting members of the committee. Additionally, the director of assessment and the director of undergraduate education and professional programs and/or curriculum committee chair are ex-officio members of the committee (non-voting). In addition to the director of assessment and the AC, the EC also oversees the implementation of the evaluation plan and ongoing quality improvement efforts. The 2014-2015 committee members are listed in Appendix 3.2.1. The 2014-15 committee report is included as Appendix 3.2.2 and reflects the charges and accomplishments of the group. (Q6, 9)

As part of the systematic approach to quality improvement the school has established processes to monitor ongoing compliance with accreditation standards. Our bylaws and strategic plan identify responsible administrators and committees for standard compliance review. The process for standard compliance review is captured in the school's assessment plan. The reviews are periodic with the goal of assessing midpoint compliance review between accreditation visits and any time updates or new guidelines are released. Since our 2009 accreditation visit we have worked diligently to resolve areas of partial compliance and to provide updates on areas of monitoring. All of the issues were addressed by 2012 with no further monitoring requested by ACPE. In 2011, the EC discussed changes in version 2.0 of the 2007 standards. In 2013, the leadership of the school used the Internal Program Review Feature of AAMS to document our compliance with the standards, identify areas of strength and areas for improvement and to develop an action plan to ensure 100% compliance with standards. In 2015, the EC and the faculty reviewed and provided feedback on Standards 2016 draft. These reviews and our self-study have revealed that the school is well on the way to be in full compliance with Standards 2016 by July 2016. (Q2, 9)

Assessment activities at the school of pharmacy are faculty and student-driven and are transparent. Students are educated on the value of feedback at the course and programmatic levels. Quality improvements that are made as a result of student feedback are shared with students at town hall meetings and in newsletters. Implementation of ExamSoft in several courses in the P2 and P3 years included student training to utilize individual performance reports to identify their learning gaps and encourage them to self-direct their learning to close these gaps. Students are also asked to consistently reflect on their learning and professional development through use of a Professional Pharmacy Portfolio (see Standard 15). The university makes available course evaluation data for all students. Faculty receive regular reports from the AC with updates on survey results, analysis, and recommendations, board scores, and other data. Reports are made available via the Blackboard school portal. All internal and external stakeholders have access to our [strategic plan](#) and [program quality indicators](#) via the [school's web site](#). (Q7)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|---|--|
| 4. Institutional Accreditation | |
| The institution housing the college or school, or the independent college or school, must have or, in the case of new programs, achieve full accreditation by a regional/institutional accreditation agency recognized by the U.S. Department of Education. | |

2. College or School's Self-Assessment

| | |
|---|--------------|
| The institution housing the program, or the independent college or school, has full accreditation by a regional/institutional accreditation agency recognized by the U.S. Department of Education or it is in the process of seeking accreditation within the prescribed timeframe. | Satisfactory |
| The college or school reports to ACPE, as soon as possible, any issue identified in regional/institutional accreditation actions that may have a negative impact on the quality of the professional degree program and compliance with ACPE standards. | N/A |

3. College or School's Comments on the Standard

| | |
|---|--|
| Focused Questions | |
| <input checked="" type="checkbox"/> Any deficiencies from institutional accreditation that impact or potentially impact the college, schools or program (if applicable) | |
| <input checked="" type="checkbox"/> Measures taken or proposed by the college or school to address any issues arising from institutional accreditation (if applicable) | |
| <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard | |

(School comments begin here)

The School of Pharmacy is a part of the BCHS at Northeastern University, an educational institution accredited by the [New England Association of Schools and Colleges, Inc. \(NEASC\)](#). The university's most recent comprehensive evaluation and site visit by NEASC occurred November 2-5, 2008. Accreditation was reaffirmed by the NEASC Commission on Institutions of Higher Education following the normal review process on April 16, 2009 (Appendix 4.1.1). The university's accreditation will next be reviewed in 2019. (Q1, 2)

The school was actively involved in this university-wide self-study and programmatic evaluation. It is noteworthy that the university's central administration chose John (Jack) Reynolds, dean of the school at the time, to co-chair the academic section of the 2008 NEASC self-study. Northeastern University provided NEASC with a midpoint report that included an assessment of how it was meeting its programmatic outcomes. The school provided data for this report and was recognized, both within the BCHS and across the University, as being a leader in not only establishing programmatic outcomes but also the quality of the assessment plan it had in place to ensure that outcomes were being met. (Q3)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

5. College or School and University Relationship

The college or school must be an autonomous unit within the university structure and must be led by a dean. To maintain and advance the professional degree program, the university president (or other university officials charged with final responsibility for the college or school) and the dean must collaborate to secure adequate financial, physical (teaching and research), faculty, staff, student, practice site, preceptor, library, technology, and administrative resources to meet all of the ACPE accreditation standards.

2. College or School's Self-Assessment

| | |
|---|--------------|
| The university president (or other university officials charged with final responsibility for the college or school) and the dean collaborate to secure adequate financial, physical (teaching and research), faculty, staff, student, practice site, preceptor, library, technology, and administrative resources to meet all of the ACPE accreditation standards. | Satisfactory |
| The college or school participates in the governance of the university, in accordance with its policies and procedures. | Satisfactory |
| The college or school has autonomy, within university policies and procedures and state and federal regulations, in all the following areas: <ul style="list-style-type: none"> • programmatic evaluation • definition and delivery of the curriculum • development of bylaws, policies, and procedures • student enrollment, admission and progression policies • faculty and staff recruitment, development, evaluation, remuneration, and retention | Satisfactory |
| The college or school's reporting relationship(s) is depicted in the university's organizational chart. | Satisfactory |

3. College or School's Comments on the Standard

| Focused Questions | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | How the college or school participates in the governance of the university (if applicable) |
| <input checked="" type="checkbox"/> | How the autonomy of the college or school is assured and maintained |
| <input checked="" type="checkbox"/> | How the college or school collaborates with university officials to secure adequate resources to effectively deliver the program and comply with all accreditation standards |
| <input checked="" type="checkbox"/> | How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> | Any other notable achievements, innovations or quality improvements |

(School comments begin here)

The school is governed by the bylaws of the school, the college, and the university faculty senate (Appendices 5.2.1-3). The school is represented by the dean of the college within the central university administration (Appendix

5.1.1). The college dean is actively involved in administrative planning within the university and represents all schools and other health science programs within the college. (Q1)

The university organizational chart (Appendix 5.1.1) identifies Interim BCHS Dean John (Jack) Reynolds as the administrator who reports directly to the provost on matters relating to the college and its many academic programs, including pharmacy. Acting Dean David Zgarrick is the administrative chief of the school, and he reports on issues and needs of the school to BCHS Interim Dean Reynolds (Appendix 5.1.2). This model is consistent with the college bylaws (Appendix 5.2.2, revised September 2014) section 3.1, which notes “The dean of the college is the chief academic and executive officer of the college and is the chief internal and external spokesperson for the college.” (Q1)

The college bylaws section 2.3 outlines the autonomy of the school dean, the department chairs and the school faculty with regard to: education policy; admission and student progression; faculty and staff appointments, promotion, and development; budget; and approval of educational programs in the school. Bylaws contain additional provisions in the following five areas:

1) Programmatic evaluation (see Standard 3);

2) Curriculum delivery:

Proposals for curriculum change originate with a faculty member and his/her department. They are then advanced through the school’s curriculum committee, reviewed by the school dean, and then approved by the collective school faculty. Subsequently, the college’s curriculum committees (both undergraduate and graduate) that include representation from each professional program, review each proposal and may make a recommendation(s) back to the school’s curriculum committee (BCHS bylaw 4.5.2). Substantive curricular changes are voted by college faculty and presented to university curriculum committees for approval. This process illustrates the faculty-driven nature of both the curricular development and governance processes in the school, and highlights the school’s autonomy within both the college and university. (Q2)

3) Development of bylaws and policies and procedures:

Faculty involvement in the governance of the university is outlined in the Faculty Senate Bylaws (Appendix 5.2.3). The role of the faculty senate is to provide a mechanism for faculty to actively participate in university governance, develop policies, maintain and improve academic standards, and address faculty matters with the university administration. The school’s faculty are represented on the faculty senate by elected members of the tenured and tenure-track faculty; the school currently has one representative on the faculty senate. Current university policy precludes clinical (i.e., non-tenure track) faculty from serving on the faculty senate; however, clinical faculty representation on the faculty senate is an issue that is currently being considered by the faculty senate. It is anticipated that current policies on faculty senate representation will change in the next few years. (Q1)

School of Pharmacy faculty are actively involved in service to the college and the university. College bylaws ensure that pharmacy faculty serve on all college standing committees. In addition, school faculty serve on many standing university-wide committees such as tenure appeals and administrator oversight evaluation committees. Faculty also participate in cross-college efforts in areas such as nanotechnology, biotechnology, and interdisciplinary doctoral programs. (Q1)

4) Student admission and progression policies: see Standards 17 – 19;

5) Faculty and staff recruitment, development, evaluation and retention: see Standard 26.

While the structure of the school within the university organization is not typical of the model used at many other institutions, the organization of our school as one of three schools in the college provides distinct strengths and opportunities to students, faculty, and administrators. For students, there are interprofessional (IP) student organizations that provide strong IP service-learning opportunities. College faculty jointly develop a number IP courses. For faculty, the shared college-level financial resources and expertise support the development of IP curricular and research programs (e.g., Goldstein Simulation Center, graduate programs). Interdisciplinary research is supported by a six-member college research office (BCORe) that provides pre- and post-award support and a biostatistical consultation service. Health-related community outreach activities take place via the Bouve health van and the Bouve Health Day. For administrators, the college provides support in the areas of student services, budget, development, personnel, and graduate studies and serves as the administrative liaison to university-wide offices such as the registrar, admissions, and information services. Bouve budget reallocations have facilitated the hiring of additional pharmacy faculty; some of whom required significant start-up resources including laboratory renovations and equipment purchases. Most of the newer pharmaceutical science faculty are in cross-college, interdisciplinary positions, which has resulted in an increase in research collaborations between the school and various other units outside of the college (see Standard 25). Additional clinical faculty and several staff members have also been hired (See Standard 24). (Q3, 4)

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

Several leadership transitions at the college and university level may have a direct impact on the school of pharmacy and will be carefully monitored by school’s leadership. A new provost, James C. Bean, joined the university in July 2015 and the search for the new BCHS dean is currently underway.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|--|--|
| 6. College or School and Other Administrative Relationships | |
| The college or school, with the full support of the university, must develop suitable academic, research, and other scholarly activity; practice and service relationships; collaborations; and partnerships, within and outside the university, to support and advance its mission and goals. | |

2. College or School's Self-Assessment

| | |
|--|--------------|
| The college or school, with the full support of the university, develops suitable academic, research, and other scholarly activity; practice and service relationships; collaborations; and partnerships, within and outside the university, to support and advance its mission and goals. | Satisfactory |
| Formal signed agreements that codify the nature and intent of the relationship, the legal liability of the parties, and applicable financial arrangements are in place for collaborations and partnerships. | Satisfactory |
| The relationships, collaborations, and partnerships advance the desired outcomes of the professional degree program, research and other scholarly activities, service and pharmacy practice programs. | Satisfactory |

3. College or School's Comments on the Standard

| | |
|-------------------------------------|---|
| Focused Questions | |
| <input checked="" type="checkbox"/> | The number and nature of affiliations external to the college or school |
| <input checked="" type="checkbox"/> | Details of academic research activity, partnerships and collaborations outside the college or school |
| <input checked="" type="checkbox"/> | Details of alliances that promote and facilitate interprofessional or collaborative education |
| <input checked="" type="checkbox"/> | How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> | Any other notable achievements, innovations or quality improvements |

(School comments begin here)

Consistent with the mission and the related investment in the practice of pharmacy and our commitment to the health of our community, the school maintains a wide range of practice and services relationships, educational partnerships, and research collaborations.

In the area of experiential education our faculty and students work with 120 active IPPE/Co-op (and up to 30 additional sites for occasional use) and more than 200 APPE practice partners to deliver patient care and services. The Office of Experiential Education (OEE), comprised of a director, 2 IPPE/Co-op coordinators, and 2 program managers, manages IPPE/Co-op and APPE experiences. The OEE operates in accordance with the school's approved criteria for experiential sites and educational outcomes (see Standards 14 and 28). The OEE ensures that student placements occur across a wide range of practice settings that involve contact with a variety of healthcare providers, researchers and regulatory officials (see Standard 14). (Q1)

Given that the IPPE/Co-op program involves an employer and employee relationship, formal affiliation agreements are not developed for IPPE/Co-op sites; however, the OEE communicates with IPPE preceptors before, during and

after the completion of IPPEs to ensure that they have documented whether the student has met the specific IPPE competencies (see Standard 14). (Q1)

The OEE utilizes a standard university template for APPE site affiliation agreements (Appendix 6.1.1), but also accepts site-based templates if required. All are processed through the university's Office of General Counsel for approval and signature when relevant, and filed electronically in E-value (online APPE database and management tool), where renewal dates can be tracked. Financial agreements are negotiated at the school level and are generally excluded from the main body of the agreement. Co-funded faculty agreements are negotiated annually by the chair or vice-chair of Department of Pharmacy and Health Systems Sciences (DPHSS) and are addressed via an addendum. (Q1)

Community engagement and service learning are among priorities of Northeastern University, with such activities coordinated and supported through the university's [Center of Community Service](#). Staff from the center inform faculty at school meetings about the services they provide. Given that pharmacy students seeking to engage in service learning experiences are doing so on a volunteer basis, formal affiliation agreements are not negotiated between the university and the sites of service learning, although the time frame and supervision requirements for these activities are defined. While our curriculum does not require mandatory service learning, many of our students and faculty engage in service in their communities. (Q1)

The school participates in initiatives at various centers aimed at improving the health of the community including the Center for Community Health Education, Research, and Service, and the Institute for Urban Health Research. The school is part of the university's [Stony Brook Initiative](#), a program established in 2008 that engages the university and its neighbors in activities that are designed to be mutually beneficial. Our health science mission fits well with the initiative, and several programs have already been established to promote health and improve access to quality health care. In addition, [the Edward M. Kennedy Academy for Health Careers](#), a charter high school housed on the university campus, seeks to support and attract inner-city high school students with interests in the health professions. Through this partnership, the university hosts students in campus classrooms, libraries, and laboratories and provides them with support during their high school studies (Q1).

The BCHS strives to be a national model for interprofessional (IP) health education. The school actively participates in all aspects of the college's various IP collaborative education and research programs and initiatives to prepare pharmacy students to function as key members of the IP health team. The new Bouve Arnold Goldstein Simulation Center, named in honor of a school of pharmacy alumnus and faculty member, provides an interactive learning environment that enables student pharmacists to develop the skills and knowledge to function as a part of the health care team in various clinical settings. Students are also prepared by partnerships within the university to work with health sciences students from other professions to promote professional socialization and to develop IP education competencies (See curriculum standards). Bouve's Innovations in [Oral Health initiative](#), funded by the DentaQuest Foundation, is a national leader in developing knowledge of health sciences faculty and students on the connections between oral and systemic health. Throughout their IPPE/Co-ops and APPEs, students actively participate in IP team-based practice. Some of these experiences offer students opportunities to participate in IP demonstration projects. Recent examples of IP projects available to the students included the 2014 National Interprofessional Initiative on Oral Health Summit, Harvard Medical School's Interprofessional Crimson Care Collaborative at Beth Israel Deaconess Medical Center, and the IP teaching initiative at the West Roxbury VA Medical Center (that is led by a faculty member from the school of pharmacy). (Q3, 5)

The School of Pharmacy's collaborations and partnerships directly and indirectly support the development of post-graduate training. Since our 2009 ACPE site visit we have significantly expanded the number of residents from one to four and the number of fellows from one to two (with as many as 11 fellows during Cubist partnership

2013-2015). The school currently offers three ASHP-accredited PGY-1 ambulatory care residency programs at Harbor Health Services, Inc. and the Dimock Center. In collaboration with Walgreens, the school supports a PGY1 community pharmacy residency that is located in the Joslin Diabetes Center. The school also provides a teaching certificate program that is open to all residents and fellows in the state. (Q4, 5)

The school, in affiliation with Tufts Medical Center, administers a critical care fellowship program. A recent partnership with Alnylam Pharmaceuticals provides for training a fellow starting summer 2015. A joint PharmD/ Masters in Public Health (MPH) degree program is offered through BCHS to promote IP education and post-graduate training in urban population health. A new initiative to explore the offering of a PharmD/ Masters in Business Administration (MBA) track is underway. In the DPHSS recently revised strategic plan (fall 2014) expansion of post-graduate pharmacy education remains a key priority area. (Q4, 5)

Substantial efforts are made to expose students to the many post-graduate residency, fellowship and degree programs available to them. In addition to formalized professional mentoring that is provided by faculty to students, special sessions are scheduled, frequently by pharmacy student organizations, to discuss post-graduate opportunities. Our current residents and fellows actively serve as facilitators (with mentorship by faculty) in the comprehensive disease management seminar course. This provides additional opportunities for P2 and P3 students to interact and learn more about postgraduate training. Historically 25-35% of our graduates pursued post-graduate training. For the class of 2015, 43 students (33%) were placed into ASHP accredited PGY1 programs and 5 students (4%) into fellowship programs. (Q4)

With its location in the heart of Boston, one of the largest hubs of biotechnology and health care in the world, the school has developed many research partnerships with both academia and industry. The school currently has formal research agreements with Alnylam Pharmaceuticals, Beth Israel Deaconess Medical Center, Boston VA Medical Center, Dana-Farber Cancer Institute, Harvard Medical School, Massachusetts General Hospital, Massachusetts Institute of Technology, McLean Hospital, Tufts Medical Center, and the University of Massachusetts Medical School. On a national and international basis, faculty have formalized research relationships with such institutions as Washington University in St. Louis, the University of Michigan, the University of Toronto, the University Medical Center in Utrecht, Netherlands, and the University of Puerto Rico. A more comprehensive list of faculty and research collaborations is provided in Appendix 6.2.1. (Q2)

The school hosts many scholarly symposia and seminars. For example, the Department of Pharmaceutical Sciences (DPS) holds a weekly colloquium that brings renowned researchers and speakers to campus. Also, as part of our biotechnology and nanomedicine initiatives, the school participates in and/or sponsors seminars and research expositions throughout the year (e.g., Pharmaceutical Sciences Research Expo, Center for Drug Discovery Annual Symposium). School faculty also participate in various interdisciplinary programs at the graduate level, including programs in biotechnology, nanomedicine, chemistry, immunology, health informatics, drug discovery, and imaging. The school's annual Critical Care Symposium (now in its 13th year), brings critical care pharmacists and researchers together to present their research and discuss practice advancements. The school hosted the [2014 International Social Pharmacy Workshop](#) and will host the [20th International Symposium on Microencapsulation](#) in October 2015. (Q2)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

7. College or School Organization and Governance

The college or school must be organized and staffed to facilitate the accomplishment of its mission and goals. The college or school administration must have defined lines of authority and responsibility, foster organizational unit development and collegiality, and allocate resources appropriately. The college or school must have published, updated governance documents, such as bylaws and policies and procedures, which have been generated by faculty consensus under the leadership of the dean in accordance with university regulations.

2. College or School's Self-Assessment

| | |
|---|--------------|
| The college or school is organized and staffed to facilitate the accomplishment of its mission and goals. | Satisfactory |
| The college or school administrative leaders working with the dean have credentials and experience that prepare them for their respective roles. | Satisfactory |
| The college or school administration has defined lines of authority and responsibility, fosters organizational unit development and collegiality, and allocates resources appropriately. | Satisfactory |
| The college or school has established mechanisms to foster unity of purpose, effective communication, and collaboration among administrators. | Satisfactory |
| The college or school's administrative leaders - individually or collectively - are developing and evaluating interprofessional education and practice opportunities | Satisfactory |
| The college or school has published, updated governance documents, such as bylaws and policies and procedures, which have been generated by faculty consensus under the leadership of the dean in accordance with university regulations. | Satisfactory |
| If the college or school organizes its faculty into subunits, such as departments or divisions, subunit goals and objectives align with the mission and goals of the college or school. | Satisfactory |
| The effectiveness of each organizational unit is evaluated on the basis of its goals and objectives and its contribution to the professional program. | Satisfactory |
| Programs are in place to hone leadership and management skills of college or school administrators, including department/division chairs (if applicable). | Satisfactory |
| Faculty meetings and committees established to address key components of the mission and goals are part of the system of governance of the college or school. | Satisfactory |
| Where appropriate, faculty committees include staff, students, preceptors, alumni, and pharmacy practitioners. | Satisfactory |
| Minutes of faculty meetings and committee actions are maintained and communicated to appropriate parties. | Satisfactory |
| The college or school has policies and procedures that address potential systems failures, whether such failures are technical, administrative, or curricular. | Satisfactory |
| Contingency planning includes creating secure backups of critical applications and systems data, providing mechanisms for making up lost course work and academic | Satisfactory |

| | |
|---|--------------|
| credit, securing alternate means for communication and information delivery, and creating exit strategies to protect students if part or all of a program loses viability. | |
| The college or school maintains an effective system of communication with internal and external stakeholders. | Satisfactory |
| Alternate program pathways are integrated into the college or school's regular administrative structures, policies, and procedures (including planning, oversight, and evaluation), and are supervised by an administrator who is part of the college or school. | Satisfactory |
| The college or school ensures that workflow and communication among administration, faculty, staff, preceptors, and students engaged in distance-learning activities are maintained. | N/A |
| The college or school retains ultimate responsibility for the academic quality and integrity of distance-learning activities and the achievement of expected and unexpected outcomes, regardless of any contractual arrangements, partnerships, or consortia for educational or technical services. | N/A |

3. College or School's Comments on the Standard

| Focused Questions |
|---|
| <input checked="" type="checkbox"/> A description of the college or school's organization and administration and the process for ongoing evaluation of the effectiveness of each operational unit |
| <input checked="" type="checkbox"/> A self-assessment of how well the organizational structure and systems of communication and collaboration are serving the program and supporting the achievement of the mission and goals |
| <input checked="" type="checkbox"/> How college or school bylaws, policies and procedures are developed and modified |
| <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> How the college or school's administrative leaders are developing and evaluating interprofessional education and practice opportunities |
| <input checked="" type="checkbox"/> How the credentials and experience of college or school administrative leaders working with the dean have prepared them for their respective roles. |
| <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements |
| <input checked="" type="checkbox"/> Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms |

(School comments begin here)

The school's organizational structure (Appendix 7.1.1) places the dean as the chief academic and administrative officer for the school. The Executive Committee (EC), includes the assistant director of operations, assistant dean for academic affairs, two department chairs and five directors for: assessment, undergraduate and professional programs, the OEE, graduate programs, and continuing pharmacy education (see job descriptions as Appendices 7.2.1-7.2.9). One faculty from each department will serve on the EC beginning fall 2015. (Q1)

Six staff members (5.67 FTE) support the two departments with two staff members supporting the OEE and one staff supporting graduate programs. The assistant director of operations supervises the five staff and supports the Office of the Dean. In addition, many staff are hired through grants to support research programs and centers

associated with the school. Faculty satisfaction with staff support has improved from 36% in 2009 to 61% in 2014; however, the comparison to the national data reveals that there is room for improvement. (Q1,8)

In August 2014, the Provost asked Jack Reynolds to serve as Interim Vice Provost for Undergraduate Education for the 2014-15 academic year. David Zgarrick was then appointed as Acting Dean of the school and John Devlin as Acting Chair of the DPHSS. In May 2015 BCHS dean Terry Fulmer left the university, at which point Dr. Reynolds was appointed as Interim Dean of BCHS. The school remains under the leadership of Acting Dean Zgarrick during 2015-16 year with Michael Gonyeau assuming the role of Acting Chair of DPHSS. Though Dean Reynolds' direct involvement in the day-to-day matters of the school has decreased since September 2014, he remains fully committed to the success of the school and its students. He has maintained involvement in development/advancement, budgeting, search for a new chair of DPS and self-study activities. (Q4)

School administrative leaders working with the dean have the credentials and experience that prepare them for their respective roles. Mansoor Amiji is professor of pharmaceutical sciences and serves as chair of the DPS. The university is currently completing a search for a replacement for Dr. Amiji who is planning to return fully to his teaching and research program in 2016. Dr. Amiji is recognized internationally for his work in nanotechnology and is an active researcher in the university's Center for Pharmaceutical Biotechnology and Nanotechnology. All faculty serving or having recently served in acting roles (i.e., Drs. Zgarrick, Devlin, Gonyeau) are experienced educators, clinicians, and researchers with extensive leadership experience. (Q6)

Since the 2009 visit by ACPE, the most notable administrative changes within the school have been the appointment of Margarita DiVall as Director of Assessment, Michael Gonyeau as Director of Undergraduate and Professional Programs, Jenny Van Amburgh as Assistant Dean for Academic Affairs, and Jennifer Kirwin as a vice-chair in the DPHSS. Each has completed AACUP's Academic Leadership Fellows Program (ALFP). Dr. DiVall and Dr. Gonyeau also recently received a Masters in Education and continue to shape the academic and assessment programs through their capable leadership. Debra Copeland, Director of the OEE, has served in this role since 2004. Under her leadership the office has integrated two experienced IPPE/Co-op coordinators and two professional staff program managers. (Q6, 7)

The administrative team functions well, with unit goals developed and applied in cooperation with faculty and department chairs, under the direction of the school dean. Administrative staff members carry out functions that enable the administrative team and faculty to focus on planning, organizing and achieving unit goals and strategic plans. To ensure the success of students admitted in alternate pathway tracks, Michael Conley has been assigned as an advisor to direct-entry graduate PharmD students and Shan Mohammed (BCHS) and Judy Barr have been identified as co-advisors for students in the PharmD/MPH track. Results from AACUP faculty surveys demonstrate that most faculty agree that school administrators have clearly defined responsibilities (74% in 2009 to 93% in 2014) and function as a unified team (76% in 2009 to 87% in 2014). (Q1, 7, 8)

The dean's administrative team comprises the EC, which meets twice a month. The school and each of its two departments have monthly faculty meetings to facilitate communication and decision making between faculty and administration. Policy recommendations are brought forward to the faculty at monthly school meetings for discussion, review and approval. Written minutes of the proceedings of all school and department meetings and most committee meetings are approved by and distributed to faculty. With the exception of the EC (that is appointed by the school dean with faculty representatives selected by each department) all committee appointments are assigned by the chairs after faculty have the opportunity to provide their specific committee interests. Annual committee reports and departmental productivity metrics are used to evaluate the achievement of mission, goals, and the strategic plan (see Standard 3). In 2014, more than 80% of faculty agreed or strongly agreed that the school administration is aware and responsive to their needs/problems. (Q2, 4, 8)

Pharmacy Student Government Organization (PSGO) works closely with the administration and faculty to ensure that communication among students and between faculty and students is regular and robust. The PSGO represents 11 professional student organizations within the school and class representatives for each student cohort. To facilitate communication the PSGO has a common calendar and sends out weekly notification of news, events, and other important matters. Additionally, the school publishes two annual electronic newsletters to communicate with current students, alumni and friends. The 2014 AACP student survey revealed that over 95% of students agree that the school provides timely communication regarding important events. (Q2, 8)

Faculty and staff are involved in governance and planning and actively articulate the school's mission. Faculty regularly review and update the school's bylaws. Changes to bylaws are facilitated through the Bylaws Committee and approved by faculty vote. School bylaws explicitly detail standing committees, their composition (including faculty, students, and alumni) and charges that address key components of school's mission and goals (Appendix 7.6.1). The school dean assigns supplemental charges to the standing committees each year based on the strategic plan and other timely initiatives (example, Appendix 7.3.1 and 7.3.2), and committees can further broaden their scopes as needs and interests arise, but they must do so in consultation with the dean. (Q3)

BCHS has a long-standing commitment to interprofessional (IP) education. School faculty actively participate in the standing BCBS IP committee that is charged to propose policies and procedures to ensure faculty/unit equity for IP efforts and activities and to review and evaluate proposals for IP courses and programs. Notable achievements since the 2009 self-study include the 2012 launch of a new Interprofessional Research Education and Practice (iPREP) initiative and the opening of the Goldstein Simulation Center (Appendices 7.8.1-3). Several college-wide retreats engaged faculty and students in the iPREP and identified four strategic foci: drug discovery and delivery, healthy aging (lifespan), self-care/self-management, and urban population health. A new college-level Interprofessional Research, Innovate, Serve & Educate (iRISE) student organization was established (Appendix 7.8.4). The school's strategic plan continues to emphasize the importance of furthering IP collaboration, research and education. Many of our faculty and students have recently published or presented the results of their IP initiatives. (Q5,8)

The university manages critical information such as student records and other vital information in a safe and secure environment. The university's Office of Information Security (OIS) manages a disaster recovery plan including emergency procedures in case of any system failure. All information can be found on the [OIS web site](#). The OIS provides the following services: virus protection, information on safe computing and online presence, information regarding appropriate use and downloading of copyrighted materials, network security services, computer security incident response, information security management and assessment, and data sanitization and destruction. (Q4)

In addition to the survey data mentioned above, we have identified some areas of concern and future action. On the 2014 AACP faculty survey, 35% of faculty disagreed or strongly disagreed (more so than the national comparison) that their performance criteria are explicit and clear. Faculty agreement that promotion and tenure policies and procedures are consistently applied across the school improved from 50% in 2009 to 65% on 2014; however, agreement remains below the national comparison. Negative tenure decisions are thought to be contributing to the dissatisfaction of faculty with the evaluation process. Preceptor survey results reveal that improvements are needed in updating the preceptors regarding school policies on harassment and discrimination. These data have been discussed by the assessment committee, the OEE and EC. Remaining data from the AACP surveys reveal stability of satisfaction over time, or similarities with national comparison data (Q8).

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

The school leadership transitions will be carefully monitored and ACPE will be informed as changes occur. Efforts are underway to improve preceptor understanding of Northeastern University policies on harassment and discrimination. The OEE has visited many practice sites during the 2014-2015 academic year to review existing policies and procedures. Additionally, they plan to send out regular communications and reminders with this information. Both departments have recently expanded their mentoring programs to assist faculty in their efforts to receive successful promotion and tenure. AACP faculty and preceptor surveys are planned for 2016.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

8. Qualifications and Responsibilities of the Dean

The dean must be qualified to provide leadership in pharmacy professional education and practice, including research, scholarly activities, and service. The dean must be the chief administrative and academic officer and have direct access to the university president or other university officials delegated with final responsibility for the college or school. The dean must unite and inspire administrators, faculty, staff, preceptors, and students toward achievement of the mission and goals. The dean is responsible for ensuring that all accreditation requirements of the ACPE are met, including the timely submission of all reports and notices of planning for substantive changes.

2. College or School's Self-Assessment

| | |
|--|--------------|
| The dean is qualified to provide leadership in pharmacy professional education and practice, including research, scholarly activities, and service. | Satisfactory |
| The dean is the chief administrative and academic officer and has direct access to the university president or other university officials delegated with final responsibility for the college or school. | Satisfactory |
| The dean unites and inspires administrators, faculty, staff, preceptors, and students to achieve the mission and goals. | Satisfactory |
| The dean is responsible for ensuring that all accreditation requirements of the ACPE are met, including the timely submission of all reports and plans for substantive changes. | Satisfactory |
| The dean has the assistance and full support of the administrative leaders of the college or school's organizational units and adequate staff support. In instances where the dean is assigned other substantial administrative responsibilities within the university, arrangements for additional administrative support to the office of the dean are made to ensure effective administration of the affairs of the college or school. | Satisfactory |
| The dean is responsible for compliance with ACPE's accreditation standards, policies, and procedures. In the event that remedial action is required to bring the college or school into compliance, the dean takes the necessary steps to ensure compliance in a timely and efficient manner. | Satisfactory |
| The qualifications and characteristics of the dean relate well to those called for in the standards, i.e.: <ul style="list-style-type: none"> • a degree in pharmacy or a strong understanding of contemporary pharmacy and health care systems • a scholarly concern for the profession, generally, and for the diverse aspects of pharmacy science and practice, in particular • publications in pharmacy and biomedical literature in areas relevant to the mission and goals of the college or school • appropriate leadership and managerial skills and experience in the academic (preferred) or health care sectors • recognition for career accomplishments by pharmacy or other health profession educators, researchers, and practitioners • strong written and interpersonal communication skills | Satisfactory |

| | |
|---|---------------------|
| <ul style="list-style-type: none"> • experience with and a commitment to systematic planning, assessment, and continuous programmatic improvement • a thorough understanding of and a commitment to teaching and student learning, including pedagogy • evidence of a commitment to the advancement of research and scholarship • the ability and willingness to provide assertive advocacy on behalf of the college or school to the university administration • the ability and willingness to provide assertive advocacy on behalf of the college or school and the profession of pharmacy in community, state, and national health care initiatives • a record of and willingness to continue active participation in the affairs of pharmacy's professional and scientific societies | |
| <p>The dean has the authority and accepts ultimate responsibility for ensuring:</p> <ul style="list-style-type: none"> • development, articulation, and implementation of the mission and goals • acceptance of the mission and goals by the stakeholders • development, implementation, evaluation, and enhancement of the educational, research, service, and pharmacy practice programs • collaborative efforts to develop, implement, evaluate, and enhance interprofessional education, practice, service, and research programs • development and progress of the strategic plan and the evaluation plan, including assessment of outcomes • recruitment, development, remuneration, and retention of competent faculty and staff • initiation, implementation, and management of programs for the recruitment and admission of qualified students • establishment and implementation of standards for academic performance and progression • resource acquisition and mission-based allocation • continuous enhancement of the visibility of the college or school on campus and to external stakeholders • the effective use of resources to meet the needs and mission of the college or school | <p>Satisfactory</p> |
| <p>The dean has ensured that ACPE has been notified in advance of the implementation of any substantive change, allowing sufficient time for evaluation of compliance with standards or the need for additional monitoring.</p> | <p>Satisfactory</p> |

3. College or School's Comments on the Standard

| |
|--|
| <p>Focused Questions</p> |
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> How the dean provides leadership for the college or school and program and how the qualifications and characteristics of the dean support the achievement of the mission and goals <input checked="" type="checkbox"/> The authority and responsibility of the dean to ensure all expectations of the standard and guidelines are achieved <input checked="" type="checkbox"/> How the dean interacts with and is supported by the other administrative leaders in the college or school |

- How the dean is providing leadership to the academy at large, and advancing the pharmacy education enterprise on local, regional, and national levels.
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The dean of the school is the chief academic and administrative officer of the School of Pharmacy. The dean reports directly to the dean of the BCHS and serves on the senior leadership team of the college. At the school level, the dean is responsible for providing vision and leadership for the faculty, staff and students with a focus on producing excellence in education, research and service. The dean has specific responsibilities for the planning, development, coordination and management of the school's academic and research programs, budget, personnel, admissions, unit goals and strategic priorities. The dean is also charged with enhancing the quality and reputation of the school through interactions with internal and external constituencies. The dean's job description can be found in Appendix 8.2.1. (Q1, 2)

Upon the departure of Dean Daniel Robinson in 2006, Jack Reynolds served as interim dean for one year and was then selected to serve as the dean of the school in 2007. Dr. Reynolds's curriculum vitae is listed in Appendix 8.1.1. In September 2014 Dr. Reynolds assumed the role of Interim Vice Provost for Undergraduate Education at which point David Zgarrick, then the Chair of DPHSS, was appointed as Acting Dean of the school. As of May 2015 Dr. Reynolds was asked to serve as Interim Dean of BCHS for the 2015-2016 academic year, with the School of Pharmacy remaining under the leadership of Acting Dean Zgarrick. Dr. Zgarrick's curriculum vitae is listed in Appendix 8.1.2. During the period of the leadership transition Drs. Reynolds and Zgarrick have maintained open lines of communication to ensure smooth day-to-day operation of the school and continued work on our strategic initiatives. (Q1)

John (Jack) Reynolds holds BS in Pharmacy and Doctor of Pharmacy degrees and has completed a pharmacy practice residency. Dr. Reynolds spent five years in the School of Pharmacy at St. John's University where he received tenure and was promoted to clinical associate professor. Following two years in a practice management position at the University of Massachusetts Medical Center he joined the Massachusetts College of Pharmacy and Health Sciences-Boston where he served as department chair and moved to the position of division director and then dean of the School of Pharmacy, Boston Campus. He was promoted to the rank of professor in 2000. In 2002, he accepted the position of chair of the Department of Pharmacy Practice at Northeastern University. (Q4)

Dr. Reynolds has been invited to deliver a number of presentations at regional and national academic pharmacy meetings and schools of pharmacy. His scholarly efforts have resulted in peer-reviewed publications, poster presentations, and book chapters. In 2013 Dr. Reynolds was the recipient of the Bowel of Hygeia award from the Massachusetts Pharmacists Association. He was the recipient of both the Distinguished Alumni Award and the Hugh C. Muldoon Memorial Lecture Award from Duquesne University. Dr. Reynolds service to the profession is extensive. He has served as the national Rho Chi president, participated on numerous AACP committees and task forces and on evaluation teams for the ACPE. (Q4)

From 2009-2014, Dean Reynolds boosted the profile of the school across the country and advocated for resources to grow the faculty and physical facilities for the school. Both the number and quality of faculty in the school has increased over the past 8 years (see Standards 24 and 25). Internationally recognized researchers in the areas of Northeastern University / Bouve College of Health Sciences, School of Pharmacy

outcomes research, nanotechnology, and neuropharmacology have joined the faculty. In 2012, Dean Reynolds led a successful relocation of the school from Mugar Hall to 140 The Fenway. This facility, considered by many to be a great improvement over the facilities that existed in Mugar, contains the faculty offices and labs needed to drive the school's academic success while providing the school with a beautiful and functional space to interact with the outside community (see Standard 27). Dean Reynolds is actively committed to strategic planning (see Standard 2). In response to a decrease in admission of students in the traditional pathway, Dean Reynolds led the development of the direct-entry post-baccalaureate pathway to sustain the quality of the students in the PharmD program and manage enrollments effectively. In 2012, the school celebrated its 50th Anniversary and Dean Reynolds led a large fundraising campaign that facilitated a number of student scholarships and the committee that produced a series of celebratory events over the year. (Q5, 6).

Outside of the School of Pharmacy, Dr. Reynolds has provided substantial service to the university including serving at the Interim Vice Provost for Undergraduate Education during the 2014-15 academic year, Interim Dean for BCHS for 2015-2016, Chair of the Committee of Associate Deans for Undergraduate Education, a leadership role for the 2008-09 NEASC self-study, Chair of the University Undergraduate Curriculum Committee, co-chair of the University Retention Committee, Faculty Senate, co-chair of the BCHS Strategic Planning Committee and many senior search committees. (Q4).

Acting Dean David Zgarrick holds a BS in Pharmacy from University of Wisconsin-Madison and a MS and PhD in Pharmacy from the Ohio State University. Dr. Zgarrick began his academic career at Midwestern University-Chicago College of Pharmacy where he was tenured and promoted to full professor and served as a vice-chair for the Department of Pharmacy Practice. In 2007, Dr. Zgarrick assumed the position of John R. Ellis Distinguished Chair for the Department of Pharmacy Practice at Drake University College of Pharmacy and Health Sciences. He came to Northeastern in 2009 and served as the Chair of DPHSS until his appointment as Acting Dean in 2014. (Q4)

Dr. Zgarrick is an accomplished educator and scholar. He continues to teach a Pharmacy Care Management course in the PharmD program. Since his arrival to Northeastern he has worked collaboratively to bring over \$2.5 million in funding for both research and expansion of our post-graduate programs. He has an impressive record of peer reviewed and invited publications and presentations both nationally and internationally. His commitment to the profession is evident through his continued service to AACP, ACPE and APhA, including service to numerous committees and his leadership as the chair of AACP's Council of Faculties and service on their Board of Directors. (Q4)

As the school faculty and leader, Dr. Zgarrick has served on the University Faculty Senate and several university committees, the BCHS Dean's Leadership Team, and various college committees. Outside of the school, he has served on the planning board for School of Law Health Policy Conference and as a member of the D'Amore-McKim School of Business Center for Health Policy and Healthcare Research. (Q4)

The dean of the school of pharmacy is supported by the Executive Committee, which consists of two department chairs; an assistant dean for academic affairs; directors of assessment, the office of experiential education, undergraduate education and professional programs, graduate education, continuous professional development; the assistant director of operations; and as of fall 2015, two faculty representatives (one selected by each department). This group meets regularly to consider and resolve a variety of operational, academic, and development issues. Additionally, the school dean serves as associate dean in the BCHS and has been actively involved in discussions and initiatives focused on boosting interprofessional educational such as curricular revision, the development of the Goldstein Stimulation Center and the Bouve College Health Van. (Q3)

AACP faculty survey results between 2009-2014 reveal that the vast majority of faculty are in agreement that the dean of the school has clearly defined responsibilities, that the school's administrator's function as a unified team, and that the dean is an effective leader of the school. The faculty review of Dean Reynolds that was administered by the University Senate in 2011 was very positive (Q6, 7).

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| |
|---|
| 9. The Goal of the Curriculum |
| <p>The college or school's professional degree program curriculum must prepare graduates with the professional competencies to enter pharmacy practice in any setting to ensure optimal medication therapy outcomes and patient safety, satisfy the educational requirements for licensure as a pharmacist, and meet the requirements of the university for the degree.</p> <p>The curriculum must develop in graduates knowledge that meets the criteria of good science; professional skills, attitudes, and values; and the ability to integrate and apply learning to both the present practice of pharmacy and the advancement of the profession. Graduates must be able to identify and implement needed changes in pharmacy practice and health care delivery.</p> |

2. College or School's Self-Assessment

| | |
|---|--------------|
| The curriculum prepares graduates with the professional competencies to enter pharmacy practice in any setting to ensure optimal medication therapy outcomes and patient safety, satisfies the educational requirements for licensure as a pharmacist, and meets the requirements of the university for the degree. | Satisfactory |
| The curriculum develops in graduates knowledge that meets the criteria of good science; professional skills, attitudes, and values; and the ability to integrate and apply learning to both the present practice of pharmacy and the advancement of the profession. | Satisfactory |
| The curriculum fosters the development of students as leaders and agents of change. The curriculum helps students embrace the moral purpose that underpins the profession and develop the ability to use tools and strategies needed to affect positive change in pharmacy practice and health care delivery | Satisfactory |
| In developing knowledge, skills, attitudes, and values in students, the college or school ensures that the curriculum fosters the development of professional judgment and a commitment to uphold ethical standards and abide by practice regulations. | Satisfactory |
| The college or school ensures that the curriculum addresses patient safety, cultural competence, health literacy, health care disparities, and competencies needed to work as a member of or on an interprofessional team. | Satisfactory |
| Curricular content, instructional processes, course delivery, and experiential education are documented, aligned, and integrated where appropriate. | Satisfactory |

3. College or School's Comments on the Standard

| |
|--|
| Focused Questions |
| <p><input checked="" type="checkbox"/> A description of the college or school's curricular philosophy</p> <p><input checked="" type="checkbox"/> A description of how the curriculum fosters the development of students as leaders and agents of change and helps students to embrace the moral purpose that underpins the profession and develop the ability to use tools and strategies needed to affect positive change in pharmacy practice and health care delivery</p> <p><input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard</p> |

- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The goal of the PharmD curriculum is to prepare graduates for the present and future practice of pharmacy and the advancement of the profession by providing a strong foundation in science and practice that stresses integration and application. Graduates are prepared to deliver patient-centered care, provide safe and effective medication therapy management, work as members of interprofessional teams, and make significant contributions to contemporary health care environments. (Q1)

Our curricular philosophy is grounded in a desire to prepare students with the fundamental knowledge, skills and attitudes for a variety of careers in pharmacy practice and the pharmaceutical sciences. We apply didactic, experiential and co-curricular activities throughout the professional program that emphasize active learning and reflection. We encourage students to personalize their education through thoughtful selection of experiential sites, elective courses and capstone projects. This philosophy was developed by the curriculum committee and approved by the faculty. (Q1)

This curricular philosophy fits within our school's mission and the university's mission to educate students for a life of fulfillment and accomplishment, and to create and translate knowledge to meet global and societal needs. (Q2)

The curriculum fosters the development of students as leaders and agents of change through many activities. The combination of early IPPE/Co-op experiences, APPEs, and the integration with their campus-based activities help mature students professionally and give them exposure to different areas of practice. Students are urged to reflect on how advancements in practice can have an impact on patient care. Numerous professional electives (see Standard 13) and extracurricular opportunities exist that develop professional leadership and advocacy skills to promote healthcare improvement. Our capstone requirement also facilitates leadership by allowing students to work alone or in groups to design and implement projects (see Standard 13). We also cultivate leadership by developing reflective practitioners beginning early in the curriculum through a co-curricular professional portfolio requirement. The portfolio requires annual meetings with advisors and provides for targeted reflections on practice experiences and participation in professional activities (see Standard 15). Research opportunities also allow students to take ownership for their roles in projects and help develop project leadership skills. (Q2)

We have developed a dynamic curriculum that integrates the basic and biomedical sciences with applied pharmaceutical and clinical sciences, and the classroom with real-world experience. Our curriculum is strong in three ways, representing key strengths of our program:

- First, the majority of our PharmD students enter the program after completing 2 years of pre-pharmacy curriculum at Northeastern University. These students state their interest in the pharmacy major on entry to the university. Many consider this as a strength since students come to the university with a pre-commitment to the profession based on exposure during their pre-collegiate education and experiences. Additionally we are able to influence their pre-pharmacy curriculum and as well as nurture and socialize them early in their pursuit of becoming pharmacists. Students who meet P1 progression requirements (see Standard 17) become PharmD students after completing 4 semesters of pre-pharmacy curriculum. (Q2)
- Second, our signature IPPE/Co-op program, which is unique, integrates a minimum of two (most students complete three) structured, full-time, early education experiences throughout the curriculum (further described in Standard 14). These 4-month IPPEs provide students with learning and practice experiences in community, hospital, and elective pharmacy settings. The program involves monitoring of student outcomes and student/

preceptor feedback. The university's focus on using experiential education to integrate the classroom with the real world supports our school's experiential efforts. Established practice partnerships provide countless opportunities for students to explore their paths, discover their passions, and grow intellectually. (Q3, 4)

- Third, a strength of our program is our growing national reputation in research, both scholarship of teaching and learning and cutting edge research in pharmaceutical, clinical, and health systems sciences (see Standards 11 and 26). Such research expertise has been linked to the classroom teaching of basic sciences, health systems sciences, and clinical courses. Our faculty is continually using and evaluating innovative educational strategies and technologies to promote student engagement in and outside the classroom and to assess student learning. Many faculty members offer students research opportunities through research IPPE/Co-ops, research APPEs, and directed study research and capstone projects. Our pharmacy students take advantage of the many opportunities to participate in research with faculty (See Appendix 9.9.1) with an increasing number of posters and publications by our faculty involving student co-authors. (Q4)

Our curriculum has similarities to that of other pharmacy programs. All students take required coursework in the biological sciences and liberal arts, expanding their sense of diversity and the human experience as part of their pre-PharmD curriculum. In the P1 and P2 years, students gain an understanding of how medications are processed and how they affect healthy and unhealthy biological systems (pharmacology/medicinal chemistry, pharmaceuticals, biopharmacokinetics, and immunology). Students are also introduced to the basics of scientific and analytical thinking in their science and research methods courses. In the P2 and P3 years, students take practice-related courses that develop therapeutic content, clinical approaches, and provide context for their work as practitioners. The P4 year consists of six 6-week advanced experiential rotations in a variety of practice settings including required general medicine, health-systems, ambulatory and community settings (Appendix 9.2.1). (Q3)

The curriculum enables students to achieve ability-based outcomes (ABOs) as documented by periodic assessment and mapping activities (Appendices 9.1.1 and 9.1.2). In 2014, the school decided to replace the existing ABO statements (Appendix 9.1.2) with the 15 educational outcomes statements approved by the Center for the Advancement of Pharmacy Education (CAPE) (see Appendix 9.1.1 and Standard 12). The CAPE outcomes now serve as our program's ABOs and as the basis for all assessment activities. Curricular mapping and gap analyses have been performed since adopting CAPE outcomes (see Standard 12). (Q3)

The school's curriculum committee (CC) monitors the extent to which the curriculum addresses important themes such as patient safety, cultural/ethnic appreciation, health literacy, health care disparities and interprofessional competencies. Our systematic curricular review process provides ongoing review of syllabi and teaching methodologies to ensure content and processes are current, integrated, and flow across the curriculum. This curricular review process and feedback from our current students and alumni have guided the development of several recent curricular changes (see Standard 10). Our increased integration and modernization of the curriculum is intended to improve the sustainability of student learning and the flexibility with which students can take electives and experience more manageable course loads. (Q3)

Results of the 2014 alumni survey indicate that 93% of the respondents strongly agree or agree that when they were students they knew what the program outcomes were. Results of the 2014 graduating student survey indicate that 95% of the respondents reported that they strongly agree or agree that the NU program provides opportunities to develop professional attitudes, ethics, and behaviors. These results are consistent with our previous data and national and peer comparison data. (Q5)

Over the past five years NAPLEX results for our school were similar or above the national pass rates, providing evidence that our program is achieving our desired outcomes (See Appendices 9.5.1-9.8.1). MPJE pass rates over the past five years have been slightly below the national averages (See Appendix 9.4.1). Our 2014 NAPLEX

annualized pass rate was 93.1% (national 94.35%), which is the lowest pass rate in the past five years for our school (Appendices 9.5.1, 9.6.1, 9.7.1, 9.8.1). These data, as well as lower than national MJPE results, have prompted conversations in the school's executive committee, CC and assessment committee (AC). The curriculum for the graduating class of 2014 was the same as for the previous five cohorts (i.e., new curriculum has not yet been implemented for this class). Evaluation of academic performance by the graduates who did not pass the NAPLEX exam revealed a history of academic deficiencies and problems with the pre-pharmacy interview (which was not high-stakes for this cohort of students). We will continue to carefully monitor NAPLEX and MPJE rates. (See Standard 15). Additionally, we are evaluating novel delivery methods for jurisprudence instruction (including a hybrid course or a course later in the curriculum) and improvements in NAPLEX preparation. (Q5)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|---|--|
| 10. Curricular Development, Delivery, and Improvement. | |
| <p>The college or school's faculty must be responsible for the development, organization, delivery, and improvement of the curriculum. The curriculum must define the expected outcomes and be developed, with attention to sequencing and integration of content and the selection of teaching and learning methods and assessments. All curricular pathways must have both required and elective courses and experiences and must effectively facilitate student development and achievement of the professional competencies.</p> <p>The curriculum for the professional portion of the degree program must be a minimum of four academic years or the equivalent number of hours or credits. The curriculum must include didactic course work to provide the desired scientific foundation, introductory pharmacy practice experiences (not less than 5% of the curricular length) and advanced pharmacy practice experiences (not less than 25% of the curricular length).</p> | |

2. College or School's Self-Assessment

| | |
|---|--------------|
| The college or school's faculty is responsible for the development, organization, delivery, and improvement of the curriculum. | Satisfactory |
| The curriculum defines the expected outcomes and is developed with attention to sequencing and integration of content and the selection of teaching and learning methods and assessments. | Satisfactory |
| All curricular pathways have both required and elective courses and experiences and effectively facilitate student development and achievement of the professional competencies. | Satisfactory |
| The curriculum for the professional portion of the degree program is a minimum of four academic years or the equivalent number of hours or credits. | Satisfactory |
| Introductory pharmacy practice experiences are not less than 5% (300 hours) of the curricular length. | Satisfactory |
| The advanced pharmacy practice experiences are not less than 25% (1440 hours) of the curricular length. | Satisfactory |
| On behalf of the faculty, the Curriculum Committee (or equivalent) manages curricular development, evaluation, and improvement to ensure that the curriculum is consistent with the collective vision of the faculty and administration. | Satisfactory |
| Learning outcomes for curricular courses and pharmacy practice experiences are mapped to the desired competencies and gaps and inappropriate redundancies identified inform curricular revision. | Satisfactory |
| Curricular design allows for students to be challenged with increasing rigor and expectations as they matriculate through the program to achieve the desired competencies. The curriculum design enables students to integrate and apply all competency areas needed for the delivery of holistic patient care. | Satisfactory |
| The Curriculum Committee (or equivalent) is constituted to provide balanced representation from all departments, divisions, and/or disciplines within the college or school. | Satisfactory |

| | |
|--|--------------|
| Faculty members are aware of the content, competencies, and learning outcomes for each other's courses and use that information to optimize these elements within their own courses. | Satisfactory |
| The curriculum complies with university policies and procedures and the accreditation standards. | Satisfactory |
| Student representation and feedback are integral parts of curricular development and improvement. | Satisfactory |
| The Curriculum Committee (or equivalent) has adequate resources to serve as the central body for the management of orderly and systematic reviews of curricular structure, content, process, and outcomes, based on assessment data. | Satisfactory |

3. College or School's Comments on the Standard

| Focused Questions |
|--|
| <input checked="" type="checkbox"/> A description of the curricular structure, including a description of the elective courses and experiences available to students |
| <input checked="" type="checkbox"/> How both the didactic and experiential components comply with Standards for core curriculum and IPPE and APPEs in regard to percentage of curricular length |
| <input checked="" type="checkbox"/> Any nontraditional pathway(s) leading to the Doctor of Pharmacy degree (if applicable) |
| <input checked="" type="checkbox"/> Data that link teaching-and-learning methods with curricular outcomes |
| <input checked="" type="checkbox"/> How the results of curricular assessments are used to improve the curriculum |
| <input checked="" type="checkbox"/> How the components and contents of the curriculum are linked to the expected competencies and outcomes through curricular mapping and other techniques and how gaps in competency development or inappropriate redundancies identified inform curricular revision |
| <input checked="" type="checkbox"/> How the curricular design allows for students to be challenged with increasing rigor and expectations as they matriculate through the program to achieve the desired competencies and how the curriculum design enables students to integrate and apply all competency areas needed for the delivery of holistic patient care. |
| <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements |
| <input checked="" type="checkbox"/> Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms |

(School comments begin here)

The pharmacy curriculum consists of 72 credit hours in the two pre-professional years (pre-Ph1 and pre-Ph2) and 132 credit hours in the four professional years (P1-P4) (Appendix 10.3.1). Of the 204 credits in the program, 36 are elective, 154 are didactic and 36 are APPEs. Students complete 2 or 3 IPPEs via participation in the university’s signature Co-op program. Students also complete the [NU Core requirement](#) including a 4-credit capstone project. During P1-P3 years, students must take at least 10 credit hours of elective coursework including at least 2 credit hours of designated professional elective credit (see Appendix 10.3.2). All course credits are based on the university standard (one credit hour is 50 minutes in class or three hours in lab per week). (Q1, 2)

Faculty have the ultimate responsibility for the development, organization, delivery, assessment and improvement of the curriculum, as governed by the school's curriculum committee (CC). All faculty who responded to 2014 AACCP faculty survey agreed/strongly agreed that they are consulted on curricular matters. The CC consists of 11 voting members: the chairs of the two departments, 2 faculty from each department, an IPPE/Co-op coordinator, a representative from the OEE, a student representative, and an NU alumnus. The director of undergraduate and professional programs (voting) and the director of assessment (non-voting) are ex-officio members. The school dean and a representative from the Office of Student Services (OSS) are non-voting members of the committee (Appendix 10.1.1). In addition to yearly charges, the CC also reviews existing courses when issues arise, in the event of substantive course change, or once per 6-year cycle as outlined in the process for systematic course review (Appendix 10.3.3). The committee is charged by the dean, led by a faculty chair, and reports on its work to faculty at monthly faculty meetings (standing agenda item). Recommendations made by the committee are brought to the entire faculty for discussion and vote prior to implementation. Charges and accomplishments of the committee for the 2014-2015 year are detailed in Appendix 10.2.1. (Q8, 10)

As part of the IPPE/Co-op program, students complete two required Co-ops/IPPEs (community and institutional) and have one elective. The elective IPPE/Co-op can be in a non-traditional setting such as informatics, pharmaceutical company, managed care, research or other settings. Some students choose to do a global experience during their elective IPPE/Co-op. Students obtain up to 640 hours for each IPPE/Co-op accumulating 1,280 hours in required pharmacy settings and meeting all state board internship hour requirements where applicable. IPPE/Co-ops take place over 3 of the 13 semesters of the professional program for our undergraduate cohort. Direct-entry graduate students complete 2 IPPE/Co-ops in the required settings (2 out of 12 semesters). (Q2)

APPEs are offered over seven, 6-week blocks in the P4 year. Students are required to complete six APPE rotations: one in each of three core areas: internal medicine, ambulatory care, and community pharmacy; one health systems specialty patient care APPE; and two elective APPEs, all together accumulating 1440 hours of advanced experiential education. APPEs constitute 36 credits of the curriculum and take place over 3 semesters in the P4 year. Pharmacy practice experiences are described in further detail in Standard 14. (Q2)

The curriculum is designed to develop practice-ready pharmacists who can apply scientific information to provide care to patients and populations. The school has used ABOs to guide curricular development and assessment for many years. The school's syllabus template (Appendix 10.3.4) requires each instructor to report which programmatic outcomes are taught and how they are assessed in each course. This information informs our mapping and is periodically updated during the systematic curricular review process. Results of this mapping are discussed by the AC and CC and recommendations are made for course or curricular revision (see Standards 12 and 15). One example of this process was identification of low frequency of coverage of population health promotion competency. In addition to the previously existing population health project in the Healthcare Systems course, a required project was added to the Comprehensive Disease Management (CDM) Seminar in 2010 and students now apply this content as they research and design an intervention to improve the health of a target population in a local Boston community. (Q5, 6)

Teaching methods used in the program seek to develop students' abilities to create and communicate care plans, solve problems and maintain professional competency. Laboratory courses include the use of simulated patient actors to allow students to develop and demonstrate communication skills, professionalism, and critical thinking. In CDM seminar, students apply concepts to patient cases in a variety of settings. Several elective courses use the problem-based or team-based learning methodology, encouraging students' self-awareness and problem solving skills. Active learning is used extensively throughout the curriculum spanning the entire spectrum from simple

strategies such as question and answer, or audience response systems, to complex methodologies such as flipped classroom and team-based learning. See Standard 11 for more detail on teaching and learning methods. (Q4-6)

We pay particular attention to sequencing and integration of course material across scientific disciplines and practice areas. In addition to mapping to programmatic outcomes, targeted curricular mapping exercises are completed when relevant and needed. This information is discussed by members of the school AC and CC and, taken with data from other sources, has been used to improve course content and sequencing as described below. (Q5)

Student feedback also informs decisions. In addition to holding voting membership on school standing committees, students provide feedback through several forums: town hall meetings, exit surveys, university-administered instructor evaluations, and informal meetings with school administration, IPPE/Co-op coordinators and BCHS student services advisors. The school also uses student-conducted, formative mid-semester course reviews (see Standards 3 and 15). The school dean also meets with each class at least once a year, inviting students to a dialogue at the beginning of each academic year, and has open office hours. The assistant dean for academic affairs is the faculty liaison to the Pharmacy Student Governing Organization (PSGO), which is comprised of leaders from all pharmacy student classes and organizations. (Q5)

A notable example of changes that resulted from our curricular and assessment process is the 2012 major curriculum revision. In 2011, the CC began discussions to revise the PharmD curriculum. Work progressed over the subsequent year and resulted in a revised curriculum plan that was approved by the school faculty in May 2012. Design of the revision was a result of feedback from faculty, alumni and student survey data, curriculum mapping and assessment information, and recommendations from the school faculty. This revision addressed specific aims and offered students increased opportunities for a personalized education plan as it sought to (Q9):

1. Introduce more flexibility: by allowing additional elective options in the professional years of the program and increasing choice in how students complete the capstone requirement. This revision enables students to personalize their education plans (Strategic Goal 1.1) by allowing selection of a capstone projects of interest rather than having one project assigned to a single course in the spring semester of the P3 year. Students also have the ability to start working toward completion of their capstone as early as the P2 year.

2. Improve course sequencing to address the following:

- To improve preparedness for first IPPE/Co-op applicable introductory content from the Drug Information and Evaluation course (P2) and Educational and Behavioral Interventions in Pharmacy Practice (P1) courses was moved into the Introduction to Pharmacy Practice course (PrePh-2). Selected laboratory activities were also moved to allow students to interact with simulated patients and practice communication skills before entering the first IPPE/Co-op.
- Content from several courses including Medical Microbiology (PrePh-2) and pharmacology of antiinfective drugs (P1) were combined and moved later in the curriculum to the new Antiinfectives course (P2) to improve student retention of material in the area of infectious diseases. This new course directly precedes infectious diseases content in the related CDM module in an effort to move foundational content closer to application activities.
- Several other topics were moved to balance workload and ensure adequate coverage including topics in the Research Methods and Drug Information and Evaluation courses and pharmacogenomics content in Biopharmaceutics and Pharmacology/Medicinal Chemistry courses.

3. Emphasize pharmacotherapy process and improve efficiency in course delivery through streamlining of the CDM course series. This series was revised from two 4-credit-hour courses with 2 exams each per semester, to one 6-credit hour course with 3 exams per semester to improve pace and workload associated with the course series. Also, the modification supported the development of critical thinking with several class periods devoted entirely to in-class, applied, discussion-based activities each semester.

4. Encourage professional development while allowing students to pursue areas of interest: Students are required to complete two credit hours of professional elective credit to complement the reduction in credits from the CDM course. This also motivated faculty to create additional pharmacy-related elective courses, an area of need as identified via AACP survey data in 2009-10.

The class of 2016 will be the first class that will fully experience the most recent curricular revision. It is noteworthy that our survey data has already begun to show improvement in student attitudes regarding course sequence (agreement increased from 78% in 2010 to over 90% in 2012-2014), and pharmacy electives (agreement increased from 66% in 2010-12 to 80% in 2014). Several new pharmacy electives (Self Care and Nonprescription Medications: A Team-Based Approach, Leadership and Advocacy in Health Professions, Exploring Academic Careers, Contemporary Issues in Geriatric Pharmacy, Principles of General Medicine, and Special Topics: Principles of Translational Medicine) have been developed in response to student feedback gathered via surveys and in town hall meetings. The increased flexibility within the curriculum allows students to personalize their education based on elective interests. (Q6, 9, 10)

Results from the AACP faculty survey indicate that nearly 100% of respondents believe that our curricular structure and organization are clear. Throughout the process of curricular revision, discussions and many initiatives were aimed at ensuring that faculty have better knowledge of each other's contribution to the curriculum and to further encourage collaboration as reflected by an improvement in faculty attitudes on the 2014 faculty survey. (Q10)

Examples of efforts aimed at increasing students' understanding of the curricular design include: a new yearly orientation for P1 and P2 students focused on the curriculum; the creation of a curriculum presentation to provide insight into the order of courses or relevance of courses within the program; and the implementation of a new Curriculum and Assessment newsletter. In 2014, 95% of faculty agreed or strongly agreed that they understood how their instructional content fits into the curriculum (up from 86% in 2013) and nearly 90% of the faculty felt that curricular collaboration among disciplines was encouraged (up from 68% in 2014). Eighty three percent of faculty agreed that the school uses programmatic assessment data to improve the curriculum (72% in 2010). We will continue to monitor our alumni surveys with anticipated positive changes in perceptions after the class of 2016 graduates and enters practice. (Q5)

The curriculum has been strategically designed to challenge students with increasing rigor and expectations as they progress. Such examples include General Chemistry in the first pre-Ph1 year, followed by Organic Chemistry in the pre-Ph2 year. These courses provide the foundational knowledge students need as they enter into Pharmacology and Medicinal Chemistry courses in the P1 year. Furthermore, introductory content from the Educational and Behavioral Interventions in Pharmacy Practice and Drug Information and Literature Evaluation courses have been moved earlier in the curriculum to allow for application during IPPE/Co-op. This content is further developed in the two subsequent courses. Another example is the placement of Pharmacology and Medicinal Chemistry I and II in the P1 year, setting the foundation for CDM in the P2 and P3 years. Following the P3 year, students enter the APPE year and apply their classroom knowledge and build on the IPPE/Co-ops. Such strategic progression allows for sequential ascent to higher-levels Bloom's taxonomy from the pre-professional to the professional years. (Q7)

The school has an effective process to manage curricular affairs. These processes result in a program that provides a solid foundation for pharmacy careers while retaining flexibility and opportunities that enable students to pursue and develop personal areas of academic and professional interest. (Q8)

Notably, the school has established the position of director of undergraduate and professional programs to manage curricular issues (see Standard 7). It is also noteworthy that our unique IPPE/Co-op program allows students to complete the ACPE IPPE requirements by working in the community, institutional and other professional practice settings for up to 8-12 months, providing a greater understanding of pharmacy practice and acquisition of knowledge and skills. Lastly, the CC uses a diligent process to seek additional input from outside experts on matters of a specialized nature and pays close attention to sequencing and integrating course material across scientific disciplines and practice areas. Our faculty commitment to the continuous quality improvement of teaching and learning is evidenced through participation in peer and self-evaluation and the variety of teaching styles and technological tools used, many of which have been presented and published (see Standard 11). (Q9)

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

While we find ourselves compliant with all aspects of this standard, we plan to closely monitor the implementation of the new curriculum and the achievement of our ability based outcomes. Capstone implementation and the breadth of capstone options will be monitored for effectiveness. We will be paying particular attention to the feedback from AACCP surveys, performance of our students on IPPEs and APPEs, board pass rates and other metrics reflective of student success. The impact of the new curriculum on the direct-entry students (students entering directly into P1 year) will also be evaluated.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

11. Teaching and Learning Methods

The college or school, throughout the curriculum and in all program pathways, must use and integrate teaching and learning methods that have been shown through curricular assessments to produce graduates who become competent pharmacists by ensuring the achievement of the stated outcomes, fostering the development and maturation of critical thinking and problem-solving skills, meeting the diverse learning needs of students, and enabling students to transition from dependent to active, self-directed, lifelong learners.

2. College or School's Self-Assessment

| | |
|---|--------------|
| The program, throughout the curriculum and in all pathways, uses and integrates teaching and learning methods that have been shown through curricular assessments to meet the diverse learning needs of students and produce the desired professional competencies and outcomes, including the development and maturation of critical thinking, problem-solving, and self-directed, lifelong learning skills. | Satisfactory |
| Faculty members use a variety of teaching and learning techniques (e.g., active learning, case studies, etc.) that have been thoughtfully selected, designed, and/or tailored to help students achieve the learning outcomes articulated for their courses. | Satisfactory |
| The college or school evaluates the effectiveness of its curricular innovations through its assessment activities. | Satisfactory |
| The outcomes of the distance-learning activities are appropriate for the student population and achievable through distance study. | N/A |
| Teaching and learning methods used assure that learning experiences, opportunities, and outcomes are comparable for all pathways, branches or campuses. | N/A |

3. College or School's Comments on the Standard

| Focused Questions | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | A description of teaching and learning methods and strategies employed in the delivery of the curriculum, including nontraditional pathway(s) leading to the Doctor of Pharmacy degree (if applicable), and how those methods are expected to advance meaningful learning in the courses in which they are employed. |
| <input checked="" type="checkbox"/> | Efforts of the college or school to address the diverse learning needs of students |
| <input checked="" type="checkbox"/> | The formative and summative assessments used to evaluate teaching and learning methods used in the curriculum, including nontraditional pathway(s) leading to the Doctor of Pharmacy degree (if applicable) |
| <input checked="" type="checkbox"/> | How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> | Any other notable achievements, innovations or quality improvements |
| <input checked="" type="checkbox"/> | Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms |

(School comments begin here)

The PharmD curriculum is delivered using a variety of teaching and learning methods. In a 2012 survey, the most frequently used classroom techniques were traditional lecture, the Blackboard Learning Management System (Blackboard, Inc, Washington, DC) discussion board feature, and audience response systems (“clickers”). In the experiential setting, the most frequently used techniques were peer teaching, case discussion, and team-based practice and learning. The survey results are included in Appendix 11.3.1 (Q1)

Active learning (AL) methods are included throughout the curriculum. Based on a 2014 survey (Appendix 11.2.1) of all faculty who participate in required or elective courses (n=41; response rate 91%), 80% of those responding routinely use a low intensity, in-class AL strategy (e.g., free write, question and answer format, think-pair-share, muddiest point); higher complexity strategies such as role playing, debates, concept maps, small group discussions, flipped classrooms, jigsaw and team-based learning are used occasionally. Other frequently used AL techniques include peer teaching and simulated patient case discussions. Student and alumni surveys conducted from 2009 to 2014 consistently reveal that the curriculum provides opportunities for AL (100% student agreement in 2014 and 100% alumni agreement in 2012) and that students are encouraged to ask questions in class. Faculty, preceptor, and alumni survey results show consistent agreement (similar to national data) that students are encouraged to assume responsibility for their own learning. Many of the university’s classrooms are furnished with fixed, lecture setups, presenting a challenge to faculty who wish to engage students in collaborative exercises or other AL strategies. Despite this, our faculty find ways to engage students with active participation in class. (Q1,6)

A number of active learning strategies employed by the faculty are noteworthy. Many have been evaluated and reported in peer-reviewed papers (Appendix 11.4.1). Scholarship of Teaching and Learning (SOTL) is a strength of our faculty. (Q5)

Noteworthy examples of active learning (numerals in [] refer to publication number as listed in Appendix 11.4.1):

1) CDM Seminar and Skills Lab courses apply and expand information from the CDM lecture courses. In seminars, students work in small groups to assess patient cases and complete projects that require the application of course content to a contemporary issue (e.g., Public Health Program Project [34] and Public Service Announcement Videos [12]) and/or evaluation of drug information literature (debates, journal clubs). Use of MEDITECH software (donated by Medical Information Technology, Inc, Westwood, MA) in lab and seminar exposes students to an electronic health record system that is used in real world practice. First added to the Skills Lab course in 2010, MEDITECH was added to the CDM seminars in 2015. As such, these courses offer a simulated electronic record environment with the expectations that students verify medication orders including, sterile products, identify medication errors, and complete discharge medication education. Use of pre- and post-survey evaluations of MEDITECH use in Skills Lab revealed notable improvements in the students’ levels of comfort and proficiency with use and application of an electronic health record in preparation for APPEs and subsequent employment [37].

2) Simulation using standardized patients is included in five laboratory courses in the program, from immediately before the first IPPE/Co-op (pre-Ph2) to the last semester of the P3 year. Use of standardized patient activities improves communication skills over time and is positively received by students [6].

3) For ten years, the school has been using audience response systems (e.g., TurningPoint) in many classes to enhance student participation and to gauge learning. Some faculty have also tested a variety of delivery and lecture methods [22,23,30], social media (e.g., Facebook [28] and instant messaging technology [42]) to engage the class or improve communication.

5) Problem-based learning (PBL) involves the self-investigation of realistic problems relating to students’ courses of study. Using the PBL approach, students develop their own learning questions about a problem, investigate their

own questions, self-evaluate their learning resources, and ultimately apply their self-acquired knowledge to solve the underlying problem. The PBL process addresses all of the domains of learning with attention to population-based health concerns, cultural and psychosocial factors, and financial and regulatory aspects of health care. As such, the student involved in PBL self-explores his/her knowledge, skills, attitudes and values about the health care system and patient care. Based on a web-based survey of faculty in 2013, use of PBL as a teaching method has increased in the curriculum with at least one course (Contemporary Issues in Geriatric Pharmacy elective) entirely delivered using PBL.

6) Team-based learning (TBL) methodology is used in the first-year Introduction to the Profession of Pharmacy course, Research Methodology and Biostatistics, Health care Systems, and the Self-Care and Nonprescription Medications elective. TBL asks students to explore content outside of class, then apply it during class through individual and group assessments, problem solving and discussion.

The school addresses the diverse learning needs of students through use of the variety of teaching methods described above. In addition to AL, most courses in the professional curriculum are archived using the Tegrity lecture-capture system and recordings are available to students as a study aid. There is college-wide encouragement to use hybrid or “flipped” course models and support to assist faculty in development efforts. In the 2013-14 academic year, at least 4 courses used a flipped classroom approach for all or part of the course. Recently, the school was awarded an NU Provost’s grant to expand the use of ExamSoft, an electronic testing and assessment program. Project goals are to design, administer and analyze electronic assessments with the use of mapping that links assessment questions to programmatic outcomes and other categories. The software allows students, instructors and advisors to generate “Strengths and Opportunities” reports. These assessment-based performance reports highlight areas of strength and opportunity mapped to categories within the system including course content, ABOs, and Bloom’s taxonomy levels and can provide individualized learner feedback. The team-taught CDM course also uses a Faculty Guide (Appendix 11.4.2) to encourage all faculty teaching in the course to use principles of instructional design when developing objectives, assessments and instructional strategies and to develop materials appropriate for diverse learners and a consistent style among all instructors. This guide also emphasizes continuous reinforcement of Joint Commission of Pharmacy Practitioners Patient Care Process throughout this course series. (Q2, 5)

The university’s [Center for Advancing Teaching & Learning Through Research](#) (CATLR) provides faculty with significant support in the area of teaching and learning. In the summer 2015 semester alone, CATLR offered 38 teaching/learning events including the Conference for Advancing Evidence Based teaching where several pharmacy faculty members presented work. Locally, the school has offered faculty development in the areas of: flipping the classroom, integrating IPPE/Co-op with didactic coursework, discussion-based teaching and learning, identifying students’ learning styles, active learning in large classes, developing appropriate course/lecture assessment, and use of plagiarism scanning software and e-portfolios. (Q2)

The school routinely sponsors faculty workshops on innovative teaching methods and supports the scholarship of teaching and learning. The faculty advance their teaching skills and abilities to accommodate the diverse needs of students by experimenting with instructional methods, particularly those involving technology as we adapt to our digitally oriented student body. For example, in 2012, Department of Pharmacy and Health Systems Sciences (DPHSS) faculty accepted an innovative, reflective teaching challenge formally proposed by the department’s Curriculum Task Force. In keeping with best evidence in education, this initiative was grounded in two learning theories (diffusion of innovation theory and decomposed theory of planned behavior) and Seven Research Based Principles for Smart Teaching. All faculty in the DPHSS were encouraged to try at least one “new to you” teaching method in a class, course or the experiential setting that was linked to at least 1 of the 7 research-based principles for smart teaching. The activities culminated in individualized, systematic reflections by each faculty

member and voluntary presentations of the experience to faculty peers at department meetings. Two web-based survey instruments were used in 2013 to evaluate the initiative. Based on a response rate of 90% (n=28), the majority (67%) of participants tried one new strategy, 26% tried 2 and 6% tried 3 new strategies. The flipped classroom, inclusion of a new project in a course, and use of social media/back channel app (Facebook, Twitter, Todaysmeet.com) each accounted for 14.7% of the innovations, whereas use of YouTube videos, small group discussions, problem-based learning and role plays each accounted for less than 5% of the innovations. Overall, 75% of all teaching innovations required the use of technology. The project and its impact have been published in AJPE [45]. (Q1, 2)

Formative and summative feedback in the teaching and learning process is valued in the school, as all courses (with the exception of breakout sessions such as recitations and seminars) participate in mid-semester formative feedback and summative end-of course evaluations (TRACE). The mid-semester feedback process is overseen by the director of assessment and is administered by the class representatives. Student feedback is synthesized and communicated to the faculty. The university coordinates the TRACE end-of-course evaluation process; faculty reports of TRACE results are required in departmental annual merit documents and are reviewed by administrators. Students voluntarily complete online surveys and instructors may access aggregate reports at the close of each semester. TRACE evaluations contain a number of questions pertinent to instructional methods and instructor effectiveness. See Standard 3 for more information and examples of these instruments. The DPHSS faculty are expected to periodically obtain formative feedback on their didactic teaching using the Peer Observation and Evaluation Tool (POET) (further discussed in Standard 26; see citations 2 and 27 in Appendix 11.4.1). (Q3)

An important part of this standard is the development of a curriculum that facilitates students' abilities to assume responsibility for their own learning including assessing their own learning needs, developing personalized learning plans and self-assessing their knowledge, skills and values. This is cultivated throughout the curriculum. In AACP student surveys conducted from 2009 to 2014, students consistently agreed that the faculty and preceptors encourage them to take responsibility for their own learning and that skills needed for continued learning are acquired during the professional program. Students are required to create and maintain a professional progression portfolio that is used to document application of knowledge and skills to a variety of professional opportunities and experiences. Students reflect upon the professional and curricular experiences each semester and meet annually with a designated portfolio faculty advisor to review their self-assessments of learning. These meetings are student-centered and often result in the development of customized career development plans that the students are empowered to actualize. For example, based on a given student's reflections on learning, the faculty advisor may recommend shadowing activities to explore alternative career options or a specific IPPE/Co-op experience that supports the student's current learning needs. The portfolio process is described further in Standard 15. (Q4, 6)

Students also participate in the education of other health care providers, patients and pharmacists. Activities specific to the education of patients are built into the IPPE/Co-ops and APPEs such as patient discharge counseling, ambulatory care patient interviews, medication reconciliation, and in-service education of nurses, physicians and pharmacists. Starting in 2015, all students in the required CDM 4 Skills Lab course will complete Interprofessional Curbside Consults. These activities apply content about roles and responsibilities of health professionals to sessions with simulated health professionals. In each session, a role-played health professional (e.g., MD, DO, RN, PT, NP, DDS) asks the pharmacy student a question. The student then applies drug information skills to answer the question, document the answer in writing, and present the response verbally in a format customized to the requester. We received a provost grant for AY 15-16 to further expand this project at BCHS. (Q5)

In addition to IP interactions in labs, IPPE/Co-ops and APPEs, students in BCHS may participate in IP activities via other paths including:

- Choosing to live in IP housing via the college's living-learning communities;
- The 2012 First-Year Interprofessional Student Conference (See citation 46 in Appendix 11.4.1);
- Arnold S. Goldstein Simulation Center – In 2013, BCHS opened a state-of-the-art simulation space designed to host IP simulations and debriefing activities. Groups of pharmacy students have occasionally used the space as part of IP pilot or demonstration projects and some laboratory courses have experimented with hosting task assessments in the space to expose students to the technology and potential opportunity in the center. We are working to expand the use of the center in our curriculum;
- Student-driven iRISE (Interprofessional Research Innovate Serve Educate) committee (see Standard 7).

On AACP Surveys, students report multiple opportunities to learn with other health professionals. They feel ready to communicate with other professionals and work with the healthcare team to implement care plans. Also, preceptors and faculty generally agree that the PharmD program prepares students to communicate with patients and the health care team. (Q4, 6)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

12. Professional Competencies and Outcome Expectations

Professional pharmacist competencies that must be achieved by graduates through the professional degree program curriculum are the ability to:

1. Provide patient care in cooperation with patients, prescribers, and other members of an interprofessional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social, cultural, economic, and professional issues, emerging technologies, and evolving biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences that may impact therapeutic outcomes.
2. Manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel, to promote health; to provide, assess, and coordinate safe, accurate, and timesensitive medication distribution; and to improve therapeutic outcomes of medication use.
3. Promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an interprofessional team of health care providers.

These professional competencies must be used to guide the development of stated student learning outcome expectations for the curriculum. To anticipate future professional competencies, outcome statements must incorporate the development of the skills necessary to become self-directed lifelong learners.

2. College or School's Self-Assessment

| | |
|--|--------------|
| Professional Competencies 1, 2 and 3 guide the development of stated student learning outcome expectations for the curriculum. | Satisfactory |
| The curriculum prepared graduates to provide patient care in cooperation with patients, prescribers, and other members of an interprofessional health-care team based upon sound scientific and therapeutic principles and evidence-based data. | Satisfactory |
| The curriculum fosters an understanding of, and an appreciation for, the legal, ethical, social, cultural, economic, and professional issues, emerging technologies, and evolving biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences that may impact therapeutic outcomes. | Satisfactory |
| The curriculum prepares graduates to manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel, to promote health; to provide, assess, and coordinate safe, accurate, and time-sensitive medication distribution; and to improve therapeutic outcomes of medication use. | Satisfactory |
| The curriculum prepares graduates to promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an interprofessional team of health care providers. | Satisfactory |
| Outcome statements include developing skills to become self-directed lifelong learners. | Satisfactory |
| The curriculum prepares graduates to independently seek solutions to practice-based problems in the scientific and clinical literature. | Satisfactory |

| | |
|---|--------------|
| Graduates possess the knowledge, skills, attitudes, and values needed to enter practice pharmacy independently by graduation. | Satisfactory |
|---|--------------|

3. College or School's Comments on the Standard

| Focused Questions |
|--|
| <input checked="" type="checkbox"/> A description of the professional competencies of the curriculum |
| <input checked="" type="checkbox"/> A description of the assessment measures and methods used to evaluate achievement of professional competencies and outcomes along with evidence of how feedback from the assessments is used to improve outcomes |
| <input checked="" type="checkbox"/> How the curriculum is preparing graduates to work as members of an interprofessional team, including a description of the courses that focus specifically on interprofessional education |
| <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements |
| <input checked="" type="checkbox"/> Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms |

(School comments begin here)

Student achievement of the programmatic outcomes is integral to the mission and vision of the school. Our ABOs, first adopted in 2003, underwent a minor revision in 2010. In 2013, the school reviewed newly released CAPE outcomes and cross-mapped them to our 25 ABOs. Discussions between the AC and CC put forth the proposal to adopt new CAPE outcomes as our ABOs because they accurately reflected what is expected of our graduates. In 2014 faculty voted to adopt the new CAPE outcomes as our ABOs with subsequent mapping of our curriculum (Appendices 12.1.1-2). (Q1)

The didactic and experiential curricula have been mapped to each version of ABOs. In syllabi, instructors indicate which ABOs are covered and how they are assessed (Appendices 12.3.1-4). This information is compiled and used to evaluate the need for curricular improvement. Most recent mapping found that each ABO was covered at least once in the didactic curriculum (Appendices 12.2.1-2). Recent changes to the curriculum as the result of mapping activities and gap analyses are described in Standards 10 and 13.

The AC is a standing committee that works with the CC to monitor achievement of professional competencies and outcomes. The AC oversees the assessment plan and collects and reviews data on educational outcomes in both the didactic and experiential settings (detailed in Standard 15). The AC, director of assessment, instructors of record, and students assist in documentation of ABO achievement. The close working relationship between the AC and CC facilitates improvements in the curriculum, as shown by the 2012 curriculum revision (see Standard 10). (Q2)

Faculty are asked to routinely evaluate achievement of course outcomes and modify methods of instruction as needed. Changes made are discussed during the systematic course review. Course-level assessment also allows instructors and administrators to identify at-risk students and discuss remediation plans. For experiential evaluations, the director of the Office of Experiential Education (OEE) reviews outcome data in collaboration with the AC. Reports are provided to the CC as part of the systematic course review. In 2014, ExamSoft was adopted by several courses, and this was expanded to more courses in 2015. This implementation will improve assessment of students' achievement of ABOs. ABO achievement is also demonstrated via the portfolio process (Standard

15) and in evaluations used in IPPE/Co-ops and APPEs (Standard 14). The progression portfolio asks students to reflect on achievement of specific ABOs throughout each semester of didactic and experiential coursework with documentation for each ABO reflection and supporting artifacts at least twice at different points of the curriculum, but even more frequently for the ABOs in the affective domains. (Q2)

Recognizing that there are limited opportunities for interprofessional education (IPE) in the didactic curriculum, the school has taken several targeted steps to enhance IPE activities for our students. In 2014-15 the CC was charged to work with the BCHS CC to determine how to expand IPE opportunities in the didactic curriculum. The systematic curricular review process (Standard 10) pays special attention to interprofessional (IP) course content and integration of interprofessional education (IPE) throughout the curriculum. In preparation for Standards 2016, the school approved a new syllabus template that will collect data on IPEC competencies covered in each course. Although there are several other health professions programs within the BCHS, IPE remains difficult to arrange due to the logistics of course sequencing and scheduling. To facilitate IP interaction, a committee of faculty from the BCHS (including pharmacy) was established in 2012. It is working to develop structured activities that promote IPE. As an example, the 2012 freshman IP conference on alcohol and substance misuse introduced first-year BCHS students to the principles of IPE. A publication by a group of BCHS faculty led by Margarita DiVall (Appendix 12.5.1) described improved attitudes towards early IPE as measured by the validated Readiness for Interprofessional Learning Scale. In fall 2013, a module on oral health was added to the CDM course, and students were required to take an online tutorial and demonstrate competency via a quiz. This oral health module is a part of the national validated IP Smiles for Life Curriculum. Other IPE activities are integrated into the CDM skills lab course including IP Curbside Consults, which ask students to learn the roles of other healthcare professionals and then respond to their medication-related questions with professional communication based on a structured method. Several IP elective courses are available to students (see Standard 10) as well as extracurricular activities with professional fraternities. Phi Lambda Sigma sponsored two IPE opportunities in 2013-2014, including a leadership retreat, to promote understanding of other healthcare professions while bringing students of the various disciplines together. Finally, with creation of the Arnold Goldstein Simulation Center, faculty and students have access to a new venue for IPE. (Q3)

Results from AACP student survey indicate that students agree that the PharmD program “prepared them to work with the healthcare team to implement patient care plans”. Responses also indicate that students feel prepared to collaborate and communicate effectively with other health care professionals. Similarly, the majority of faculty, preceptors and alumni agree that “the curriculum prepares students to communicate with patients, caregivers, and other members of the IP team.” (Q3, 6)

Many of our IPE interactions occur in the experiential settings on IPPE/Co-ops and APPEs. The director of assessment has been collecting data regarding IP interactions and student attitudes in the experiential setting using a published and validated Interprofessional Socialization and Valuing Scale (ISVS, Appendix 12.5.2). The ISVS measures self-perceived ability to work with others, value in working with others, and comfort in working with others. Analyses of ISVS data reveal that our Co-op/ IPPE model provides students with an early opportunity to build the IP competencies and values necessary to provide effective team-based care. Comparison of ISVS data before and after IPPEs/APPEs demonstrate development of positive attitudes toward other health professionals and the value of working with a health care team (Appendix 12.5.3). (Q3)

The breadth and depth of professional socialization that occurs as a result of IPPE/Co-op experiences is a strength of the program. The IPPE/Co-ops ensure that students achieve the programmatic outcomes while providing a high number of IPPE hours in a variety of practice areas and early in the curriculum. It integrates real world experience with didactic content and provides an early opportunity to become an effective member of team-based patient care.

Completion of the Introduction to Pharmacy Practice course, 2-3 IPPE/Co-op experiences and associated cyclical reflections lay a strong foundation for APPE participation and the development of a practice-ready pharmacist. (Q5)

Processes are in place to maintain compliance with this standard. The AC and CC monitor trends in education and training and collaborate on initiatives that respond to these trends and improve the program. For example, in 2013 the new CAPE outcomes were evaluated and adopted by the school, and eventually integrated into the assessment plan and curriculum. Notably, this occurred prior to release of the ACPE 2016 standards, which puts a greater emphasis on the adoption of the CAPE outcomes. (Q4, 5)

Results from the AACP graduating student survey indicate that our students feel well prepared for entry into practice (97% agreed/strongly agreed in 2014). Notable strengths of our program compared to national and peer cohorts include student readiness to work as part of the health care team, interpretation of epidemiologic and pharmaco-economic data, and interpretation and application of drug use and health policy. The AACP faculty survey demonstrated positive perceptions of student preparation for entry into practice in comparison to national and peer comparators with the exception of student preparation in the area of informatics. This was corroborated by data from the preceptor survey. The AC has brought this to the attention of the CC and the leadership team. In short-term response, lectures in informatics have been added to the Drug Information and Literature Evaluation course and faculty discussions have begun to determine long-term aims in this area. The school has been working with the Masters in Health Informatics program to leverage internal expertise and develop an informatics certificate option for PharmD students. In the 2014 AACP preceptor survey respondents strongly agreed/agreed that the PharmD program prepared students to “manage systems of medication use” and “to promote the availability of health promotion and disease prevention initiatives” at lower rates than peer and national comparators. This is the first time AC have noted these concerns from the preceptors and brought these to the attention of the CC, leadership, and the OEE. At the same time, in the AACP alumni survey respondents felt adequately prepared in all areas, including managing systems for medication use and promoting the availability of health promotion and disease prevention initiatives. While more alumni feel they do not possess informatics expertise compared with other competencies, NU responses are similar to national and peer cohorts. (Q6)

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

While we meet all of the elements of this standard, we are working to expand IPE in our curriculum and will monitor the implementation and outcomes of IPE particularly as we prepare to meet Standards 2016. Specific current initiatives include the revision of IPPE/Co-op assessment instrument to include specific IP competencies (completed May 2015 to be implemented Fall 2015), conversations regarding exposing all BCHS students to TeamSTEPPS curriculum, expansion of the interprofessional curbside consult assignment to other programs at BCHS via IP simulation (planned for Spring 2016 semester), including other disciplines in the college in the Health Care Systems Course. Additionally, the new syllabus template will provide us with a more extensive map of IPEC competency coverage in our curriculum. The CC will continue to work on documenting achievement of ABOs, particularly in the affective domains.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| |
|---|
| 13. Curricular Core - Knowledge, Skills, Attitudes and Values |
| <p>To provide the thorough scientific foundation necessary for achievement of the professional competencies, the curriculum of the professional degree program must contain the following:</p> <ul style="list-style-type: none"> • biomedical sciences • pharmaceutical sciences • social/behavioral/administrative sciences • clinical sciences <p>Knowledge, practice skills, and professional attitudes and values must be integrated and applied, reinforced, and advanced throughout the curriculum, including the pharmacy practice experiences.</p> |

2. College or School's Self-Assessment

| | |
|--|--------------|
| The curriculum contains at an appropriate breadth and depth the necessary elements within the following areas as outlined in Appendix B of the Standards: | Satisfactory |
| biomedical sciences | Satisfactory |
| pharmaceutical sciences | Satisfactory |
| social/behavioral/administrative sciences | Satisfactory |
| clinical sciences | Satisfactory |
| The content of curricular courses is mapped to Appendix B to assess where specific content foundations are addressed in the curriculum. Gaps in curricular content and inappropriate redundancies identified in the mapping process inform curricular revision. | Satisfactory |
| The didactic course work provides a rigorous scientific foundation appropriate for the contemporary practice of pharmacy. | Satisfactory |
| Knowledge, practice skills, and professional attitudes and values are integrated and applied, reinforced, and advanced throughout the didactic and experiential curriculum. | Satisfactory |
| The biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences are of adequate depth, scope, timeliness, quality, sequence, and emphasis to provide the foundation and support for the intellectual and clinical objectives of the professional degree program and the practice of pharmacy. | Satisfactory |
| The sciences provide the basis for understanding the development and use of medications and other therapies for the treatment and prevention of disease. | Satisfactory |
| Courses and other formal learning experiences are coordinated and integrated across disciplines. | Satisfactory |
| Where instruction is provided by academic units of the university other than the pharmacy program, these areas are developed in accordance with the professional degree program's curricular goals and objectives; and assessment liaison mechanisms ensure effective instructional delivery and achievement of the educational objectives of the program. | Satisfactory |

3. College or School's Comments on the Standard

Focused Questions

- The curricular structure and content of all curricular pathways
- A description of the breadth and depth of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences components of the didactic curriculum, and the strategies utilized to integrate these components
- How the curricular content for all curricular pathways is linked to Appendix B of Standards 2007 through mapping and other techniques and how gaps in curricular content or inappropriate redundancies identified inform curricular revision
- Examples of assessment and documentation of student performance and the attainment of desired core knowledge, skills and values
- Evidence that knowledge, practice skills and professional attitudes and values are integrated, reinforced and advanced throughout the didactic and experiential curriculum
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

For most students our pharmacy program consists of two components; a two year pre-pharmacy curriculum with professional requirements to transition into the four year PharmD program. Students can enter the program via two routes described in detail in Standard 17. Briefly, the majority of our students are accepted into an early assurance pharmacy program as freshmen (pre-Ph1). After completing two years of pre-pharmacy curriculum and attaining minimum GPA requirements and acceptable performance during a mandatory interview, they are then accepted into the PharmD program. A small component of our PharmD cohort consists of students with previous degrees who have completed all pre-pharmacy requirements and enter directly into the P1 year (direct-entry students) (see Standard 17).

Our students also meet general education requirements of the NU Core curriculum. Adopted in 2007, the goal of the [NU core curriculum](#) is to develop in students the knowledge and skills to be lifelong learners. As described by the university, the early core requirements (comparative cultures, level 1 knowledge domains, first-year writing, and level 1 mathematical/analytical thinking) and the experiential learning requirement encourage a breadth of exposure. Intermediate and advanced requirements are deeper, more focused experiences. The NU Core was [recently revised](#) and will go into effect in 2016. (Q1, 2)

During the pre-Ph1 and pre-Ph2 years students are exposed to a rigorous science-based curriculum focused on chemistry, biology, anatomy and physiology. These courses lay the groundwork for study in the biomedical sciences. Also in the pre-professional years, the professional socialization of students begins in the pre-Ph1 year with the first-year seminar, entitled, College: An Introduction. This seminar, taken by all BCHS students, helps acclimate first-year students to the collegiate experience, and begins to develop professionalism, the spirit of a healthcare provider and interprofessional collaboration (see Standard 12). First year students also take Introduction to the Profession of Pharmacy which examines pharmacists' responsibilities, pharmacy organizations, ethical issues related to health care, the education of pharmacists, and pharmacists' roles in health-

care systems. The American Pharmacists Association Career Pathway Evaluation Program is incorporated into this course. This course is aimed at reaffirming early assurance students' interest in the pharmacy profession and is not a requirement for direct-entry students. In the pre-Ph2 year students take Introduction to Pharmacy Practice with laboratory. This course prepares students for their first IPPE/Co-op and covers workplace issues including diversity, sexual harassment, ethics, and patient confidentiality. In addition, the course introduces students to the technical knowledge and skills required for pharmacy practice, including introductory sterile compounding and drug information. The lab uses standardized patient simulation to develop students' professional communication skills. For the DE students, this course is also offered during the first semester of their P1 year (Q1, 2).

The professional P1-P4 curriculum consists of multiple courses in each of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences, as well as electives and courses needed to fulfill the NU Core requirement. See Standard 9 for the curriculum plan. Several courses in the professional curriculum integrate topics from multiple disciplines in order to guide students through foundational theory and application activities in the same semester, such as the Pharmacology/Medicinal Chemistry I and II, Antiinfectives, and the CDM sequence. (Q1).

The pharmaceutical sciences foundational courses - Pharmaceutics, Pharmacology/Medicinal Chemistry, Biochemistry, Pharmacokinetics/ Biopharmaceutics, Immunology, and Antiinfectives build on the biological sciences foundation. Antiinfectives is a new course integrating content of microbiology, pharmacology and medicinal chemistry that was first offered in the summer of 2014. The course content was moved later in the curriculum as part of the 2012 major curriculum revision to assure that students are better able to synthesize concepts as they are immersed in the CDM sequence. Toxicology and pharmacogenomics content have been integrated into the Pharmacology/Medicinal Chemistry, Antiinfectives and CDM courses. (Q1, 2, 7)

The social/administrative sciences sequence builds on concepts introduced in the pre-Ph1 and pre-Ph2 year including information about the history of pharmacy and core tenets of professionalism in the Introduction to the Profession of Pharmacy Course and continue with drug information and communication skills concepts in the Introduction to Pharmacy Practice course and lab. These concepts are expanded upon in the Educational and Behavioral Interventions in Pharmacy Practice (where students apply course content in lab-based standardized patient simulations) and Drug Information and Literature Evaluation courses in the P1 and P2 years, respectively. These skills are further applied in the IPPE/Co-op, CDM course, CDM seminar and skills labs and APPE sequences. Health Care Systems, Research Methodology and Biostatistics, Drug Information and Literature Evaluation, Jurisprudence, Pharmacy Care Management and Economic Evaluation round out the course content. These courses are designed and sequenced to optimize acquisition of student knowledge and skills. Effective in the spring of 2015, the capstone course requirement may be completed as part of the Economic Evaluation course or by completion of another designated course or directed study project to provide students an opportunity for a personalized educational experience. (Q1, 2)

The CDM sequence, which consists of lectures, seminars, and skills labs, integrates the foundational sciences, pharmaceutical sciences, social/behavioral/administrative and the clinical sciences (pathophysiology, self-care, health and wellness, and therapeutics) with the goal of preparing our students for the APPE year. These courses require students to apply scientific knowledge and principles of medicinal and biochemistry, pharmacology, pharmaceutics, pharmacokinetics to the design of rational, evidence-based therapeutic strategies. Students also integrate social/behavioral/administrative and clinical sciences to provide care to patients in inpatient, ambulatory and community settings as well as to communities and populations. In 2014 faculty involved in the CDM course sequence discussed incorporation of Pharmacists' Patient Care Process Model endorsed by the Joint Commission of Pharmacy Practitioners (JCPP). Beginning in January 2015, students are introduced to the JCPP model at the start of the CDM sequence, which spans the entire P2 and P3 years. The model is emphasized throughout the

series including application activities in seminar where students use the model to work up simulated patient cases. Work will continue to integrate the model into CDM skills lab courses. (Q2)

In summary, our curriculum is structured with basic courses leading into and integrated with more advanced courses and with application and further integration with P3 and P4 content. The three semesters of IPPE/Co-ops ensure that students integrate, reinforce, and advance knowledge, skills, and professional attitudes in the early professional years. The P4 year of APPEs engages students in advanced integration and application of their knowledge and skills. Both IPPE/Co-ops and APPEs involve preceptor assessments of student performance relative to professional knowledge, skills, and attitudes. Important co-curricular activities, guided themes of reflection, self-awareness, leadership and professionalism are cultivated through the professional portfolio (see Standard 15). (Q1, 2)

Curricular content has been mapped to ABOs and ACPE Appendices B, C, and D and to other curricular themes when warranted (Appendices 13.1.1-2). Maps are updated if needed as part of the Systematic Curricular Review process (see Standard 12). Members of the assessment and curriculum committees (AC and CC) review the maps. When gaps are identified in content plans are put in place to provide this material by revising appropriate coursework. For example, pharmacogenomics content was added to the Pharmacology course sequence and the Antiinfectives and CDM courses. As another example, mapping completed in 2014 to Appendix B revealed gaps in training in sterile compounding and in health informatics. Both of these gaps were addressed by the CC. Beginning in spring 2015, sterile products content was included in the Introduction to Pharmacy Practice laboratory (prior to first IPPE/Co-op) and in the P3 CDM 4 Skills Lab (prior to first APPE). We have also added health promotion material into our Educational and Behavioral Interventions in Pharmacy Practice course. Health informatics content was added to the Drug Information course starting in summer 2015 (see Appendix 13.1.2). (Q3)

Facilitated by the CC, ongoing dialog occurs between chemistry and pharmaceutical sciences faculty to ensure the relevance of the pre-professional courses in general and organic chemistry. Similar dialog occurs regularly between school faculty and OSS advisors and faculty from the English, biology and physics departments. The discussions occur as part of the CC's systematic course review and through collaboration between OSS and the respective departments with a focus on enhancing the link between introductory and applied coursework. (Q3)

The CC also reviews the curriculum to assess effectiveness of topic integration. Content is also deliberately integrated in different courses in the same semester (e.g., students in Research Methods examine a randomized control trial on a topic relevant to the CDM course). Content is aligned in a vertical and progressive format in the CDM course as pharmacology material is reinforced and reassessed and exams beginning with CDM 2 include 15-20% content reassessment from previous CDM courses (see Standard 15). (Q4, 5, 7)

The school has used ABOs for more than a decade to design a curriculum that ensures graduation of practice-ready pharmacists. We have implemented many methods to assess whether students are achieving these ABOs (see Standard 15). Students are introduced to programmatic outcomes upon entry into the program (pre-Ph1 year for early assurance students or P1 year for direct-entry students). In addition to faculty-driven assessments, students routinely self-assess their level of mastery of the ABOs as a component of the professional portfolio process. This highlights the importance of the ABOs to students as early as the first year of college. We have now begun to integrate ExamSoft category mapping and strengths and opportunities reports in several courses (Antiinfectives, CDM sequence, CDM Skills Lab, and others). The software allows instructors to map assessments to topics and program outcomes to monitor overall attainment. Other traditional measures to assess performance and mastery of knowledge and skills include performance on exams, quizzes, self and preceptor evaluations of students during the IPPE/Co-ops and APPEs (see Standards 14 and 15). Lastly, the AC and CC monitor trends in NAPLEX and MJPE scores as a measure of curricular effectiveness. (Q4)

Students and alumni report being academically prepared to enter APPEs (96.2% NU vs. 92.3% national on student survey and 98.8% NU vs. 93.1% national on alumni survey). Further, more than 90% of alumni report being well prepared for their first pharmacy job (national: 88.6%). (Q8)

The school has developed several strategies to further integrate, reinforce, and advance student knowledge, skills, attitudes, and values as they progress throughout the curriculum (Q5). For example:

- Through portfolio reflections (pre-Ph1 and Ph2 years, P1-P3), students link their science and/or social science courses and IPPE/Co-ops to their chosen career goal in pharmacy. In addition, through the portfolio process, students are required to select (based on their expressed goals), attend and reflect on professional events and presentations during the year. The portfolio serves to reinforce professional attitudes during meetings with advisors.
- To obtain an IPPE/Co-op position students participate in a referral and interview process. Students have multiple opportunities to develop their interview techniques and demonstrate professional attitudes and skills.
- In their Educational and Behavioral Interventions in Pharmacy Practice course students build on theories from their earlier psychology courses.
- In the CDM skills laboratory, students apply their knowledge and skills in the area of physical assessment, patient education and counseling, and professional communication.
- In the College: An Introduction seminar students are introduced to the concept of volunteerism.
- In the CDM sequence students work in groups to apply coursework to produce a public service announcement video and a public health project in the CDM sequence.

Notably, the school has implemented several systematic quality improvement processes that drive improvement and integration of curricular content including periodic communication with departments that offer foundational coursework, systematic curricular review, and routine programmatic assessment including review of faculty, student, alumni, and preceptor surveys. These processes, coupled with in depth student exposure to practice environments in our signature IPPE/Co-op program provide the depth and breath of knowledge, skills, attitudes that prepare students for early and advanced pharmacy practice experiences. (Q6)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|--|--|
| 14. Curricular Core - Pharmacy Practice Experiences | |
| <p>The college or school must provide a continuum of required and elective pharmacy practice experiences throughout the curriculum, from introductory to advanced, of adequate scope, intensity, and duration to support the achievement of the professional competencies presented in Standard 12.</p> <p>The pharmacy practice experiences must integrate, apply, reinforce, and advance the knowledge, skills, attitudes, and values developed through the other components of the curriculum. The objectives for each pharmacy practice experience and the responsibilities of the student, preceptor, and site must be defined. Student performance, nature and extent of patient and health care professional interactions, where applicable, and the attainment of desired outcomes must be documented and assessed.</p> <p>In aggregate, the pharmacy practice experiences must include direct interaction with diverse patient populations in a variety of practice settings and involve collaboration with other health care professionals. Most pharmacy practice experiences must be under the supervision of qualified pharmacist preceptors licensed in the United States.</p> | |

2. College or School's Self-Assessment

| | |
|--|--------------|
| The college or school provides a continuum of required and elective pharmacy practice experiences throughout the curriculum, from introductory to advanced, of adequate scope, intensity, and duration to support the achievement of the professional competencies presented in Standard 12. | Satisfactory |
| The pharmacy practice experiences integrate, apply, reinforce, and advance the knowledge, skills, attitudes, and values developed through the other components of the curriculum. | Satisfactory |
| Pharmacy practice experiences include periods for preparation and guided reflection. | Satisfactory |
| The objectives for each pharmacy practice experience and the responsibilities of the student, preceptor, and site are defined. | Satisfactory |
| Goals and outcomes for each pharmacy practice experience are mapped to activities listed in Appendix C to ensure that students' experience will cover, at a minimum, all the listed activities. | Satisfactory |
| Student performance, nature and extent of patient and health care professional interactions, where applicable, and the attainment of desired outcomes are documented and assessed. | Satisfactory |
| In aggregate, the pharmacy practice experiences include direct interaction with diverse patient populations in a variety of practice settings and involve collaboration with other health care professionals. | Satisfactory |
| Most pharmacy practice experiences are under the supervision of qualified pharmacist preceptors licensed in the United States. | Satisfactory |
| The college or school ensures that all preceptors (especially first-time preceptors prior to assuming their responsibilities) receive orientation regarding the outcomes expected of students and the pedagogical methods that enhance learning, ongoing training, and development. | Satisfactory |

| | |
|---|--------------|
| A quality assurance procedure is in place that facilitates standardization and consistency of experiences and outcomes while allowing for individualization of instruction, guidance, and remediation by the preceptor based on student needs. | Satisfactory |
| Students do not receive remuneration for any pharmacy practice experiences (introductory or advanced) for which academic credit is assigned. | Satisfactory |
| The introductory pharmacy practice experiences involve actual practice experiences in community and institutional settings and permit students, under appropriate supervision and as permitted by practice regulations, to assume direct patient care responsibilities. | Satisfactory |
| Introductory pharmacy practice experiences account for not less than 300 hours over the first three professional years. The majority of students' time (minimum 150 hours) is balanced between community pharmacy and institutional health system settings. | Satisfactory |
| The length of the advanced pharmacy practice experiences is not less than 1440 hours (36 weeks) during the last academic year and after all pre-advanced pharmacy practice experience requirements (i.e., introductory pharmacy practice experiences and required core didactic course work) are completed. | Satisfactory |
| All <u>required</u> advanced pharmacy practice experiences in all program pathways are conducted in the United States or its territories and possessions (including the District of Columbia, Guam, Puerto Rico, and U.S. Virgin Islands). | Satisfactory |
| Required experiences include primary, acute, chronic, and preventive care among patients of all ages and develop pharmacist-delivered patient care competencies in the following settings: <ul style="list-style-type: none"> • community pharmacy • hospital or health-system pharmacy • ambulatory care • inpatient/acute care general medicine | Satisfactory |
| Simulation is used appropriately as a component of introductory pharmacy practice experiences; it does not account for greater than 20% of total introductory pharmacy practice experience time and does not substitute for the hours devoted to actual experiences in community pharmacy and institutional health system settings. | N/A |

3. College or School's Comments on the Standard

| Focused Questions |
|--|
| <input checked="" type="checkbox"/> How student performance is assessed and documented, including the nature and extent of patient and health care professional interactions, and the attainment of desired outcomes |
| <input checked="" type="checkbox"/> How, in aggregate, the practice experiences assure that students have direct interactions with diverse patient populations in a variety of health care settings |
| <input checked="" type="checkbox"/> How the college or school ensures that the majority of students' IPPE hours are provided in and balanced between community pharmacy and institutional health system settings |
| <input checked="" type="checkbox"/> How the college or school uses simulation in the curriculum |
| <input checked="" type="checkbox"/> How the college or school establishes objectives and criteria to distinguish introductory from advanced practice experiences. |

- How the college or schools assures, measures, and maintains the quality of site used for practice experiences
- How quality improvements are made based on assessment data from practice sites
- How the goals and outcomes for each pharmacy practice experience are mapped to the activities listed in Appendix C of Standards 2007 to ensure that students' experience will cover, at a minimum, all the listed activities
- How the college or school is applying the guidelines for this standard, and the additional guidance provided in Appendix C, in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

Regional goals and objectives for IPPEs have been developed through efforts of the New England Regional Departments of Experiential Education (NERDEE). The IPPE specific learning objectives are assessed by preceptors and self-assessed by students. At NU, we use the Co-op education learning model (Appendix 14.5.1) and simulation to ensure that students attain IPPE competencies as outlined in Appendix C of Standards 2007 (Appendix 14.2.1). Simulation experiences with standardized patients are employed in labs associated with the following courses: Introduction to Pharmacy Practice, Educational and Behavioral Interventions in Pharmacy Practice and CDM Skills Lab, but this simulation does not count towards overall IPPE hour requirements. (Q1)

The IPPE/Co-op program is overseen by two coordinators who are practicing pharmacists. School policies require that each student complete one IPPE/Co-op (4-months, 640 hours) in a community setting and one in an institutional setting (4-months, 640 hours). Our early assurance students are also eligible for a third IPPE/Co-op elective opportunity. Placements are reviewed annually to ensure students are in compliance with the policy, and plans are underway for incorporation of this information into the NU Degree Audit Reporting System to automate the review. (Q1, 3, 4)

IPPE/Co-ops ensure that students achieve specific competencies in both community and institutional practice settings (Appendix 14.1.1). Students are enrolled in, and receive non-academic credit for, these required experiences and are typically remunerated by sites, consistent with the long-standing tradition of Co-op at NU. A waiver has been obtained from ACPE regarding remuneration on experiential education (Appendix 14.5.2). Student performance is documented and assessed using student self-assessments and preceptor assessments. (Q1)

IPPE/Co-ops play an important role in preparing pharmacy students for their APPEs. In 2014 93.1% of graduating students agreed that IPPEs were valuable in helping them prepare for their APPEs (11% above national data) (Q11). Early exposure to working directly with patients and practitioners in common pharmacy practice settings builds patient care and interpersonal skills and increases student confidence. Through these experiences, students begin APPEs with relatively high levels of independence and maturity. Each IPPE is delivered according to the Co-op Learning Model, which includes preparation, activity and reflection. The learning model assists students in the development of both personal and career goals. Subsequent didactic studies not only build on these IPPEs, but also help students better refine their personal and career goals, as documented in professional portfolios (see Standard 15). IPPE/Co-op coordinators maintain approximately 120 local and national sites that collectively provide approximately 145 jobs. Another 30 sites are available for occasional use. Co-ops/IPPEs offer one-to-one student to preceptor relationships. (Q1, 2)

Students prepare for IPPE/Co-ops by taking the Introduction to Pharmacy Practice course with lab. Students also meet with an IPPE/Co-op coordinator several times prior to each IPPE/Co-op. The course was revised in 2012 to

provide a stronger foundation in communication and drug information skills. Students develop job acquisition skills and are introduced to the realities of the healthcare environment. Students prepare resumes, develop interviewing skills, and construct strategies to solve challenges commonly encountered during employment. A clear definition of student and employer expectations is discussed. Students are introduced to pharmacy calculations, drug information resources, Massachusetts pharmacy laws and regulations, brand/generic names of the top 100 drugs, and sterile product preparation. Successful completion of this course prepares students to enter the pharmacy workplace. In the supplemental portion of the preceptor survey, 96% of respondents agreed the students are adequately prepared for IPPE/Co-ops. Students are not placed in their sites, but interview for their jobs. This creates a real-world job search experience and enhances learning. Students receive notification of their IPPE/Co-op based on their timeliness to respond to job offers. In the event of multiple job offers, IPPE/Co-op coordinators assist students in their final selections. Students without an offer are guided towards opportunities to interview with other employers. (Q1)

The first IPPE/Co-op is placed early in the curriculum and preceptors are oriented to recognize that most students are novices in the healthcare environment. Students learn quickly to identify and reflect on their strengths and weaknesses relative to their newly assigned roles; this self-assessment process helps students develop strategies for professional success. Students then apply their pharmacy knowledge and practice their newly acquired pharmacy skills in relation to specific IPPE competencies depending on the practice environment (i.e., community, institutional or elective) and bring experiences back into classes and labs. (Q1, 5)

Students receive evaluations from their IPPE/Co-op employers upon completion of each experience. They also complete an on-line self-assessment 3 times for each experience. IPPE/Co-op coordinators use these instruments to monitor and discuss students' job performance, professional behaviors and successful completion of IPPE competencies during the debrief sessions. IPPE/Co-op coordinators also meet with each student individually prior to their second IPPE/Co-op and, based on the assessment of the first IPPE, assist students in creating new goals and strategies for personal and professional development. This learning model and cycle is repeated for each subsequent IPPE/Co-op. (Q1)

Preceptors and employers are provided with an IPPE/Co-op Handbook (Appendix 14.3.1) that outlines the program, its requirements, and expectations of students and employers. The Handbook also offers suggestions as to how to interact with and develop young professionals. A course syllabus for each required IPPE defines expectations for the student and preceptor (Appendices 14.1.1). Preceptors also receive individual training on the program requirements via phone and in-person visits. (Q5)

The APPE Preparatory Seminars I & II, administered by the OEE during the P3 year, are designed to assist students with preparing for P4 year. Students are guided through the process of obtaining required certifications (CPR, HIPAA, infection control, etc.) and health clearance. Students are also introduced to different APPE opportunities culminating in APPE preference selection in the spring semester of the P3 year. Students submit preferences and are matched with preceptor availability. Aspects of APPE placements and assessment are managed using the E*Value software. Students in the class of 2015 had 96.9% of the total 786 APPE rotations match with their first, second or third choices with 40% of the total APPE rotations delivered by NU faculty preceptors. APPE schedules are released to students annually at least a month before APPE start. During "APPE Boot camp" (the last class of APPE Prep II) APPE Syllabi (Appendix 14.1.2) are reviewed to ensure that students are able to identify competencies and activities for the required APPEs. Preceptors are provided an abbreviated version of the student syllabus that contains the competency assessment form, the site/preceptor evaluation forms, the students' APPE portfolio requirements, and expectations for midpoint and final evaluations. (Q9)

The APPE program consists of six, 6-week rotations. There are four required APPEs: community, internal medicine, health systems, and ambulatory care. Additionally, there are two elective APPEs. Students complete 36 weeks (or 1440 hours) of APPE in the P4 year. Students may select from 28 different types of patient care and non-patient care APPEs (registered as courses) to satisfy programmatic requirements. Each type of APPE is delivered at a variety of different sites, offering the opportunity for students to personalize their experiential year. Appendix 14.2.2 reflects the extent of coverage of Appendix C competencies (Standards 2007) in the required APPE rotations. Surveys reveal that 95.9% of students graduating in 2014 agreed that the variety of available APPEs met their needs (5% above national/peer data). (Q9, 11)

Based on programmatic feedback, the assessment of student performance on APPEs was changed in May 2011. The new competencies in the four required APPEs focus on nine content areas within five targeted outcome sections (Knowledge Application, Professionalism, Communication, Patient Care and Practice & Systems Management). In addition to showing competency in these nine areas students must have actively participated in patient care, undertaken projects relevant to the experience, maintained a goal-driven reflective portfolio, and adhered to professional standards of conduct. (Q7)

Student performance is documented in E*Value by both the preceptor and the student via the APPE Final Evaluation of Student Performance and Student APPE Self-Evaluation, respectively. Students are required to maintain a self-reflective portfolio during the APPE year, which includes updated CV and goal setting for each APPE. Students self-assess achievement of their competencies and complete structured reflections on at least two ABOs during each APPE. (Q1)

Patient interactions are documented, in part, in the E*Value system using the PxDx patient intervention form. Students are also able to rate the level of interaction with patients on the student assessment of the site/preceptor evaluations forms. Surveys revealed that 98.6% of students in the class of 2014 agreed that their APPEs allowed them to interact with diverse patient populations. (Q2, 11)

All required IPPE and APPE experiences take place in the United States. Nearly all (99.7%) APPEs are precepted by licensed pharmacists; 0.3% are delivered by non-pharmacists (including MDs, PhDs, MBAs) and these are elective. Student to adjunct primary preceptor ratio is 1:1 (co-preceptors are excluded from the ratio) for the majority of APPEs, while the student to preceptor ratio on APPEs lead by school faculty is typically 3:1.

It is OEE policy to visit new sites and provide an orientation to the APPE program. However, in cases where the site is outside the school's region, orientation and program requirements are discussed via a conference call. Locally, where NU has an extensive, long-standing relationship with a site (e.g., Brigham and Women's Hospital), the site's clinical coordinator works with the OEE to ensure that new preceptors receive the necessary information. The school is fortunate to have many loyal and engaged alumni serving as preceptors. From 2008 to present, 61 alumni precepted students in an adjunct faculty capacity in a variety of practice settings. These preceptor/alumni know the program from the student perspective, giving them a unique understanding of students' needs and program requirements. (Q9, 10)

The OEE reviews student assessments of preceptors and sites to identify those that require intervention for quality improvement. Preceptor identification of a student issue also prompts a site visit. In the 2014-15 year the OEE visited 69, or over half of, high utilization (defined as precepting an IPPE student 2 out of 3 Co-op periods and 4 out of 7 APPE blocks) sites. The goal of each site visit was to obtain and deliver key information about the expectations and processes of the IPPE and APPE programs (e.g., clear instructions for preceptors to view student evaluations of their APPEs). Additionally, the visit provided a 'how to' guide to access available online preceptor development programming. Lastly, each site was asked to provide their preference for the frequency of ongoing contact with the OEE. (Q6)

Recent quality improvement measures include: a revised IPPE competency document (in collaboration with the NERDEE), revised APPE student final evaluation tool, comprehensive site visits (including materials for sites/ preceptors to invite more frequent visits) and updating required rotation descriptions. These improvements have allowed us to maintain a quality program based on NU's and ACPE's requirements. Graduating students from 2014 agreed that sites available for APPE were of high quality (NU 96.6%, peer/national 92.2%). The APPE program has been recognized with 2 AACP Crystal APPLE awards (2007, 2008) and a winning nomination for the Master Preceptor Award (2014). (Q7, 10,11)

Of the 27 AACP survey questions related to Standard 14, NU met or exceeded (by as much as 10 percentage points) agreement with the peer/national scores on 18 questions. The remaining questions were examined closely. From the 2014 student survey, ~5% more of the graduating class disagreed that the process by which they were assigned to IPPE sites was fair compared to 2013 results. Earlier, the OEE had received similar feedback and investigated the IPPE placement process. Results revealed that annually there is a minority of students who had not completed their IPPE requirements after 2 IPPE/Co-ops. Therefore, to ensure that requirements are met, their resumes were sent out to prospective employers before resumes from other students who have already completed requirements. A student who has completed his/her requirement may view this process as unfair, but it has improved the OEE's ability to ensure compliance with ACPE and programmatic requirement. The OEE is working to help students better understand the aspects of the experience that cannot be easily controlled. (Q11)

An additional APPE student concern involves access to patients in the ambulatory care environment. Some sites experience 'no show appointments' despite the best attempts by preceptors, and some students have provided feedback on preceptor/site evaluations about this situation. As a result, this uncontrollable aspect of the patient care environment is discussed prior to APPEs. (Q11)

Five questions on the preceptor survey identify a decline in the number of preceptors who agree with some aspects of our program (Qs 21, 23, 24, 36, 38). However, upon careful examination, the change was a result of just 1 or 2 preceptors selecting disagree or unable to comment. This underscores our need to increase the number of respondents to be sure the results reflect important trends rather than small variations as a result of low response rate. (Q11)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

15. Assessment and Evaluation of Student Learning and Curricular Effectiveness

As a component of its evaluation plan, the college or school must develop and carry out assessment activities to collect information about the attainment of desired student learning outcomes. The assessment activities must employ a variety of valid and reliable measures systematically and sequentially throughout the professional degree program. The college or school must use the analysis of assessment measures to improve student learning and the achievement of the professional competencies.

The college or school must systematically and sequentially evaluate its curricular structure, content, organization, and outcomes. The college or school must use the analysis of outcome measures for continuous improvement of the curriculum and its delivery.

2. College or School's Self-Assessment

| | |
|--|--------------|
| The college or school develops and carries out assessment activities to collect information about the attainment of desired student learning outcomes. The assessment activities employ a variety of valid and reliable measures systematically and sequentially throughout the professional degree program. | Satisfactory |
| The college or school's evaluation of student learning determines student achievement at defined levels of the professional competencies, in aggregate and at the individual student level | Satisfactory |
| The college or school uses the analysis of assessment measures to improve student learning and the achievement of the professional competencies. | Satisfactory |
| The college or school systematically and sequentially evaluates its curricular structure, content, organization, pedagogy, and outcomes. | Satisfactory |
| The college or school uses the analysis of outcome measures for continuous improvement of the curriculum and its delivery. | Satisfactory |
| The college or school has developed a system to evaluate curricular effectiveness. | Satisfactory |
| The college or school ensures the credibility of the degrees it awards and the integrity of student work. | Satisfactory |
| The college or school has mechanisms to assess and correct underlying causes of ineffective learning experiences. | Satisfactory |
| The college or school's assessments include measurement of perceived stress in faculty, staff, and students, and evaluate the potential for a negative impact on programmatic outcomes and morale. | Satisfactory |

3. College or School's Comments on the Standard

| |
|---|
| Focused Questions |
| <input checked="" type="checkbox"/> A description of formative and summative assessments and measures used to evaluate teaching and learning methods and curricular effectiveness, including nontraditional pathway(s) leading to the Doctor of Pharmacy degree (if applicable) |

- A description of the assessment measures and methods used to evaluate student learning and, achievement at defined levels of the professional competencies and educational outcomes, both in aggregate and at the individual student level
- How achievement of required competencies by all students is assessed and assured on completion of the program
- Comparisons with national data and selected peer-group programs (include a description of the basis for the peer-group selection) and trends over time
- How feedback from the assessments is used to improve student learning, outcomes, and curricular effectiveness
- The mechanisms in place to assess and correct causes of ineffective learning experiences, including the measurement of perceived stress in faculty, staff, and students and evaluation of the potential for a negative impact on programmatic outcomes and morale
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The school systematically evaluates curricular outcomes, structure, content, and organization of the curriculum. The curriculum committee (CC) works in unison with the assessment committee (AC) to collect and analyze data to document attainment of learning outcomes. Each committee has representation from key stakeholders: faculty, students, administrators, student services and alumni. Both committees receive charges from the dean based on the school's strategic plan, meet on a regular basis throughout the year, and collaborate frequently. Each committee has representation on the other via the directors of undergraduate and professional programs and assessment. The director of undergraduate and professional programs works closely with the CC, oversees the professional portfolio, and works as a liaison with the BCHS and university CCs. The director of assessment oversees programmatic assessment and assessment of educational outcomes, provides faculty development, and works closely with the AC and CC and the OEE. (Q2, 8)

Since 2009, the AC routinely reviews data collected via our school-specific graduating student exit survey, as well as AACP surveys, student services satisfaction surveys, performance on NAPLEX and MPJE, student progression and attrition statistics, and learning outcomes assessment data collected by faculty and through student self-assessments. This information is analyzed and recommendations are presented to the appropriate committees and administrators. A positive trend has been observed with respect to preceptors' awareness of mechanisms to provide curricular feedback to the school (agreement increased from 68% in 2009 to 78% in 2014). Our student, faculty, alumni and preceptor AACP response rates have always exceeded that of national and peer cohorts, indicating commitment of all stakeholder groups to our quality improvement process. (Q2, 9)

Faculty development to improve assessment practices and to foster a culture of assessment has been ongoing. Recently, specific workshops included: assessment basics, writing effective exam questions, mapping of exam questions to course and programmatic outcomes, and the use of exam analytics to identify learning gaps or areas of strength. We have also begun publishing an annual Curriculum & Assessment Newsletter that is shared with all students and faculty to highlight best assessment practices and curricular initiatives. Our efforts to increase faculty

expertise in the use of evidence-based assessment strategies have been reflected in the AACP faculty survey, with a 10% increase in faculty agreement that the school effectively uses programmatic assessment data to improve the curriculum (71% in agreement in 2010 vs. 83% in 2014) with a notable decrease in those who chose “unable to comment” for this question (24% in 2009 to only 4% in 2014), signifying a greater awareness and engagement in assessment. (Q1, 2, 9)

The foundation of any assessment program is the definition of and continuous attention to programmatic outcomes. Our ABOs (Standard 12) represent the minimal expectations for graduates of the professional program in pursuit of the missions of the school, college and university. Curriculum mapping to determine the degree to which all ABOs are covered by our course content and practice experiences has revealed an appropriate curricular breadth and depth of coverage (Standard 12). Likewise, mapping of Appendix B demonstrates richness in the scope of our curriculum. Our mapping and gap analyses continue to inform us of strengths and areas for improvement and have helped to develop an agenda for the CC and AC moving forward. We have identified the following areas of need for further analysis: pharmacognosy and alternative and complementary treatments, some aspects of practice management, pharmacy law and regulatory affairs, informatics, and aspects of leadership. There is also continued development of activities that develop interprofessional competencies. (Q2, 5)

Our assessment plan accurately describes our approach to comprehensive formative and summative curriculum evaluations. The plan (Appendix 15.8.1) was developed in 2008 and revised in 2014. The revised plan includes a comprehensive approach to assessment, detailing when assessment data are collected, who receives data and how results are used and communicated, as well as where to find results. The plan is organized by our programmatic and curricular assessments, and for each measure we have identified benchmarks to assess achievement. (Q1, 2)

The 2014 assessment blueprint (Appendix 15.8.2) has allowed us to consider the nature of assessments in our program. This blueprint extracts data from course syllabi, which indicate assessment methods for all outcomes and reflect the breadth of formative and summative assessments performed. Formative assessments include: in class exercises (use of clickers and other response systems, clinical patient cases, think pair share strategies, etc.), homework, drafts, performance based assessments in our skills labs, and mid-point IPPE/APPE feedback. Summative assessments include quizzes, exams, presentations, and performance based-assessments in laboratories and during experiential learning. Most of our performance-based assessments (in both didactic/ laboratory and experiential settings), papers, and presentations are evaluated using rubrics, which are developed, tested and revised by groups of faculty in attempts to ensure validity and internal reliability. During IPPE/Co-ops and APPEs, students are evaluated by preceptors using standardized performance evaluation rubrics that have been mapped to programmatic outcomes and Appendix C. Also, students are routinely asked to self-assess in experiential activities (IPPE/Co-op and APPE reflections) and co-curricular requirements (portfolio reflections and student self assessment of ABO achievement). (Q1)

A plan to document achievement of educational programmatic outcomes (Appendix 15.8.3) has been developed to ensure that all students attain our ABOs prior to graduation. In addition to receiving passing grades, evaluations of competency achievement have been encouraged in each course. Templates were developed to help faculty evaluate student achievement at both the lecture level and the course level (see examples Appendix 15.8.4-6). Some faculty also ensure outcome achievement by creating a course grade structure that requires students to achieve adequate competency in a specific area. For example, in the Pharmacology/Medicinal Chemistry courses, student must attain a passing score on both pharmacology and medicinal chemistry material to pass the course. This change was implemented as the result of assessment data that showed that many students were able to pass the course without achieving the competency in medicinal chemistry material. Another example of this is the CDM

Skills Lab courses where students must now pass the communication and order filling competencies, independent of the overall course score, to successfully complete the course. (Q3, 5)

In 2014 we adopted the use of ExamSoft software in response to the challenge of manual gathering and aggregation of data across courses. We anticipate that ExamSoft will provide a more feasible system for faculty to gather and evaluate student achievement of outcomes on individual and aggregate levels in individual lectures and courses, and across many courses (Appendix 15.8.6). The implementation of ExamSoft has provided further opportunities for faculty to develop their assessment practices and skills. Particular emphasis has been placed on using immediate assessment data to evaluate students' learning gaps and adjust instruction or provide remediation in real time. The software can also create student specific performance reports that highlight their strengths and learning gaps and allow for self-directed remediation. The AC continues to play an important role in continued faculty development and quality assurance of mapping. (Q3, 5, 8)

While some programs have instituted milestone and progress exams to evaluate student outcomes achievement, we have adopted an embedded assessment model in several of our courses. Throughout the 24 SH CDM series that integrates foundational pharmaceutical sciences content with clinical sciences, each exam includes 15-20% of content derived from previous coursework. With the powerful analytics available in ExamSoft, course faculty identify learning gaps, discuss these with the students during exam review sessions, provide suggestions and resources for further study, and then reassess students on future exams. Additionally, the CDM Skills Lab series comprehensively evaluates knowledge, skills, and attitudes covered in several other courses, such as the CDM series, Drug Information and Literature Evaluation, Research Methodology, and Educational and Behavioral Interventions in Pharmacy Practice courses. As we begin to implement Standards 2016 we will utilize the Pharmacy Curriculum Outcomes Assessment (PCOA) to provide additional benchmark data on the curriculum. (Q1, 3)

The CC employs a comprehensive systematic curricular review process to identify, integrate and document assessment activities and resultant curricular changes as described in Standard 10. The process is sensitive to advances in clinical and educational practices and is designed to focus on global curricular issues. The review process is aligned with the school's assessment policies and assists in the ongoing documentation of ABO achievement and ACPE standards. During the review, the CC members consider whether assessment methods are appropriate and how instructors link assessments with course objectives and documentation of student achievement of ABOs. (Q1-3)

The School has used the progressive, reflective, career development student portfolio since early 2000's to meet multiple objectives: career and professional development, student-faculty engagement, and student documentation of progress in achievement of learning outcomes. Each student is matched with a faculty advisor/mentor based on a survey of the student's interests in various pharmacy practice and research settings using the career options profiles from the American Pharmacists Association Pathways Program. (Q3)

In the portfolio (Appendix 15.7.1), students reflect on their career aspirations as well as recent activities and events to provide insight into healthcare and the profession of pharmacy. Each year the portfolio is tailored to aspects of student development and their progression through the curriculum. Students are required to reflect and document their progress to achievement of programmatic ABOs from year to year. From the breadth of curricular, experiential and co-curricular aspects of their education, students write a brief explanation of how the ABOs were achieved and provide one or more artifacts as evidence of outcome achievement (examples of artifacts can be course papers, photos of work/activities, exam scores, etc.) Reflections are structured using a "reflection on action" model and can help students modify and refine their professional goals. Faculty advisors meet with students annually to review the portfolio and provide feedback. (Q1-3)

Internal student and faculty survey data have identified areas for improvement in the portfolio process. An ad-hoc portfolio revision taskforce had been meeting regularly to work on revisions and in 2014-15 a new Student Professional Development committee was proposed (see charges and members in Appendix 15.8.7). The revised portfolio will consist of four pillars: Career Development; Documentation of Professional Competencies/ABOs; Personalized Education Plans/Differentiated Learning; and Professionalism (See Appendix 15.8.8). Student self-reflection and promotion of self-directed learning will continue to be emphasized. In addition, NU has recently obtained a site license with an e-portfolio platform (Digication®), and the progression portfolio was transitioned to this platform in Summer 2015. (Q5)

A number of systems are in place to ensure integrity of student work and credibility of student degrees. A faculty guidance document is available that suggests strategies to limit academic misconduct (Appendix 15.8.9). The majority of courses use assigned seating charts for exams, multiple versions of paper exams, and randomized question delivery in electronic testing platforms (Blackboard or ExamSoft). Whenever possible, additional space is obtained and multiple trained proctors are available. Students leave all belongings at the room perimeter. Class photo rosters are available for all courses through the Blackboard learning management system. The Degree Audit Reporting System is an automated process monitored by OSS advisors to ensure that each student completes all didactic, laboratory, and IPPE/Co-ops and APPEs required for degree completion. (Q7)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

While we find ourselves in compliance with this standard, we will continue to monitor our NAPLEX and MPJE pass rates. The curriculum for the graduating class of 2014 and progression standards was the same as for the previous five cohorts (i.e. new curriculum has not yet been implemented for this class). Evaluation of academic performance by the graduates who did not pass the NAPLEX exam revealed a history of academic deficiencies and problems with the pre-pharmacy interview (which was not high-stakes for this cohort of students). We anticipate that changes in the curriculum as described above and changes in requirements for progression into P1 year for the class of 2015 will have a positive impact on board pass rates. The CC is charged with evaluating jurisprudence content delivery during 2015-16. Additionally, implementation of ExamSoft and mapping validity and the e-portfolio platform will be monitored. Faculty development regarding the new e-portfolio platform is also planned.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| |
|---|
| 16. Organization of Student Services |
| The college or school must have an organizational element(s) devoted to student services. The administrative officer responsible for this organizational element must oversee and coordinate the student services of the college or school. |

2. College or School's Self-Assessment

| | |
|---|-------------------|
| The college or school has an organizational element(s) devoted to student services. | Needs Improvement |
| The organizational element(s) devoted to student services has an administrative officer responsible for overseeing and coordinating them. | Satisfactory |
| The budget assigned to student services is sufficient to provide needed services. | Satisfactory |
| The college or school has an ordered, accurate, and secure system of student records which are confidential and maintained in compliance with the Family Educational Rights and Privacy Act (FERPA). | Satisfactory |
| Student services personnel are knowledgeable regarding FERPA law and its requirements. | Satisfactory |
| The college or school provides students with financial aid information and guidance, academic advising, career-pathway and other personal counseling, and information about post-graduate education and training opportunities, e.g., residencies, fellowships, and graduate school. | Satisfactory |
| The college or school offers access to adequate health and counseling services for students. Appropriate immunization standards exist, along with the means to ensure that such standards are satisfied. | Satisfactory |
| The college or school has policies in place so that students who have off-campus classes or pharmacy practice experiences fully understand their insurance coverage and where and how to access health and counseling services. | Satisfactory |
| The college or school has a policy on student services, including admissions and progression, that ensures nondiscrimination as defined by state and federal laws and regulations, such as on the basis of race, religion, gender, lifestyle, sexual orientation, national origin, or disability. | Satisfactory |
| The college or school ensures that students in all degree program pathways and geographic locations have equal access to and a comparable system of individualized student services (e.g., tutorial support, faculty advising, counseling). | Needs Improvement |

3. College or School's Comments on the Standard

| |
|--|
| Focused Questions |
| <input checked="" type="checkbox"/> A description of student services offered and, if applicable, how the college or school ensures that students in all degree program pathways and geographic locations have equal access to and a comparable system of individualized student services (e.g., tutorial support, faculty advising, counseling) |
| <input checked="" type="checkbox"/> A description of the sections of the student handbook that deal with specific requirements of the standard and guidelines |

- How the college or school provides students with financial aid information and guidance, academic advising, career-pathway and other personal counseling, and information about post-graduate education and training opportunities
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The BCHS Office of Student Services (OSS) and school's Assistant Dean for Academic Affairs are responsible for the provision of student services (Appendix 16.2.1). Christine Letzeiser, the BCHS Assistant Dean of Undergraduate Student Services and Enrollment Management, serves as the administrative officer of OSS and reports directly to the BCHS Dean (See her CV in Appendix 16.1.1). Two academic advisors in the OSS are assigned to students enrolled in pharmacy programs. One advisor works with freshman early assurance students, while the other works with second year pre-pharmacy students and P1-P3 students and collaborates with the assistant dean for academic affairs. P4 students receive advising from the school through the OEE and from BCHS Graduate Office of Student Services. OSS staff provide support to pharmacy students at the college level by addressing students' developmental needs, inviting students to participate in institutional decision-making, enabling a strong and compassionate crisis response, and promoting a lifelong affinity with the university and alumni engagement. (Q1)

All pharmacy students have an OSS professional academic advisor through the completion of the P3 year and an advisor from the OEE in the P4 year. Students meet with their academic advisor during student orientations and throughout the curriculum for individual advising sessions to ensure smooth entry and progression that aligns with program requirements. While academic advising during these years is the primary responsibility of the OSS, there is also a collaborative process between the OSS and the school. Faculty members involved in both undergraduate and graduate education are assigned approximately 3-4 students from each pharmacy class to provide portfolio advising (see Standard 15). This faculty interface enables additional mentoring regarding career opportunities, personalization of educational experience, and student reflection on learning and attainment of educational outcomes. (Q1,4)

Undergraduate advisors, in collaboration with the assistant dean for academic affairs, regularly assist at-risk students (i.e., those who have a low grade-point average, past course deficiencies, and/or are self-identified as at-risk). Students returning from a leave of absence (LOA) can also be considered at-risk. In addition to the OSS advisors, undergraduate student athletes have a second advisor to assist with academic issues that may arise and have additional mandatory reporting as part of the National Collegiate Athletic Association (NCAA) student athlete retention policy. Students who matriculated into the PharmD curriculum through the post-baccalaureate direct-entry program are assigned their own dedicated primary faculty advisor (Dr. Conley) who works in consultation with the assistant dean for academic affairs. (Q1, 4)

Upon successful completion of the P3 year, students receive a BS in Pharmacy Studies degree. During the P4 year, the OEE provides student services. The Bouve Office of Graduate Student Services works collaboratively with the school to ensure administrative adherence to university requirements. (Q1, 4)

In the past two years three OSS staff members assigned to pharmacy have left the university (one due to retirement and two due to career opportunities elsewhere). The school has worked closely with the OSS to ensure

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

that newly assigned advisors are familiar with the pharmacy curriculum and school policies, minimizing the potential for disruption of continuity of support services for our students. One of the current advisors, Maegan Anyzeski, is a school of pharmacy alumna who decided to pursue a career in academic counseling after graduation. Changes in staffing in the OSS and the new direct-entry track pathway prompted further discussion regarding organization of student services in the school. The school would like to have a student advisor that works with all P1-P4 students regardless of their entry point and understands accreditation requirements, school progression policies and professional expectations and will work closely with the assistant dean of academic affairs and a number of school committees. (Q1, 4)

Since 2009, both the OSS and the OEE have increased FTE lines with the intent of achieving overall improvements within each respective office. The AACCP student surveys demonstrate high overall student satisfaction regarding student advising, tutoring services, career planning and guidance, and making information available about post-graduate education and training. There is also improving satisfaction with financial aid advising and health/wellness services, which are provided centrally by the university. (Q1, 5, 6)

Student records are available to OSS staff, each of whom has received formal compliance training regarding policies and procedures relevant to the Family Educational Rights and Privacy Act (FERPA). All electronic student records are kept confidential and secure through password protection and secure socket encryption technology. (Q4)

Both undergraduate and graduate advisors participate in a grade review at the end of each semester and contact students who did not complete program requirements and work with them to create a plan for success. The plan may include the use of university services, including but not limited to: the [Disability Resource Center \(DRC\)](#), [University Health and Counseling Services](#), [Career Services](#), financial aid office and tutoring services. The plan for success varies depending on the student's needs. Decisions about academic probation and dismissal from the major are also addressed at this time. In addition, faculty and staff use a web-based Faculty and Advisor Communication Tool (FACT) to proactively identify and notify students who may need guidance during the semester related to academic and other matters. (Q1, 4)

The OSS works closely with the school and the University Office of Undergraduate Admissions regarding student recruitment and admissions (See Standard 17). Support services for pharmacy students, including course specific tutoring, are coordinated with the assistant dean for academic affairs (see Standard 19). (Q4)

Prospective students are provided with extensive financial aid resource information at information and orientation sessions. The [University's Office of Student Financial Services \(OSFS\)](#) administers scholarships, awards (achievement and need-based), and loans and disseminates financial aid information and guidelines for both students and parents. At the local level, the school has a scholarship and awards program administered by a committee. Scholarships are provided by sponsors including pharmaceutical manufacturers, chain and independent pharmacies, and professional pharmacy organizations, as well as through endowed accounts that have been established by benefactors who wish to provide awards. The school awarded \$85,900 in scholarships in 2013-14 and \$119,850 in 2014-15. (Q1, 5)

[The BCHS First-Year Experience program](#) supports all first year BCHS students and is offered by the OSS. A first-year seminar class is required for all BCHS freshmen. The instructors for pharmacy student sections are pharmacy faculty, and many of the sections are also co-taught with upper-level pharmacy students designated as Bouve fellows and/or a pharmacy academic advisor. Content areas discussed include time management, diversity, introductory review of the pharmacy profession, and becoming familiar with the local communities. The Bouve fellows also serve as peer mentors. (Q4)

Upon matriculation into the P1 year (via direct-entry or early assurance pathways), students participate in orientation where they learn strategies to be successful, are informed about tutoring services available, curricular content development and linkage, professional code of conduct and technical standards. The importance of providing constructive feedback regarding learning experiences is also emphasized. (Q4)

Students have access to the Northeastern University Student Health Plan, which provides comprehensive medical and behavioral health care through [University Health and Counseling Services \(UHCS\)](#) and is administered by Blue Cross Blue Shield (BCBS) of Massachusetts. Students are encouraged to use UHCS when they are on campus for first-line care or acute injury, but they also have access to the BCBS preferred provider network for routine care off-campus and to national/international emergency services. In accordance with Massachusetts state law (105 CMR 220.000: Immunization of Students Before Admission to School), students enrolled full-time or three-quarters time in a degree program must obtain health insurance. Students are automatically enrolled in a university-administered health insurance program; however, individual students may waive university health insurance if they certify that they have insurance through another provider. (Q1, 4)

In accordance with university policy, the school is committed to providing its faculty and students equal opportunity and eliminating discrimination in the academic setting. The university policy on equal opportunity is available to students and faculty for review on the [Office of Institutional Diversity and Inclusion web site](#). The web site describes rights responsibilities, and a procedure for grievance relating to discrimination. (Q2)

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

While we find ourselves in compliance with this standard, recent discussions identified the desire to improve the organization of student services. The Assistant Dean for Academic Affairs will work with school dean and the BCHS OSS to discuss re-organization of student services to meet the needs of all pharmacy students regardless of entry point and year of academic standing.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|--|--|
| 17. Admission Criteria, Policies, and Procedures | |
| <p>The college or school must produce and make available to students and prospective students criteria, policies, and procedures for admission to the professional degree program. Admission materials must clearly state academic expectations, required communication skills, types of personal history disclosures that may be required, and professional standards for graduation. As a component of its evaluation plan, the college or school must regularly assess the criteria, policies, and procedures to ensure the selection of students who have the potential for academic success in the professional degree program and the ability to achieve the professional competencies and to practice in culturally diverse environments.</p> <p>Student enrollment must be managed in alignment with available physical, financial, faculty, staff, practice site, preceptor, and administrative resources. The dean and a duly constituted committee of the college or school must share the final responsibility for enrollment and selection of students.</p> | |

2. College or School's Self-Assessment

| | |
|--|--------------|
| The college or school produces and makes criteria, policies, and procedures for admission to the professional degree program available to students and prospective students. | Satisfactory |
| Admission materials clearly state academic expectations, required communication skills, types of personal history disclosures that may be required, and professional technical standards for graduation. | Satisfactory |
| As a component of its evaluation plan, the college or school regularly assesses the criteria, policies, and procedures to ensure the selection of students who have the potential for academic success in the professional degree program, the ability to achieve the professional competencies, and the disposition to practice in culturally diverse environments. | Satisfactory |
| Student enrollment is managed in alignment with available physical, financial, faculty, staff, practice site, preceptor, and administrative resources. | Satisfactory |
| The dean and a duly constituted committee of the college or school share the final responsibility for enrollment and selection of students. | Satisfactory |
| Written and verbal communication skills are assessed for student admissions in a standardized manner. | Satisfactory |
| Interviews are structured to consistently address key admission criteria for each applicant. | Satisfactory |
| Interviewers have appropriate credentials and are trained in successful interview strategies and techniques. | Satisfactory |
| Evaluation of professional attitudes and behaviors is a component of the student selection process. | Satisfactory |
| The college or school develops and employs admission criteria that set performance expectations for admission tests, evaluations, and interviews used in selecting students who have the potential for success in the professional degree program and the profession. | Satisfactory |
| The admission evaluation of students is documented and records are maintained by the college or school. | Satisfactory |

| | |
|--|--------------|
| Admission criteria, policies, and procedures are not compromised regardless of the size and quality of the applicant pool. | Satisfactory |
| In accordance with United States Department of Education regulations, the college or school has a process in place through which the college or school establishes that the student who registers in a distance education course or program is the same student who participates in and completes all course or program requirements and receives academic credit. | N/A |
| Consultation with ACPE occurs at least six months before recruiting students into new pathways or programs. | Satisfactory |
| The college or school ensures that early assurance students are at least as well qualified as students accepted for direct entry into the first professional year. Early assurance agreements and policies allow the college or school to manage student enrollment in alignment with physical, financial, faculty, staff, practice site, preceptor, and administrative resources. | N/A |

3. College or School's Comments on the Standard

| Focused Questions |
|--|
| <input checked="" type="checkbox"/> Admissions and enrollment Information, highlighting how specific requirements of the standards and guidelines are met, including those for early admission agreements or policies, if applicable |
| <input checked="" type="checkbox"/> How admission evaluations of students is documented and how records are maintained. |
| <input checked="" type="checkbox"/> A description of the college or school's recruitment methods |
| <input checked="" type="checkbox"/> A description of methods used to assess verbal and written communication skills of applicants to the program |
| <input checked="" type="checkbox"/> How enrollment is managed in alignment with available physical, financial, staff, faculty, practice site, preceptor and administrative resources |
| <input checked="" type="checkbox"/> How curricular outcomes data are correlated with admissions data |
| <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements |
| <input checked="" type="checkbox"/> Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms |

(School comments begin here)

The school has three pathways for admission to the professional degree program: freshman admission into the school of pharmacy (referred to as early assurance), transfer admission (internal or external candidates with college credit who transfer into the early assurance pathway within the first two years of the pre-pharmacy curriculum), and direct-entry post-baccalaureate track (referred to as direct-entry). The school has no formal admission agreements with other institutions. (Q1, 7)

Early assurance and external transfer students apply to the university through the university's Office of Undergraduate Admissions (OUA). The OUA is responsible for reviewing applications and admitting students into the Pre-Ph1 (freshman) or Pre-Ph2 (sophomore) years of the school. Direct-entry students apply through PharmCAS. The criteria, policies, and procedures for admission are available on the [university's](#) and [school's](#) web sites. The school's web site includes complete academic and admission information, describes research

opportunities, experiential learning through Co-op, and other program information. It also provides access to a searchable database for course equivalency for those students who desire to transfer college credit. In addition, the web site denotes technical standards for the PharmD program that includes intellectual abilities, communication skills, social maturity, and observational and motor skills. Additional student information regarding curriculum; personal, professional and academic conduct; progression requirements; health requirements for experiential learning opportunities; and background checks may be found in the university catalog and the Direct-Entry PharmD Student Handbook (Appendix 17.15.1). More than 90% of students responding to the 2014 AACP student survey agreed or strongly agreed the admissions process of the college/school of pharmacy was well organized. (Q1, 2, 5, 7, 9)

NU uses recruiters around the country to attract students to all of its programs. Additional recruitment efforts for early assurance and transfer students include faculty and P2-P4 student involvement in informational sessions (Health Science Days), as well as events targeting admitted students (phone calls, Welcome Days). (Q3)

Pre-professional educational requirements for admission to the P1 year include courses in the basic sciences, mathematics, information and communications technologies, general education (e.g., humanities, social sciences, a comparative study of cultures elective, etc), and physical sciences. Pre-requisites provide necessary scientific foundation and prepare students to successfully complete the professional curriculum. (Q7)

Admission evaluation for all prospective pre-pharmacy students considers four aspects of applicants: academic performance, performance on standardized tests, personal characteristics, and recommendations. To be considered for admission, a student needs strong grades in academically rigorous high school or college courses. While Northeastern University does not have minimum score requirements for standardized tests, past students admitted via the early assurance or transfer pathways have earned highly competitive scores on the critical thinking and math sections of the SAT and/or the ACT exams. Northeastern also considers the writing portion of the SAT/ACT exams in these admission decisions. Highly valued personal characteristics include creativity, diversity, leadership, and a global perspective and resiliency/adaptability. The submission of a PCAT score is not required for the early assurance or transfer pathways, but is a requirement for direct-entry students. (Q2)

Although the OUA is responsible for freshman admission evaluation, the dean of admissions and staff meet periodically with the school dean to review criteria for freshman admission and to ensure that any changes in selection criteria are understood and mutually agreeable. Transfer students who apply internally from other majors within the university or externally without a baccalaureate degree, apply through the Common Application and are evaluated by the OUA, the OSS, and the dean of the school. (Q2)

Our freshman admission process yields well-qualified and diverse students with enrollment characteristics that consistently exceed those of students entering the university at large. Average SAT scores and GPAs for the fall 2015 admitted freshman pre-pharmacy students are 1434, and 4.10, respectively, compared to 1420 and 4.0 for university students, respectively. We enroll freshmen from many regions, countries, and ethnic backgrounds (Appendix 17.15.2). (Q1)

External transfer student applications are evaluated by the OUA and the school dean. They are held to the same high standards in terms of scholastic and overall achievement. Written communication skills are evaluated through their application essay and pre-requisite writing course grade. Internal transfer students are also known as “change of major” students within the university. Starting fall 2015, the standards by which a student may change their major to pharmacy (pre-pharmacy status only) are the following:

- Minimum cumulative GPA of 3.500
- Minimum GPA of 3.000 in sciences courses

- Minimum of 12 credits of science courses in residence at the University

Change of major and external transfer students are integrated with the early assurance students in the sophomore year and are required to participate in the second year student progression interviews. (Q1, 2)

Student class enrollment is targeted at 145 in the professional years of the program to maintain consistent alignment with physical, financial and personnel resources. Attrition, which historically has been low, is offset through internal and external transfer students or direct-entry students. The characteristics of students admitted through the direct-entry program are available in Appendix 17.15.3. While our freshman enrollments into the early assurance track have decreased in the past two years, we have been able to maintain stable enrollment in the professional years of our program with transfer, change of major and direct-entry students. (Q5, 9)

The dean charges the school's admission committee to oversee all aspects of admission of students into P1 year. Early assurance students are guaranteed an interview if they meet minimum progression requirements outlined in the student handbook. The admissions committee oversees the interview process (see Appendix 17.2.1). The committee also exclusively oversees the application, interview and acceptance processes of students for direct-entry into the P1 year. (Q1, 2, 5)

The PharmCAS web site facilitates initial processing of the direct-entry applicants and allows the committee to easily stratify applicants based on baccalaureate degree, overall GPA, science GPA, and organic chemistry GPA prior to the committee's complete review of the application. A requirement for PCAT scores occurred with incoming students in 2015 in the evaluation process. The committee reviews and discusses all applications remotely and in face-to-face meetings using a 3-point scoring system for each applicant (1–highest rating, 2–high rating, 3–not recommended) and then reviews all highest rated applicants to determine whom to invite for on-campus interviews. (Q3)

Questions used during the interview process (Appendix 17.2.1) are from the standard questions developed for the early assurance student interviews and all related documentation is kept within the school's office the dean. (Q1, 2, 3)

All early assurance students must pass the standardized interview in addition to meeting all other progression requirements. The process was formative to students in 2009 and 2010 allowing faculty to gain experience with the process and provide feedback for revision to the questions, rubric and how students were evaluated. Beginning with the P1 class entering summer of 2011 (Class of 2015), the interview is a high-stakes mandatory progression requirement. The interviews take place early in the spring of the sophomore year. The interview process, logistics, standardized questions and evaluation rubric are described in Appendix 17.2.1. Appendix 17.5.4 contains information regarding outcomes of interviews for early assurance cohorts. (Q4)

The school, through the work of the assistant dean of academic affairs, the academic affairs committee and the OSS, carefully monitors ongoing success of admitted pharmacy students. Data are analyzed to identify factors that predict academic success (See Standard 19). In recent years, we have increased our GPA progression requirement from 2.750 to 3.000 for our early assurance students. Beginning in the fall of 2016, early assurance and transfer students will need a minimum science GPA of 3.000 to progress into the P1 year. Further strategies currently being considered to ensure the success of all students include: maintaining a GPA of 3.000 or higher for all students in the professional years of the program, incorporation of the PCAT score into the early assurance interview evaluation and progression standard. By making these types of changes, we anticipate that we will admit only the most academically able early assurance students into the PharmD program. Available seats will be filled with direct-entry students. (Q7)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

18. Transfer of Credits and Waiver of Requisites for Admission with Advanced Standing
 The college or school must produce and make available to students and prospective students transfer credit and course-waiver policies, based on rational procedures and defensible assessments.

2. College or School's Self-Assessment

| | |
|---|--------------|
| The college or school produces transfer credit and course-waiver policies, based on rational procedures and defensible assessments and makes that information available to students and prospective students. | Satisfactory |
| The college or school implements policies and procedures for the evaluation of the equivalency of educational courses (preprofessional or professional) prior to admission or transfer to the professional degree program. | Satisfactory |
| Requisites are only waived based upon an educationally sound assessment of the professional competencies (as set forth in Standard 12) that have been achieved through continuing pharmacy education, other postgraduate education and training, and previous pharmacy practice experience. | Satisfactory |
| The college or school has established and implemented policies and procedures for students who request to transfer credits or who wish to change from one program pathway to another. | Satisfactory |

3. College or School's Comments on the Standard

| Focused Questions |
|---|
| <input checked="" type="checkbox"/> The number of transfer students, including (if applicable) international students or graduates of other professional degree programs admitted with advanced standing, and an assessment of the correlation between the criteria in the transfer policy and success in the program. If applicable, comparative performance data should be provided <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements |

(School comments begin here)

[The Office of Undergraduate Admissions \(OUA\)](#) manages transfer of credit prior to student matriculation, and the OSS manages transfer of credit after a student is enrolled. Guidelines are published in the university's [Undergraduate Day School Catalog](#). The university has an [extensive database](#) of equivalent courses from other colleges and universities and a standardized process for students to receive transfer credit if appropriate. (Q2)

Transfer or advanced placement credits occur upon admission to the pre-professional years. In the rare circumstance where a student might seek transfer credit for a professional course, the Northeastern University Transfer system, based in the OUA, notifies the Director of Undergraduate and Professional Programs when a student makes a request. The director then reviews the request for pharmacy course equivalence with appropriate consultation of instructors of record and makes the determination if credit can be awarded, and for what equivalent course. Once that is complete, the degree audit for the student is updated by the system, allowing the transferred

course to fulfill the requirement in the student's degree audit. This information is sent to the Office of the Registrar so the transfer equivalency database can be updated. Since the last accreditation visit in 2009, there were no requests for transfer credit for professional (PHMD or PHSC) courses in our curriculum. (Q1)

Our school does not offer a nontraditional curricular pathway. The school and the Department of Health Sciences offer a [combined Doctor of Pharmacy \(PharmD\) and Masters in Public Health \(MPH\) degree program track](#) in BCHS. Students currently enrolled in the PharmD program can apply to the MPH graduate program during the P1, P2 or P3 years. Students in the combined degree program continue to meet the core curriculum requirements of the Doctor of Pharmacy program and take core MPH courses in the PharmD elective slots. The dual degree program requires an additional year beyond the traditional PharmD course of study. This new program was approved in 2014 and currently there is one student enrolled. Interest is building in this joint degree program as evident by 31 P1 and P2 students who attended an orientation/information session in the summer of 2015. (Q2, 3)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|--|--|
| 19. Progression of Students | |
| The college or school must produce and make available to students and prospective students criteria, policies, and procedures for academic progression, academic probation, remediation, missed course work or credit, dismissal, readmission, rights to due process, and appeal mechanisms. | |

2. College or School's Self-Assessment

| | |
|---|--------------|
| The college or school produces and makes available to students and prospective students criteria, policies, and procedures for academic progression, academic probation, remediation, missed course work or credit, dismissal, readmission, rights to due process, and appeal mechanisms. | Satisfactory |
| The college or school's system of monitoring student performance, based on formative assessments of learning outcomes provides for the early detection of academic difficulty. | Satisfactory |
| The college or school maintains a record of student retention, attrition, and on-time graduation, identifies and analyzes trends, and makes programmatic adjustments as needed. | Satisfactory |
| The college or school ensures that all students have comparable access to individualized student services such as comprehensive academic success counseling, tutoring and faculty advising. | Satisfactory |

3. College or School's Comments on the Standard

| | |
|---|--|
| Focused Questions | |
| <input checked="" type="checkbox"/> How student matriculation, progression and graduation rates correlate to admission and transfer policies and the college or school's mission <input checked="" type="checkbox"/> The academic counseling and/or student support staff available to work with students seeking to retain or regain good academic standing, and how extensively they are utilized <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements <input checked="" type="checkbox"/> Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms | |

(School comments begin here)

Northeastern University and the School of Pharmacy produce and make available documents detailing the academic progression of students. [The Northeastern University Undergraduate Student Handbook](#), the [Registrar's Undergraduate Catalog](#) and [the Bouve College of Health Sciences Undergraduate Information Manual](#) (Appendix 19.1.1) complement one another and are available in print and electronic forms. Our direct-entry students are referred to *Direct-entry Graduate Student Handbook* (Appendix 19.1.2), and [Bouve Graduate Student Manual](#) (Appendix 19.1.3), and Undergraduate student manuals for progression-related policy information. See Appendix 19.2.1 for location of relevant policies. (Q3)

Students must be in good academic standing to progress with their class. OSS staff, who review the academic progress of each undergraduate pharmacy student at the end of each semester, notifies those students who fall below the minimum requirements for progression. Direct-entry and P4 students are monitored by the Bouve Graduate Office of Student Services (BGOSS). The Office of Experiential Education and the Assistant Dean for Academic Affairs work closely with BGOSS to monitor all students' progress during the P4 year and Michael Conley works closely with direct-entry students. Progression standards are based not only on prior satisfactory academic achievement, but also on adherence to the Professional Code of Conduct (see Standard 23), which incorporates elements of professional behavior and academic integrity and successful pass of the interview (see Standard 17). (Q1)

Students who are subject to academic probation or dismissal from the program as a result of non-adherence to the progression standards are entitled to the right of due process. The School of Pharmacy Academic Affairs Committee (AAC) is responsible for hearing appeals related to academic warnings, professional misconduct, probation, dismissal, permission to resume studies, changes in requirements, and repeating courses from undergraduate pharmacy students. The Bouve Graduate AAC was responsible for direct-entry students and all P4 students through the summer of 2015. To ensure consistency and continuity, the school's AAC will begin to hear all appeals from all pharmacy students starting in the fall of 2015. The AAC consists of seven voting members: three from each department of the school and a IPPE/Co-op coordinator. The assistant dean (Ex-Officio) and an administrative representative from the OSS serve as non-voting members. The current policies are available in the *Bouve College of Health Sciences Undergraduate Information Manual* and *the Graduate Manual*. (Q3)

Since 2008, the AAC has been reviewing the progression of all students who have had academic difficulty with respect to pre-professional courses, particularly science-based courses, to better guide the AAC's recommendations for student remediation/continuation in the Doctor of Pharmacy program. The committee has repeatedly observed that students with academic difficulties in Organic Chemistry I/II tend to have difficulties in Pharmacology/Medicinal Chemistry I/II and in the Comprehensive Disease Management (CDM) modules. The AAC's prospective process of using academic progression statistics as predictive measures of future success in subsequent courses has led to this committee's informed, evidence-based approach (and a more strict adherence to course prerequisites) for students with academic appeals. Although this process typically involves AAC decisions resulting in student drop-backs, the AAC has strongly affirmed that students are better prepared to succeed when they have mastered the foundational course concepts. More stringent progression standards into the P1 year have been implemented based on recommendations from the ACC. (Q3, 4)

In 2007 Northeastern University introduced a Faculty Advisor Communication Tool (FACT) that provides a method of providing feedback to students and academic advisors for early intervention, coaching, and assistance. FACT is located in the faculty view of each course in Blackboard. Throughout the semester, faculty can use FACT to submit warnings, attendance reports, and progress reports to students and their OSS advisors plus the Assistant Dean for Academic Affairs. Students are then contacted by the student services advisor to schedule meetings with them and their faculty, if advised. The assistant dean for academic affairs arranges tutoring for the P1-P3 courses and meets with students individually to discuss learning/studying strategies. (Q2, 4)

During our 2009 self-study we identified the need to provide additional tutoring services, particularly for P2 and P3 students in our upper-level pharmacy courses. Under the direction of the assistant dean for academic affairs the school has implemented a robust tutoring system aimed at all levels of professional students in an effort to increase the students' overall success and progression in our program. Academic assistance and tutoring are provided through a variety of resources (Appendix 19.3.2). (Q2, 4)

- Freshman and sophomore students (pre-pharmacy curriculum):

- The *Peer Tutoring Program* offers a wide variety of tutoring services to meet the academic needs of undergraduate students. Tutoring is provided for many introductory level courses, as well as some of the upper-level courses in the NU Core. The goal of the *Peer Tutoring Program* is to support our learning community by promoting independent and active learning and to have a direct and positive effect on improving academic achievement. The program's mission is to empower students by engaging them with the curriculum so that they can reach their full academic potential. The *Peer Tutoring Program* is committed to working closely with the faculty in the academic departments in order to firmly ground tutoring as an extension of the classroom experience. Students are able to book tutoring appointments via their MyNEU portals. Tutoring services are free and open to all NU undergraduate students. (Q4)
- Classroom Coach is a tutoring service provided to students within the college by the OSS. Pharmacy students both serve as classroom coaches and benefit from these services. The coaches attend the lectures in the course for which they provide tutoring and facilitate 1 hour review sessions/large group tutoring twice a week. This resource has been provided for General Biology I and II, General Chemistry I and II, and Organic Chemistry I and II.
- P1-P3 students (PharmD curriculum):
 - Since 2010, a structured tutoring and advising program for P1-P3 students has been managed by the school of pharmacy assistant dean through coordinated effort with our Rho Chi chapter. Rho Chi student members serve as tutors for students enrolled in Pharmacology/Medicinal Chemistry I and II and Comprehensive Disease Management I, II, III, and IV. All Rho Chi students who chose to serve as tutors must receive College Reading and Learning Association (CRLA) certification – Level 1 prior to being assigned as a tutor. (Q4)
 - Students who may benefit from tutoring services are identified as part of the assistant dean's continued monitoring for student success. Students are notified about small group (up to 20 students per session) and micro (up to five students per session) tutoring availability as well as the opportunity to meet with the assistant dean to explore and discuss effective learning and studying strategies. Students who wish to meet with the assistant dean are asked to complete a pre-meeting survey about their current study habits and learning preferences. This information is reviewed with the students to identify new and customized learning and studying strategies. Based on student feedback, an overview of effective learning and studying strategies has been incorporated in the P1 student orientations. More recently, with the adoption of ExamSoft, the assistant dean incorporates the "Strengths and Opportunities" reports into the meetings with at-risk students. For more information on tutoring services offered and utilized, see Appendix 19.3.3. Additional academic support services are available from the [University's Disability Resource Center](#), the [Writing Center](#), and course teaching assistants.

Survey data confirms that our efforts in improving tutoring services have been successful (see Standard 16). Only 7.5% of students disagreed that tutoring services met their needs. The tutoring and learning/studying strategies have also contributed to the increase in students' on-time and overall graduation rates. (Q4, 5)

The school carefully monitors attrition, retention, progression, and on-time graduation rates. Please refer to Appendix 19.3.4 for relevant data not displayed in AAMS. Data for the class of 2015 will be available in late September and will be shared with the team during the visit. The school has made significant strides in improving on-time graduation rates from 75% to 86% between 2011 and 2014. Additionally our overall graduation rate has improved from 86% to 93% in the same time period. This improvement is attributed in part to the higher caliber of students upon entry, more rigorous admission requirements, and academic support provided to students. (Q1, 4, 5)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

20. Student Complaints Policy

The college or school must produce and make available to students a complaints policy that includes procedures to be followed in the event of a written complaint related to one of the accreditation standards, student rights to due process, and appeal mechanisms. Students must receive information on how they can submit a complaint to ACPE for unresolved issues on a complaint related to the accreditation standards.

2. College or School's Self-Assessment

| | |
|---|--------------|
| The college or school produces and makes available to students a complaints policy that includes procedures to be followed in the event of a written complaint related to one of the accreditation standards, student rights to due process, and appeal mechanisms. | Satisfactory |
| Students receive information on how they can submit a complaint to ACPE for unresolved issues on a complaint related to the accreditation standards. | Satisfactory |
| The college or school includes information about the complaint policy during student orientation. | Satisfactory |
| The college or school maintains a chronological record of student complaints related to matters covered by the accreditation standards and allows inspection of the records during on-site evaluation visits by ACPE. | Satisfactory |
| The college or school informs ACPE during an on-site evaluation if any of the student complaints related to the accreditation standards have led to legal proceedings, and the outcomes of such proceedings. | Satisfactory |

3. College or School's Comments on the Standard**Focused Questions**

- How the complaint policy is communicated to students
- The number of complaints since the last accreditation visit and the nature of their resolution
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACCP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The Student Complaints Policy and Procedure was developed by the Executive Committee and approved by faculty in 2008 (see Appendix 20.1.1). Both the Student Complaints Policy and Procedure and the Student Complaint Form are clearly identifiable on the [school's web site](#) (under Accreditation). Students from each year in the degree program are informed of the policy and procedure to file a complaint via a classroom visit by the dean every fall semester, with the exception of those students off-campus on IPPE/Co-op who are visited by the dean in the Spring semester. Effective fall 2014, the policy and procedures are also reinforced during the P1 year orientation, where all students receive a copy of the policy and procedures and sign that they have read and

understand it (records are kept in the dean's office). Furthermore, a chronological record of student complaints is maintained in the dean's office. (Q1, 3)

Since the previous accreditation cycle, no complaints related to accreditation standards have been submitted. (Q2)

On the 2014 AACP Graduating Student Survey, 84% of our students agreed or strongly agreed that the college has a process for which students can raise issues with the school's administration. These data are comparable to national cohort. Since 2009 we have seen consistent improvement on this question reflective of leadership efforts to increase student awareness of the Complaints Policy and Procedure and the open door policy that the faculty and administrative leaders have at our school. (Q4, 5)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

21. Program Information

The college or school must produce and make available to students and prospective students a complete and accurate description of the professional degree program, including its current accreditation status.

2. College or School's Self-Assessment

| | |
|--|--------------|
| The college or school produces and makes available to students and prospective students a complete and accurate description of the professional degree program, including its current accreditation status. | Satisfactory |
| Admissions policies, procedures, and practices fully and clearly represent the conditions and requirements related to distance learning, including full disclosure of any requirements that cannot be completed at a distance. | N/A |

3. College or School's Comments on the Standard

Focused Questions

- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

Students are directed toward the [school's web site](#) to obtain and review information including the school's current accreditation status, degree programs, curricula, student handbook and descriptions of the coursework they can expect to complete within the program. Information available on the web site is reviewed at least once per academic year and updated accordingly. This is done in an effort to ensure the most accurate information is being provided to current and prospective students, their families and anyone else interested in the school. School's web site underwent a substantial redesign and substantial improvements that went live in Fall 2014. (Q1)

The university's [Undergraduate Course Catalog](#) and [BCHS Undergraduate Manual](#) are provided to enrolled students and are available to prospective students in print and electronic formats (Appendices 21.4.1-2). Additionally a separate manual is available for direct-entry graduate students (See Standard 19, Appendix 21.4.3). These documents are reviewed and modified annually to incorporate new or revised policies and to ensure completeness and accuracy (Q1). Beginning in 2013 the school began posting quality indicators for our program via our web site. These are updated annually. (Q2)

The data from AACP graduating student survey reveals that most students (92-97% since 2009) agree or strongly agree that the school provided timely information about news, events and important matters within the college/school of pharmacy. All pharmacy students completing the survey in 2014 agreed or strongly agreed that they were aware of expected behaviors with respect to professional and academic conduct. These data are similar to national cohort responses. (Q3)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|---|--|
| 22. Student Representation and Perspectives | |
| The college or school must consider student perspectives and include student representation, where appropriate, on committees, in policy-development bodies, and in assessment and evaluation activities. | |

2. College or School's Self-Assessment

| | |
|--|--------------|
| The college or school considers student perspectives and includes student representation, where appropriate, on committees, in policy-development bodies, and in assessment and evaluation activities. | Satisfactory |
| The college or school involves student representatives on appropriate program committees, as well as in accreditation self-studies and strategic planning activities. | Satisfactory |
| The pharmacy students feel their perspectives are heard, respected, and acted upon in a fair and just manner. | Satisfactory |
| A clear process exists for students to follow to raise issues with the college or school administration. | Satisfactory |
| The college or school administration responds to problems and issues of concern to the student body. | Satisfactory |

3. College or School's Comments on the Standard

| | |
|---|--|
| Focused Questions | |
| <input checked="" type="checkbox"/> The participation and contribution of students on college or school committees <input checked="" type="checkbox"/> The organization, empowerment, and implementation of a student government association or council <input checked="" type="checkbox"/> The other methods (e.g., focus groups, meetings with the Dean or other administrators, involvement in self study activities, review of student complaints) used to gather student perspectives <input checked="" type="checkbox"/> Examples of quality improvements in the college or school that have been made as a result of student representation and perspectives <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements <input checked="" type="checkbox"/> Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms | |

(School comments begin here)

Comments and suggestions made by the student body are of highest importance to the school's administration and faculty. The following standing committees include a student representative: Curriculum, Assessment, Student Professional Development and Professional Affairs (Appendices 22.1.1-2, 22.2.3). P1-P4 students receive an email detailing SOP committee charges and eliciting student interest in committee service. The Pharmacy Student Governing Organization (PSGO) and assistant dean for academic affairs coordinate responses. This information is sent to the dean to populate student members on committees. (Q1)

During our self-study process, a total of 15 students participated on a total of six committees. Student participation included attending committee meetings, providing valuable insight during the process, and being involved with the development of the self-study report. Student committee members also summarized the self-study report and solicited additional input from their colleagues during the student self-study town hall meeting. (Q1)

The PSGO adds structure to student government, represents every class, has direct access to the office of the dean and is advised by the assistant dean for academic affairs. The purpose of the PSGO is to encourage professional and educational advancement among students and faculty and to unite and conduct the affairs of the students of the SOP in cooperation with the faculty, alumni, and the community at large. PSGO board helps to oversee pharmacy student professional organizations. The elected executive board consists of the PSGO president, president-elect, immediate past-president, secretary, treasurer and member-at-large. The PSGO consists of the elected board members from all student organizations and also includes the four class representatives from P1-P4 classes (Appendix 22.2.1). The PSGO serves as a forum for students to bring ideas and concerns to the school's administration. Student representatives are asked to make announcements or solicit feedback from their classmates on issues requiring attention from administration. Through a feedback loop, these ideas and concerns are then transmitted back to the faculty as appropriate. Student leaders are also actively involved with the BCHS Student Dean's Council. In the fall 2014 the PSGO started a newsletter, "The Weekly Dose" that is sent at the beginning of each week to inform the student body and faculty of news and upcoming events. (Q2)

The school employs formative and summative evaluations to obtain student perspectives in program evaluation and development. At the school level, the PSGO conducts a formative faculty and curricular evaluation using mid-semester feedback from students. The university's TRACE system is systemically employed to obtain end-of-semester course evaluations (See standards 3 and 15). (Q3, 6)

Since the previous accreditation, the school has held periodic student town hall meetings (Appendix 22.2.2) to address various aspects of the pharmacy program. Data gathered has informed our 2012 curricular and the 2014 portfolio revisions. Specific changes implemented are described in detail in the curriculum standards. Changes in course sequences, improved flexibility, as well as the development of new elective courses were the direct result of student feedback. Additionally, the strategic plan contains a goal dedicated to developing and refining personalized education experience for students (see Standard 2). (Q3, 4)

Student representation on committees provides for equitable representation regardless of the program pathway in which an individual student may be enrolled. Previously, university policies stated that direct-entry pharmacy students (who are classified by the university as graduate students) were not able to serve in leadership positions of undergraduate student organizations. The PSGO and assistant dean for academic affairs worked to resolve this, and, as of November 2014, direct-entry pharmacy students can serve in leadership roles (except treasurer). (Q6)

Our school has seen improvement in student perceptions of the effectiveness of student government. In 2014, 84% of students agreed or strongly agreed that effective student government exists at our school, as compared to 72% in the 2009 self-study. Part of this may be attributed to a re-structuring of the PSGO and inclusion of students on standing committees. This is an excellent example of how we recognized a problem, instituted changes (including instructing committee chairs to schedule meetings when students are available) and saw positive results on student surveys. Ninety four percent of our students (90% national) favorably responded to the school's use of course evaluations and surveys to obtain student perspectives and needs. Furthermore, 90% of NU students felt that the school's administration responded to problems and issues of concern (82% national). (Q5, 6, 7)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| 23. Professional Behavior and Harmonious Relationships | |
|---|--|
| The college or school must provide an environment and culture that promotes professional behavior and harmonious relationships among students, faculty, administrators, preceptors, and staff. Faculty, administrators, preceptors, and staff must be committed to developing professionalism and fostering leadership in students and to serving as mentors and positive role models for students. | |

2. College or School's Self-Assessment

| | |
|---|-------------------|
| The college or school provides an environment and culture that promotes professional behavior and harmonious relationships among students, faculty, administrators, preceptors, and staff. | Satisfactory |
| Faculty, administrators, preceptors, and staff are committed to developing professionalism and fostering leadership in students and to serving as mentors and positive role models for students. | Satisfactory |
| The college or school develops, via a broadly based process, a policy consistent with university policies on student, faculty, preceptor, and staff professionalism that defines expected behaviors and consequences for deviation from the policy, as well as due process for appeals. | Satisfactory |
| The activities undertaken by the college or school to promote professional behavior are effective. | Satisfactory |
| The activities undertaken by the college or school to promote harmonious relationships are effective. | Satisfactory |
| The activities undertaken by the college or school to promote student mentoring and leadership development are effective. | Satisfactory |
| Faculty receive support from peers to participate in student mentoring and leadership development activities, and these efforts are viewed favorably by college or school administration. | Needs Improvement |
| The college or school supports students, faculty, administrators, preceptors, and staff participation, where appropriate, in pharmacy, scientific and other professional organizations. | Satisfactory |

3. College or School's Comments on the Standard

| Focused Questions | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | Strategies that the college or school has used to promote professional behavior, and the outcomes |
| <input checked="" type="checkbox"/> | Strategies that the college or school has used to promote harmonious relationships among students, faculty, administrators, preceptors, and staff; and the outcomes |
| <input checked="" type="checkbox"/> | Strategies that the college or school has used to promote student mentoring and leadership development, and the outcomes |
| <input checked="" type="checkbox"/> | How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> | Any other notable achievements, innovations or quality improvements |

Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

Faculty and students work together in many ways to promote professional behavior and achievement of educational outcomes. The PSGO is an umbrella organization comprised of 11 organizations (Appendix 23.2.1). PSGO bylaws state that the group is “an empowering and nurturing environment for student pharmacists at NU to make significant contributions to the community, the school, and the pharmacy profession”. All students enrolled in the school, and in good academic standing, are eligible for membership. PSGO and the student groups organize many events to achieve their missions and goals. These events include group meetings, fundraisers and guest speakers, and they are meant to expose students to important issues in healthcare and career opportunities as well as promote harmonious relationships between faculty and students. The PSGO maintains a school-wide event calendar and sends the “Weekly Dose” summarizing all upcoming events to all students and faculty (Appendix 23.2.2). (Q1, 2)

In 2014, more than 95% of students responding to the AACP graduating student survey agreed that “faculty, administrators and staff were committed to serving as positive role models for students” and that “preceptors modeled professional attributes and behaviors in the pharmacy practice experiences”. Every student agreed that they were aware of expected behaviors with respect to professional and academic conduct. In 2010, students’ perceptions of how the school manages academic and professional misconduct was low. In response, under the guidance of the assistant dean of academic affairs, the PSGO developed a student code of professional conduct and implemented policies and procedures, approved in January 2015 (Appendix 23.1.1). Student opinion has improved and we anticipate such perceptions to continue to rise. (Q1, 5, 6)

The PSGO and the assistant dean for academic affairs have worked diligently to raise awareness among students and faculty about academic integrity and plagiarism, and the consequences of academic and professional misconduct. The school works closely with the [NU Office of Conflict and Conduct Resolution \(OSCCR\)](#) and reinforces the university’s policy on academic integrity, which is included in template for school’s syllabi. (Q1, 5)

The school reinforces, promotes, and evaluates professionalism in many other ways, from the annual White Coat Ceremony for P1 students to formal incorporation and assessment in the didactic and experiential curriculum. Our ABO map revealed that *professionalism* outcome is reinforced in 60% of our didactic courses, all required IPPEs and APPEs, and our professional portfolio (see Standards 12 and 15). (Q1)

The school remains highly committed to leadership development among our students. In addition to faculty support in the form of advising and mentoring for all professional student organizations (Appendix 23.2.1), students may request financial support through the office of the dean. Requested funds may be utilized for professional development, such as professional meeting attendance. Since 2010, the Phi Lambda Sigma (PLS) Pharmacy Leadership Society, in collaboration with PSGO, has sponsored and conducted an annual leadership retreat for all student leaders and involved many of the faculty. Team building activities and diversity components are incorporated into each retreat using a leadership theme for the professional development component. Some of the more recent themes have included; Strength-Based Leadership, Colors of Leadership, interprofessional leadership, and strategic planning. More than 90% of students agreed or strongly agreed on the 2014 survey that “administration and faculty encouraged me to participate in regional, state or national pharmacy meetings”. Internal 2014 exit survey also revealed that 75% of our students were members of one of the school’s professional pharmacy organizations and 62% were members of a national pharmacy organization (Appendix 23.2.3). (Q3, 5, 6)

The school also works to promote harmonious relationships among students, faculty, administrators, preceptors, and staff. Students are afforded many opportunities to engage with faculty outside of class through service learning activities and social activities coordinated through the dean's office. As mentioned in Standard 22, student perspectives are heard in committee meetings, at monthly PSGO meetings, town hall meetings, via mid-semester and end of semester course evaluations and during this self-study process. (Q2)

Faculty willingly participate in many of the events organized by the students. For the past eight years, Phi Delta Chi (PDC) organizes and sponsors a BCHS-wide Health Fair on campus. In 2014 over 2,800 students, faculty, and staff attended the fair to receive free flu shots, participate in a blood drive, cholesterol testing, and other health screenings. Many faculty and staff help with the organization of this event. PDC involves all other students organizations from the school as well as their colleagues in the School of Nursing and other health science programs. Other examples of faculty student collaboration include basketball games, walks and runs to fundraise for various organizations, and special events hosted annually by various student organizations. The Rho Chi chapter holds RxWars annually, where faculty and student teams battle based on their pharmacy trivia knowledge using a game format. Most recently in 2014 and 2015, Rho Chi organized an auction event where faculty and students can donate "events" to raise money for Relay for Life (\$3000 raised in 2014 and 2015). Examples of "events" offered included attending Red Sox or Celtics games, being a dean for the day, going bowling or having a game night, as well as many dining options offered by faculty and students from home cooked meals to going out to local restaurants. (Q2)

The Office of Experiential Education (OEE) has undertaken several improvements including more clear delineation of appointment and promotion criteria for adjunct faculty preceptors, availability of preceptor development documents, and preceptor recognition to promote the relationships between preceptors and students. It should be noted that in the first year of the AACP Master Preceptor program the school put forth a candidate who was ultimately recognized for his consistent contribution as an exceptional preceptor to our P4 students. (Q2)

During our 2008-09 self-study we identified student participation in research activities as an area for improvement. Great strides have been made to make students aware of and engage them in research with faculty. Rho Chi has published an annual Research Compendium (Appendix 23.2.4) since 2009. Since 2012, the school has placed a total of 47 students on research IPPE/Co-ops (29 with campus-based faculty and 18 at pharmaceutical companies). Additionally, during this same time the school has placed a total of 67 students in research-related APPEs. We are working on a better system to accurately quantify student participation in research and recognize that many faculty involve students as co-authors on their posters and publications. Student agreement with the question "I was aware of opportunities to participate in research activities with faculty" has increased from 68% in 2009 to 83-88% in 2013-14 and these perceptions are better than those noted in the national cohort. (Q4-6)

The school remains committed to ensuring student exposure to post-graduate training opportunities. Each year, faculty hold formal sessions to inform students about post-graduate training including residencies, fellowships, and post-graduate degree programs. After APPE block 4, all students attend an on-campus meeting with the agenda that is largely dedicated to providing information on job search and post-graduate training application processes. Our students are also formally invited to attend the regional residency showcases held at Massachusetts College of Pharmacy and Health Sciences University and at the New England Pharmacists Convention each fall. Over the past few years, our faculty have been involved in Massachusetts Society of Health System Pharmacists [Early Careerist Network](#) events aimed at providing pharmacy students with opportunities to network with local residents and residency directors and get useful advice about applications and interviews. We have also hosted fellowship information sessions from the Rutgers program and local fellowship programs. Additionally, many of the student organizations hold information sessions and invite residents or residency directors to discuss the importance of post-graduate education. Many of our students pursue post-graduate training. For the class of 2015, 43 students

(33%) were placed into ASHP accredited PGY1 programs and 5 students (4%) into fellowship programs and two students in full time graduate studies (one masters and one PhD). While our overall match rate is similar to national (63%), almost 50% of our graduates opt to participate in the match, while only about 30% of graduates nationally decide to do so. This results in about 30% of our graduates matched in PGY1 residencies, compared to a national average around 20%. More than 90% of our students consistently agree on the AACP survey that they were aware of additional educational opportunities. (Q4-6)

While faculty feel the support of their peers in student mentoring and development activities (e.g. attending events, judging skill competitions, etc), they would like to see more recognition for their efforts in this area by school, college and university administrators, particularly during annual performance evaluations and in promotion and tenure review. This area for improvement has been communicated to the department chairs and the school dean. (Q4)

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

While we find ourselves compliant with this standard, we will continue to monitor student and faculty perceptions on how the school manages academic and professional misconduct after full implementation of the new school specific Code of Professional Conduct Policy. Additionally, we will monitor perceptions of faculty regarding administration fully recognizing and valuing their service contributions related to student leadership development and mentorship, particularly during annual performance evaluations and promotion and tenure review.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|---|--|
| 24. Faculty and Staff - Quantitative Factors | |
| The college or school must have a sufficient number of qualified full-time faculty and staff to effectively deliver and evaluate the professional degree program, while providing adequate time for faculty development, research and other scholarly activities, service, and pharmacy practice. | |

2. College or School's Self-Assessment

| | |
|--|-------------------|
| The college or school has a sufficient number of qualified full-time faculty to effectively deliver and evaluate the professional degree program, while providing adequate time to ensure that the following are achieved: | Satisfactory |
| effective organization and delivery of the curriculum through classroom, small group, laboratory, practice simulation, service learning, and oversight and provision of experiential education | Satisfactory |
| faculty mentoring | Satisfactory |
| student advising and mentoring | Satisfactory |
| research and other scholarly activities | Satisfactory |
| faculty development as educators and scholars | Satisfactory |
| professional/community service and pharmacy practice (where indicated by their position) | Satisfactory |
| participation in college or school and university committees | Satisfactory |
| assessment and evaluation activities | Satisfactory |
| The college or school has a sufficient number of qualified full-time staff to effectively support the delivery and evaluation of the professional degree program. | Satisfactory |
| Faculty receive adequate support staff resources. | Needs Improvement |
| The college or school periodically conducts faculty workload and needs assessments, at appropriate intervals. | Satisfactory |

3. College or School's Comments on the Standard

| | |
|---|--|
| Focused Questions | |
| <input checked="" type="checkbox"/> A description of the process and interval for conducting faculty workload and needs assessments <input checked="" type="checkbox"/> An analysis of teaching load of faculty members, including commitments outside the professional degree program <input checked="" type="checkbox"/> The rationale for hiring any part-time faculty, and the anticipated duration of their contract <input checked="" type="checkbox"/> Evidence of faculty and staff capacity planning and succession planning <input checked="" type="checkbox"/> A discussion of the college or school's student-to-faculty ratio and how the ratio ties in with the college or school's mission and goals for the program <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements | |

Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms.

(School comments begin here)

The school consists of two departments: Pharmaceutical Sciences (DPS) and Pharmacy and Health Systems Sciences (DPHSS, previously Pharmacy Practice). DPHSS was renamed in 2014 to reflect the composition of the department that houses clinical and social/administrative sciences. Overall 57 faculty are currently employed (two are part time) with two open searches in the DPS. Faculty are well balanced in terms of their disciplines and rank/years of experience to meet the needs of the program and school mission. (Q5-7)

Since the last self-study, seven new faculty lines were added to ensure quality with increased enrollments. Our current student to faculty ratio is 10.5:1 (ranked 28/61 among private schools of pharmacy; national average is 11.2:1 and median 10.6). Our current ratio has improved since the last site visit (faculty student ratio of 11.7:1 reported in our 2009 self-study). The present level of staffing of our full- and part-time faculty in the DPHSS allows us to maintain a student faculty ratio of 3:1 during APPEs. Approximately 40% of APPEs are precepted by full-time faculty. Adjunct faculty precept the remainder of APPEs with typical student to faculty ratio of 1:1. During IPPE/Co-ops students are typically assigned preceptors with a 1:1 ratio. (Q5, 7)

The school has been fortunate to secure additional faculty and staff resources as described above and has had a relatively low turnover since the last accreditation visit (Appendices 24.1.1, 24.3.1, 24.4.1, and 24.5.1). The school dean is responsible for faculty and staff capacity planning. Most of our faculty resource determinations are based on needs for classroom/laboratory instruction, experiential education, and alignment of faculty with specific content expertise, research areas, and initiatives. The dean also examines faculty-to-student ratio data from private pharmacy schools and our peer match-mates in determining faculty needs. Part-time faculty are hired when additional expertise is needed (e.g., pharmacy law) or in cases of vacancies or leaves; however, approximately 95% of our didactic curriculum is delivered by the full-time faculty. With regard to experiential education, placements and site capacity data are reviewed to determine needs for full-time, co-funded and adjunct faculty based on total and required APPEs. Preceptors are offered adjunct faculty appointments. (Q3, 4)

Currently we have eight co-funded faculty positions in the DPHSS. A co-funded clinical faculty position is considered to be 1 FTE since the academic and clinical practice responsibilities are similar to that of fully-funded clinical faculty member. A practice site co-funds the position; however, the faculty member in that position is considered 1 FTE at NU in terms of employee benefits. The major difference in workload is service responsibilities; co-funded faculty provide more service at their practice sites and do not coordinate courses. (Q5-7)

The expansion of the leadership team and the balance of junior, mid-level, and senior faculty allows for better succession planning. When Dean Reynolds was asked to step into interim university and college positions, Dr. Zgarrick was able to fulfill the acting dean position, and Dr. Devlin and Dr. Gonyeau assumed responsibility for the acting chair position for DPHSS in 2014-15 and 2015-16 respectively. Faculty, rather than administrators, are responsible for the academic affairs, assessment, and curriculum committees, which builds expertise in these areas among faculty. The self-study revealed the need to begin planning for the succession of several faculty in the DPS who are likely to retire in the next several years, particularly in pharmacology. Efforts are underway to recruit a chair for the DPS. Concerns have been raised about securing sufficient laboratory space and resources necessary to recruit scientists, particularly those with established laboratories (see Standard 27). (Q4)

Faculty needs assessments are routinely conducted (at least annually) to provide quality student didactic and clinical experiences; meet the content requirements of the PharmD, graduate, and interprofessional programs; fulfill clinical service commitments; advance the scholarship of teaching, learning and the funded research enterprise;

and contribute to the scientific, clinical, and health-systems mission of the profession of pharmacy and its related disciplines. Service commitments, advising needs (both student groups and individual students through the portfolio process) and mentoring needs are also considered. The school encourages faculty to be involved in professional associations and values leadership involvement at the regional and national levels. (Q1)

Workload assessments are conducted annually in both departments and involve individual faculty meetings with the respective chair to discuss workload profiles, which are completed at the beginning of every calendar year (see Standard 26). Didactic and experiential teaching loads vary depending on the nature of an appointment and are analyzed for each faculty member and weighted with service and scholarship obligations in an effort to balance curricular needs with faculty needs and expertise. As a whole, faculty spend about half of their time on teaching in the PharmD courses and research activities, split equally, with the rest of the time spent on service, practice, mentoring, advising, and other activities. Individually, workload assignments are not uniform and vary in many ways depending on tenure or tenure track status, administrative responsibilities, co-funded status and research obligations. Faculty are also provided with workload flexibility and encouraged to participate in professional events. Recent survey data reveal that 78% of faculty agree that "My allocation of effort has been clearly stated", which is similar to the national comparison. The majority of faculty also feel they spent an appropriate amount of their effort on teaching and research (data similar to national), but too much time on service (35% of school faculty chose "too much" vs. 22% nationally). (Q1, 2, 8)

Since the last self-study, 3 faculty (out of 6 who applied) received tenure and 12 received promotions (out of 13) (See Appendix 24.7.1). The majority of the faculty and staff turnover since the last accreditation visit is due to retirement or resignation; however, there were also 3 negative tenure decisions, 1 tenure application withdrawn after departmental review and 1 faculty on tenure track whose appointment was not renewed after a 3rd year review. Those who resigned most often did so due to desire to move for family reasons or better career opportunities (See Appendix 24.4.1). (Q4, 6)

Since the 2009 accreditation visit, the administrative team has been expanded (Appendix 24.7.2 and Standard 7) with the addition of two director positions (Assessment and Undergraduate Education and Professional Programs). Additionally, a second vice-chair position was established in the DPHSS. These positions were filled with existing faculty whose teaching responsibilities were reduced to adjust for administrative work/responsibilities. Two faculty members who previously served as university-supported Co-op coordinators for the pharmacy program have been incorporated into the OEE in 2012-13. (Q7)

Administrative and professional staff members support the operations of the school and the faculty. The dean's office is supported by the assistant director of operations who oversees support staff in both departments. Since the 2009 accreditation visit, two DPHSS administrative assistants (1.67 FTE), one new DPS budget/administrative coordinator, and one new DPS lab supervisor position were added (see Appendices 24.1.1 and 24.1.2). Throughout the year, staff receive support from work-study students and faculty are supported by teaching assistants. (Q6)

Computer services, digital media services, and information services are available from the university. Additionally, faculty receive support from the [Bouve College Office of Research](#) (BCORE) and the BCHS Dean's office. BCHS provides support through the OSS, and from the associate deans for faculty and academic affairs. The [University's Center for Advancing Teaching and Learning through Research](#) (CATLR) offers many development programs each month and provides instructional design support for our faculty. (Q6, 7)

All new faculty are offered start-up packages in line with their research and professional development needs. New tenure-track faculty and clinical faculty are assigned a mentor soon after arrival. University initiatives such as the [ADVANCE Mutual Mentoring Advancement Program](#) also promote alternative models of mentoring and

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

opportunities for early career faculty. New clinical faculty members are given approximately one semester without students to establish their clinical services at the practice site, which results in a reduction in their APPE student assignments during the first year. New tenure track faculty are given one semester without teaching so that they have time to initiate research, prepare lectures, and develop a practice or establish a laboratory. (Q6)

Survey data indicate an overall positive trajectory in faculty perception that the “faculty resources can accommodate present student enrollment”, with 84% of faculty in 2014 agreeing with this statement (the national average 76.4%). According to the 2014 data, 59% of faculty agree that they have “adequate support staff resources” (highest agreement since 2009); however, this assessment still falls below the national average of 75% agreement. A new staff member (0.67 FTE) has been added since the 2014 faculty survey administration and we will continue to monitor faculty perceptions of staff resources. (Q8)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

25. Faculty and Staff - Qualitative Factors

The college or school must have qualified faculty and staff who, individually and collectively, are committed to its mission and goals and respect their colleagues and students. Faculty must possess the required professional and academic expertise, have contemporary knowledge and abilities in current educational philosophy and techniques, and be committed to the advancement of the profession and the pursuit of research and other scholarly activities. Faculty whose responsibilities include the practice of pharmacy must satisfy all professional licensure requirements that apply to their practice. The college or school must foster the development of its faculty and staff, commensurate with their responsibilities in the program.

2. College or School's Self-Assessment

| | |
|---|-------------------|
| The college or school has qualified <u>faculty</u> who, individually and collectively, are committed to its mission and goals and respect their colleagues and students. | Satisfactory |
| The college or school has qualified <u>staff</u> who, individually and collectively, are committed to its mission and goals and respect their colleagues and students. | Satisfactory |
| Faculty possess the required professional and academic expertise, have contemporary knowledge and abilities in current educational philosophy and techniques, and are committed to the advancement of the profession and the pursuit of research and other scholarly activities. | Satisfactory |
| Faculty generate and disseminate knowledge through scholarship. Scholarship by faculty members, including the scholarship of teaching, is evident and demonstrated by productive research and other scholarly activities. | Satisfactory |
| Faculty whose responsibilities include the practice of pharmacy satisfy all professional licensure requirements that apply to their practice. | Satisfactory |
| Pharmacy practice faculty possess additional professional training (residency, fellowship, or equivalent experience) | Satisfactory |
| Pharmacy practice faculty either have or are working toward additional credentials (for example, specialty certification) relevant to their practice and teaching responsibilities. | Satisfactory |
| The college or school ensures that policies and procedures for faculty recruitment, promotion, tenure (if applicable), remuneration and retention are established and applied in a consistent manner. | Satisfactory |
| The college or school ensures that the faculty composition, including any contributions from internal and external relationships, encompasses the relevant disciplines within the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences to meet the education and research needs as defined by the mission statement. | Satisfactory |
| Faculty, regardless of their discipline, have or are developing a conceptual understanding of current and proposed future pharmacy practice in a variety of settings. | Needs Improvement |
| Faculty members have the capability and continued commitment to be effective teachers. Effective teaching requires knowledge of the discipline, effective | Satisfactory |

| | |
|---|--------------|
| communication skills, and an understanding of pedagogy, including construction and delivery of the curriculum, and a commitment to learning outcomes assessment. | |
| The college or school provides, or is affiliated with institutions that provide, postgraduate education and training, including accredited residency and fellowship programs. | Satisfactory |
| The college or school fosters an environment that encourages contributions by the faculty to the development and transmission of knowledge. | Satisfactory |

3. College or School's Comments on the Standard

| Focused Questions |
|--|
| <input checked="" type="checkbox"/> The process used to assess and confirm the credentials of faculty and staff, and to assure that faculty credentials are appropriate for their assigned teaching responsibilities |
| <input checked="" type="checkbox"/> How the college or school ensures that the faculty composition, including any contributions from internal and external relationships, encompasses the relevant disciplines within the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences to meet the education and research needs as defined by the mission statement |
| <input checked="" type="checkbox"/> How the college or school ensures that faculty members, regardless of their discipline, have a conceptual understanding of current and future trends in the scientific basis of the biomedical, pharmaceutical social/administrative and clinical sciences |
| <input checked="" type="checkbox"/> How the college or school ensures that faculty members, regardless of their discipline, have a conceptual understanding of contemporary pharmacy practice and future trends in a variety of settings |
| <input checked="" type="checkbox"/> A description of the college or school's policy or expectations regarding research productivity for faculty, including timeline for new faculty |
| <input checked="" type="checkbox"/> Evidence that faculty are generating and disseminating knowledge through productive research and scholarship, including the scholarship of teaching |
| <input checked="" type="checkbox"/> A description, if applicable, of how faculty, instructors, and teaching assistants involved in distance education are qualified through training or experience to manage, teach, evaluate, and grade students engaged in distance learning |
| <input checked="" type="checkbox"/> How the college or school provides, or is affiliated with institutions that provide, postgraduate education and training, including accredited residencies and fellowship programs |
| <input checked="" type="checkbox"/> How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard |
| <input checked="" type="checkbox"/> Any other notable achievements, innovations or quality improvements |
| <input checked="" type="checkbox"/> Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms. |

(School comments begin here)

The process of faculty recruitment starts with an annual needs assessment to ensure that faculty composition encompasses relevant disciplines based on the pharmacy curriculum, other degree programs, and the mission of the school (see Standard 24). Based on vacant/new positions, faculty are recruited through national searches for positions authorized by the provost and the college dean. Faculty search committees are appointed by the respective department chair. The committees are responsible for generating the position description and

recruitment plan in consultation with the dean, their department chair and faculty and the BCHS Associate Dean for Faculty Affairs (see [Faculty recruitment policies/procedures](#)). The search committee works with the department chair and dean to assure that the faculty credentials are appropriate for the identified needs of the department. The search committee members personally contact candidate references. College administrative staff confirm candidates' degrees prior to hire (see [Credential verification processes](#)). The university's search process, diversity considerations, and credential verification process are further described in the two embedded web links above. University Policies and Procedures on Tenure and Appointment are listed in the Faculty Handbook (Appendix 25.1.1). The policies specific for BCHS for search approval, search process, hiring process, and onboarding process are detailed in Appendix 25.6.1. (Q1, 2)

A similar annual needs assessment is conducted for staff (professional or support) who are hired with the help of HRM and under the supervision of the assistant director for operations. Minimum degree and qualification requirements for staff vary depending on the position. The majority of our support staff have associate or bachelor's degrees and several professional staff members have masters degrees. (Q1, 2)

The school has been able to recruit and retain exceptional faculty (Appendices 25.4.1 and 25.6.8) and currently has 57 faculty (two are part-time). All 19 faculty members in the DPS and all 6 social and administrative science faculty from DPHSS have PhDs/ScDs and many have post-doctoral fellowship training. In the DPHSS, 27 faculty have residencies or fellowships and 23 provide medication therapy management services at various practice sites. Twelve faculty with practice sites have achieved board and/or specialty certifications. The school has 35 faculty who are licensed pharmacists. Twenty-two faculty have tenure, 7 are on the tenure-track, while the rest (28) are non-tenure track (NTT). Faculty retention efforts are summarized in Appendix 25.6.2. (Q2)

Our faculty are well balanced in terms of disciplines, academic ranks and years of experience in academia to ensure the achievement of the school's mission and the delivery of the curriculum (Standard 24). When faculty are recruited, we consider the potential to establish strong research and scholarship records and to collaborate with others both within the school and the college/university. We have a particularly strong core of ambulatory care practitioners who provide services at urban community health centers. They have established the Society for Ambulatory Care in response to a strategic initiative of the DPHSS, which remains a priority for the department. Additionally, our social and administrative sciences and pharmaceutical sciences faculty are very productive researchers. Scientists and clinicians in both departments consistently collaborate within the school, college, and university and also maintain national and international collaborations (see Appendix 25.6.3 for representative examples of collaborations). (Q2)

New TT faculty participate in department-specific mentoring programs (see Standard 26). College-wide mentoring programs are also available for TT faculty. However, at present, a parallel mentoring program is not in place for NTT faculty at the college or university level. DPHSS has established a mentoring program for NTT clinical faculty to fill this void (see Standard 26). (Q9, 10)

Faculty development programs are provided at department, school, college, and university levels and are offered to both TT and NTT faculty. A compendium of the 2013-14 programs is included in Standard 26. Additionally, during the last five years, faculty members in the DPHSS have participated in the university's generous tuition-waiver program for fulltime employees and have enrolled in and obtained degrees; EdD (n=1), MEd (n=4), and MPH (n=1). (Q2)

Faculty recognize that further work is needed to "ensure that faculty members have a conceptual understanding of: current and future trends in the scientific basis of the biomedical, pharmaceutical, social/administrative and clinical sciences; and contemporary pharmacy practice and future trends in a variety of settings." Faculty from both departments are currently invited to attend seminars, journal clubs and colloquia; however, attendance

across departments is low. The DPS hosts an annual research and scholarship day that feature guest speakers and poster sessions. Many of the faculty and students participate in the university [Research, Innovation, and Scholarship Expo](#) and learn about each other's research. Among the methods discussed by the faculty development committee as well as the faculty as a whole to facilitate additional cross-pollination of the science and practice of pharmacy are: one-hour seminars that pair cutting-edge science and practice topics; a designated time at each school faculty meeting for discussions of these topics; a day set aside for pharmaceutical science faculty to update their DPHSS colleagues concerning recent scientific advances within their laboratories and for DPHSS faculty to update clinical and pharmacy systems topics, and for all to explore the future of the profession of pharmacy in light of expanded health care coverage and changing delivery systems; a library of readings appropriate for these topics; and podcasts. The faculty development committee has been charged to develop and implement specific activities (AY 15-16) to enhance understanding of current practice and science trends among the faculty. Additionally, expanding the agenda for school meetings beyond PharmD program related issues to include graduate education and research will engage more faculty in school governance and increase faculty interaction and morale. (Q 3, 4)

All faculty (tenured, TT, and NTT) are expected to participate in the generation or interpretation of new knowledge, which can include original research and other forms of scholarly activity. The type and amount of research/scholarship is dependent upon the department and type of appointment. TT faculty in both departments are expected to obtain research funding, publish and be externally recognized for their expertise prior to tenure consideration. TT faculty receive annual tenure progress reviews, a high-stakes third year review, and then tenure review in the sixth year (Appendix 25.3.1). All NTT faculty have expectations for scholarship, which is on average 10% of their workload. The definition of scholarship in the DPHSS is broad and includes work involving both practice and teaching. The new strategic plan for DPHSS includes objectives focused on further defining scholarship and engaging all types of faculty and students in research. Peer-reviewed presentations and publications are a prerequisite for promotion within the clinical ranks. Clinical faculty apply for promotions in accordance with the BCHS Clinical Faculty Promotion Policy (Appendix 25.6.4). (Q5)

Both departments closely monitor research productivity and prepare annual reports (Appendices 25.6.5-6). Over the past three years, the SOP faculty has produced 567 peer-reviewed publications and 65 books/chapters covering biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences as well as the scholarship of teaching and learning. During the past year, the faculty have provided 149 invited presentations and 202 research presentations/posters and received 40 external grants (data included under Standard 26 documents and data). AACP Grant Search Database reports that the overall grant funding for our school for 2014 was \$11,105,047. The school received \$10,080,546 in NIH funding, which places us as the #1 school among private institutions and #10 overall (Appendix 25.6.7). (Q6)

The school has also been successful in expanding post-graduate education residency and fellowship programs. As compared to our 2009 self-study, the number of residency and fellowship positions has grown from 1 to 4 residents currently and from 1 to 2 fellows (with as many as 11 during Cubist partnership). Additionally we now offer a joint PharmD/MPH degree; our first student enrolled in this program in Spring 2015. (Q8, 10)

Based on the AACP faculty survey results, 78.2% of our faculty agree that the school uses an effective faculty recruitment process. Sixty-three percent of faculty agree that they receive adequate guidance on career development. While this item has improved from 40% in 2009, in 2014 it is nearly 10% below the national average. Faculty also feel more positive about the funds available for professional development, with agreement increasing from 57.2% in 2009 to 78.2% in 2014, which is similar to the national average. More than 90% of our alumni and students regard our faculty as effective teachers and positive role models. (Q11)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

The Faculty Research Development and Mentoring Committee has been charged (AY15-16) with making specific recommendations and implementing activities to ensure that faculty members have a conceptual understanding of current and future trends in the scientific basis of the biomedical, pharmaceutical, social/administrative, and clinical sciences; and contemporary pharmacy practice and future trends in a variety of settings. Efforts are under way to increase engagement of science faculty in the school meetings by expanding the agenda to discuss research and graduate program issues.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| | |
|---|--|
| 26. Faculty and Staff Continuing Professional Development and Performance Review | |
| The college or school must have an effective continuing professional development program for full-time, part-time, and voluntary faculty and staff consistent with their responsibilities. The college or school must review the performance of faculty and staff on a regular basis. Criteria for performance review must be commensurate with the responsibilities of the faculty and staff in the professional degree program. | |

2. College or School's Self-Assessment

| | |
|---|-------------------|
| The college or school fosters the development of its faculty and has an effective continuing professional and career development program for full-time, part-time, and voluntary faculty consistent with their responsibilities. | Satisfactory |
| The college or school fosters the development of its staff and has an effective continuing professional and career development program for full-time and part-time staff consistent with their responsibilities. | Satisfactory |
| Faculty and staff are assisted in goal setting by their administrative reporting authority | Needs Improvement |
| The college or school reviews the performance of faculty and staff on a regular basis. | Satisfactory |
| Criteria for performance review are commensurate with the responsibilities of the faculty and staff in the professional degree program. | Satisfactory |
| The college or school has or provides support for programs and activities for faculty and preceptor continuing professional development as educators, researchers, scholars, and practitioners commensurate with their responsibilities in the program. | Needs Improvement |
| Faculty receive adequate guidance and support on career development. | Needs Improvement |
| Faculty are able to attend one or more scientific or professional association meetings per year. | Satisfactory |
| Faculty development programs are available to enhance a faculty member's academic skills and abilities. | Satisfactory |
| The performance criteria for faculty are clear. | Needs Improvement |
| Expectations on faculty for teaching, scholarship and service are appropriate and commensurate with academic and professional development. | Satisfactory |

3. College or School's Comments on the Standard

| | |
|-------------------------------------|---|
| Focused Questions | |
| <input checked="" type="checkbox"/> | A description of the performance review process for full-time, part-time and voluntary faculty (including preceptors) and staff |
| <input checked="" type="checkbox"/> | A description of the relationship between faculty, preceptor, and staff continuing professional development activities and their performance review |
| <input checked="" type="checkbox"/> | A description of faculty development programs and opportunities offered or supported by the college or school |
| <input checked="" type="checkbox"/> | A description of staff development programs and opportunities offered or supported by the college or school |

- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms.

(School comments begin here)

The dean and the chairs of the DPS and DPHSS are appointed for five-year terms. The college dean evaluates the school dean and department chairs annually. In the third year of the administrator's term, a performance evaluation is conducted by a committee, members of which are appointed by the Faculty Senate Administrator Evaluation Oversight Committee (n=3) and by the Provost (n=2). The committee seeks evaluations from administrators, unit faculty, students and other appropriate groups. The report from the committee is sent to the AEOC and it, in turn, provides the approved full report to the Senate Agenda Committee, the administrator's supervisor, and the administrator, and makes it available for review by faculty from the respective unit. (Q1)

The school evaluates all faculty and staff on an annual basis. Both departments conduct performance reviews based on department-specific criteria with input from peers, administrators and students. Faculty and staff are asked to report their professional development activities during the performance review. Faculty performance evaluations are mandated by the university, college and school. The annual review process is based on the calendar year and begins with completion of a Faculty Activity Report (Appendices 26.2.1-2) each January. Faculty set goals for the upcoming year in the areas of teaching, research/scholarship and service. The process is responsive to the individual talents and changing needs of tenured, tenure-track, and clinical faculty who need to balance teaching, research/scholarship, university/professional service and clinical service roles. In December, each faculty member completes a Performance Evaluation Report (Appendices 26.2.3-4) in which faculty list their accomplishments and reflect on set goals. (Q1, 2, 5)

In each department an elected faculty committee conducts peer reviews of each faculty member based on the materials submitted. DPHSS faculty are required to participate in the peer evaluation of teaching process (Appendix 26.3.1); however, the evaluation itself is formative and faculty are asked to reflect only on the feedback they receive. In 2011, our peer evaluation program was recognized with the AACP Excellence in Assessment Award and has been adopted by several other schools of pharmacy. (Q6) DPS faculty do not participate in mandatory peer evaluations of teaching, but senior faculty evaluate junior faculty's teaching as part of tenure review requirements. Student assessment of faculty teaching is provided by a university supported standard survey instrument (TRACE) that asks students to evaluate the effectiveness of the instructor(s), the amount learned, and the difficulty of the content in each course (see Standard 3). Results of these evaluations and preceptor evaluations for clinical faculty are submitted as part of the performance reviews. The scores and recommendations of the merit committee and the chair are combined into a single report, and that score is a weighted average of 67%/33% split, respectively. This report is then sent to the school dean for approval before being submitted to the college dean. (Q1)

During the last accreditation cycle, faculty identified a need for more clear and explicit merit performance criteria, as well as more effective feedback. Recommendations for modifications have been made regarding the performance review template including a formal assessment for the clinical faculty by the practice site. Faculty perception of the performance review process has remained consistent with some improvement on AACP faculty survey items 13, 15, and 18. However, the 2013 and 2014 data seem to indicate that the annual performance review and feedback processes could still be improved; in particular, there were concerns in the DPS. Similarly, faculty survey results reveal an improvement in faculty perceptions on the question "my performance criteria are explicit and clear" from Northeastern University / Bouve College of Health Sciences, School of Pharmacy

2009 through 2013. However, in 2014 the trend for this question raised concerns from the assessment committee that have been communicated to the leadership team. Up to 30% of the faculty did not feel that “the criteria for their performance assessment is consistent with their responsibilities”. These concerns have been discussed by the school’s leadership and recommendations are being formulated. (Q7)

Consistent with NU Co-op practices, IPPE/Co-op preceptors are informally evaluated during the students’ post-experience debriefing meeting with their IPPE/Co-op coordinator. Students provide feedback on workload level, opportunities for learning, and level of responsibility delegated at their site. Students are asked to include how their experience contributed to their academic, professional and personal development.

APPE preceptors are able to access evaluations submitted by their students following the submission of the final grade. Student assessment of the site and preceptor approach 100% based on policy requiring students to complete evaluations at the end of each APPE. Once completed, OEE team members review aggregate responses to identify areas for improvement. The preceptors’ perceptions regards their performance criteria have improved since 2009. (Q1, 6, 7)

Every staff member/manager participates in the performance management process. Both individual and team meetings occur regularly throughout the year to discuss relevant topics to administrative jobs, as well as ongoing individual performance. Details on the performance management process as rolled out by Northeastern can be found on the [HRM web site](#). Briefly, staff members participate in goal setting and self-assessment annually. Managers are encouraged to provide ongoing coaching and feedback and complete end of year appraisals. HRM provides development for managers on the performance management process and providing effective feedback. (Q1)

Support programs for continued success and advancement of faculty are provided by the university and the school; a representative list of opportunities during the 2013-14 year is in Appendix 26.1.1. The university provides a new faculty orientation to instruct faculty on operational procedures and services available to faculty. Additional meetings include mentoring events and a workshop that guide new faculty through the tenure/promotion process. As previously mentioned, the school helps faculty to achieve their goals through departmental mentoring programming. The DPHSS has made recent improvements to the mentoring processes for clinical faculty (Appendix 26.3.2). A survey of five junior faculty and their five mentors using validated instruments was performed in 2014 and revealed that the process is working; however, improvements can be made by assigning mentors to all faculty regardless of years of experience or academic rank. (Q4-6)

The university, through [CATLR](#), actively supports quality instruction and runs numerous workshops each year to assist faculty in improving their teaching effectiveness. In addition, the university provides up to 36 credits of free tuition per year at the [College of Professional Studies](#) for faculty and staff who wish to obtain additional educational or graduate degrees at the institution. Sabbatical leaves are supported by the university for tenured faculty. (Q3, 4)

Departments receive an allocation for faculty professional development from the college in their operating budgets. Department chairs then work with their faculty to develop policies regarding how these funds will be used. Faculty conference attendance is most often supported through these professional development or grant funds. (Q4)

The OEE prepares new preceptors via two mechanisms: site visits (for local programs) or conference calls to review the expectations of the pharmacy practice experience program. Preceptor development is complimentary and provided through E-Value’s Continuing Education Institute (CEI)(see Appendix 26.1.2). Currently the OEE does not require preceptors to complete a specific number of continuing education credits. While our efforts have demonstrated significant improvement with preceptor satisfaction of available training on the 2012 survey, the satisfaction declined again in 2014. This can be explained by the slow transition to programming available via the

web. The OEE reviewed available preceptor development opportunities with the preceptors during 2014-15 site visits. Beginning in the fall of 2015, school's Office of Continuing Education (OCE) will underwrite the support for preceptors' participation in its programs and will renew the annual Preceptor Recognition function. (Q2, 3)

Ongoing staff development programs are summarized in Appendix 26.1.3. Professional staff have attended the AACP Annual Meeting. Notably, many staff take advantage of employee tuition benefit. Two employees recently earned their Master's degrees, and three others are enrolled in certificate programs and/or are taking classes. (Q4, 6)

Faculty on academic year appointments have expressed significant concerns regarding teaching and precepting assignments outside of the 8 months (two semester) period. One of the specific challenges at the school is that we operate for the entire year (three semesters). These concerns have been discussed with the chairs and the dean who have begun to adjust work assignments to align better with the appointment terms for tenure-track and tenured faculty. (Q5)

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

Conversations with the chairs and the dean have already taken place in terms of aligning work assignments with appointment expectations for tenured and tenure-track faculty and we will monitor to ensure that faculty on academic year appointments receive a semester free of teaching and service assignments so that they can focus on their research. Both departments will continue to work on enhancing mentoring programs and performance review processes that align with performance expectations. Faculty survey (planned for 2016) will be monitored to determine if these efforts result in improved faculty satisfaction. The OEE will work with OCE to continue to communicate to preceptors regarding available preceptor development through CEI and will explore with regional schools and colleges of pharmacy opportunities to collaborate on live regional preceptor development programs. AACP preceptor survey (planned for 2017) will be monitored to evaluate preceptor satisfaction.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

27. Physical Facilities

The college or school must have adequate and appropriate physical facilities to achieve its mission and goals. The physical facilities must facilitate interaction among administration, faculty, and students. The physical facilities must meet legal standards and be safe, well maintained, and adequately equipped.

2. College or School's Self-Assessment

| | |
|--|-------------------|
| The college or school has adequate and appropriate physical facilities to achieve its mission and goals. | Satisfactory |
| The physical facilities facilitate interaction among administration, faculty, and students. | Needs Improvement |
| The physical facilities meet legal standards and are safe, well maintained, and adequately equipped. | Satisfactory |
| Physical facilities provide a safe and comfortable environment for teaching and learning. | Satisfactory |
| For colleges and schools that use animals in their professional course work or research, proper and adequate animal facilities are maintained in accordance with acceptable standards for animal facilities. | Satisfactory |
| Animal use conforms to Institutional Animal Care and Use Committee (or equivalent) requirements. Accreditation of the laboratory animal care and use program is encouraged. | Satisfactory |
| Space within colleges and schools dedicated for human investigation comply with state and federal statutes and regulations. | Satisfactory |
| All human investigations performed by college or school faculty, whether performed at the college or school or elsewhere, are approved by the appropriate Institutional Review Board(s) and meet state and federal research standards. | Satisfactory |
| Students, faculty, preceptors, instructors, and teaching assistants have access to appropriate resources to ensure equivalent program outcomes across all program pathways, including access to technical, design, and production services to support the college or school's various program initiatives. | Satisfactory |
| Commensurate with the numbers of students, faculty and staff, and the activities and services provided, branch or distance campuses have or have access to physical facilities of comparable quality and functionality as those of the main campus. | Satisfactory |
| Faculty have office space of adequate size and with an appropriate level of privacy. | Needs Improvement |
| Faculty have adequate laboratory resources and space for their research and scholarship needs. | Needs Improvement |
| Computer resources are adequate. | Satisfactory |
| Laboratories and simulated environments (e.g. model pharmacy) are adequate. | Satisfactory |
| Facilities encourage interprofessional interactions (e.g., simulation laboratories) | Satisfactory |
| Access to quiet and collaborative study areas is adequate. | Satisfactory |
| Common space for relaxation, professional organization activities and events, and/or socialization is adequate. | Satisfactory |

3. College or School's Comments on the Standard

Focused Questions

- A description of physical facilities, including available square footage for all areas outlined by research facilities, lecture halls, offices, laboratories, etc.
- A description of the equipment for the facilities for educational activities, including simulation areas
- A description of the equipment for the facilities for research activities
- A description of facility resources available for student organizations
- A description of facilities available for student studying, including computer and printing capabilities
- How the facilities encourage and support interprofessional interactions
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The school has necessary facility resources to provide didactic education to pharmacy students. The university's Office of the Registrar is responsible for the placement of classes into the most appropriate rooms in the university's classroom inventory. Rooms are assigned by size using information provided by the department/college. Classroom utilization is very high especially during peak times. The university has developed [standard meeting patterns](#) to make the most efficient and effective use of instructional days and classroom space. (Q1)

[Information Technology Services](#) (ITS) is the central provider of technology infrastructure, services and applications for students, faculty and staff across the university. The division serves as a technology partner evaluating and delivering innovative and collaborative solutions that promote and advance teaching, learning, research, and support for the university community. (Q2)

All classrooms are equipped with [technology necessary to deliver multi-media presentations](#). At a minimum, all classrooms are equipped with an LCD display or projector and all larger classrooms (>24 seats) are equipped with overhead projectors and instructor-station computers. The university's classroom committee has advanced and received approval for a plan to extend full audiovisual technology into all classrooms in 2015-16. [Academic Technology Services](#) (ATS) works with faculty to provide technology that facilitates teaching and learning as well as student engagement. Currently the Blackboard Learning Management System is used for all courses. Faculty routinely use the TurningPoint classroom response system and the Tegrity lecture capture system to enable students to listen to and view lectures after class. While the facilities are modern, the school has communicated with ATS our needs for more flexible classroom space and expanded power sources, ideally at each seat. (Q2)

The [Arnold S. Goldstein Interprofessional Laboratory Suite](#) is a state-of-the-art simulation facility that opened in 2013. This lab allows students from all health professions programs in BCHS to learn about, from, and with each as they prepare to enter professional practice settings with a focus on improving patient health outcomes. Interprofessional simulations focus on developing core competencies for interprofessional collaborative practice and promoting team-based approaches to health care delivery. The 2200 sq ft space houses transformable labs and debriefing rooms. Each lab can be set up to simulate a variety of practice environments including, hospital

rooms, operating rooms, exam rooms, office spaces, conference rooms, and home care settings. Each lab is equipped with video and audio capture technology, powered by EMS's SimulationiQ Enterprise simulation management system, used to record student experiences as they interact with the latest high-fidelity human patient simulators (4 SimMan 3G, 2 SimMoms, 1 SimJunior, 1 SimBaby, 1 SimNewB), patient actors, faculty and other students. Students' recorded simulation experiences are played back and analyzed during structured debriefing sessions. Debriefing is a vital component of simulation and a critical educational experience that drives and heightens student learning. Significant training is required for faculty to use this lab due to complexity of equipment. The school is working on training faculty and developing simulations. (Q6, 8)

The pharmacy program has sufficient lab space to deliver its curriculum (4796 Sq. Feet; Appendix 27.5.1). Pharmaceuticals laboratories are conducted in a dedicated space in the Behrakis' building. Another dedicated lab in the same building is used to deliver CDM Skills Lab courses and communication skills lab courses. A proposal is being prepared to reconfigure this space to be more flexible so that the lab can be used for a variety of purposes and be kept up to date with the evolving educational needs of preparing student pharmacists. The dean is working with the Bouve Office of Development to secure funding for the renovation. (Q1)

Students have sufficient facilities for individual and small group study within the university library, which was renovated in 2013 (see Standard 29). The campus and residence halls have many areas where students can gather to study in groups or alone. The [printing services plan](#) provides students with ability to select any network printer on campus (many are located in classroom buildings) and receive their printouts by swiping their student IDs. The school has a computer requirement for pharmacy students (Appendix 27.5.2) and students have access to many [computer labs](#) on campus. (Q5)

Recent graduating student surveys show that students feel safe on campus. More than 95% agree that classrooms, laboratories, study areas and non-classroom areas are conducive to learning and are meeting their needs. Responses to all relevant questions were positive and met or exceeded national averages. (Q9)

Students participate in a wide variety of groups and organizations. The administrative offices for these groups and organizations are housed in the [Curry Student Center](#). [NU Center for Student Involvement](#) provides support for professional student organizations from scheduling rooms and events, managing finances, and providing leadership development. (Q4)

NU's animal research and facilities are regulated by the Division of Laboratory Animal Medicine. The animal care and use program and housing facilities are fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC), International. AAALAC accreditation is the considered essential for animal care and use programs because it confirms that the institution's program is of the highest quality and meets the standards set by the [Guide for the Care and Use of Laboratory Animals](#). NU is also an assured institution with the Office of Laboratory Animal Welfare and is registered by the United States Department of Agriculture. (Q1, 3, 7)

[The Office of Human Subject Research Protection](#) educates members of the university community about the ethical principles guiding human subject research, provides assistance to students, faculty and staff in obtaining approval for teaching and research activities under guidelines, ensures university-wide compliance with federal, state and university statutes and regulations relating to the protection of human subjects, and provides central administrative staff at the Institutional Review Board (IRB) and serves as the primary point of contact for all IRB-related issues. (Q7)

In 2012, the school moved into a 33,473 sq ft renovated space at 140 The Fenway (140 TF). The building offers a home for the Office of the Dean, faculty offices, conference rooms and research laboratories for most school

faculty and research centers. The Center for Drug Discovery and New England Inflammation and Tissue Protection Institute remain in the Mugar Building. The list of equipment available to the school is in Appendix 27.5.2. (Q1, 3, 8)

Faculty perceptions have improved, but remain below the national comparison, regarding facilities enabling out-of-class interaction with students. The physical layout of our campus, with many classroom buildings, makes it difficult for faculty and students to occupy the same spaces; however, the conference rooms in 140 TF allow faculty to schedule meetings and office hours. Faculty perceptions regarding adequate office space declined since the move because clinical faculty share large spaces with individual cubicles which makes it more challenging to work without distractions or meet with students. (Q1, 7, 9)

Faculty perceptions regarding laboratory resources and space have improved and are similar to national data; however, compared to our peer research-intensive institutions, there is still room for improvement. Specific concerns have been raised regarding research space availability and how it may impact faculty recruitment. The university is currently building a [state-of-the-art interdisciplinary science and engineering research facility](#). Scheduled for completion in fall 2016, the new complex will provide 220,000 sq ft of research and educational space and is part of the university’s ongoing effort to expand its capacity to engage in path-breaking research across disciplines. This new space provides the school with an opportunity to secure additional laboratory space for research and education efforts. (Q1, 9)

All faculty are in agreement about the safety of the campus and most feel that there are sufficient program resources to accommodate present student enrollment and the school has appropriate physical facilities and computer resources to allow them to fulfill their responsibilities (better than national comparison). (Q9)

Finally, 140 TF is on a 10-year lease from the Museum of Fine Arts (MFA) that will expire in 2020. The university is currently negotiating with MFA on the extension of the lease. The faculty and administrators will be monitoring these negotiations and will work with college and university leaders on identifying the future home for the school if the lease is not extended. (Q1)

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

The school will need to monitor availability of laboratory and other resources needed to attract high caliber science faculty. Funds also must be obtained for the pharmacy skills laboratory renovation. Additionally, the school often deals with requests from college to share current teaching laboratory space and will continue to reinforce that the school needs this space to deliver pharmaceuticals lab courses for pharmacy students as well as graduate laboratory courses. The school will carefully monitor negotiations of continuation of lease on 140 TF and will work on a plan for a move if such negotiation is not successful. The university has a master plan with new facilities that are going to be available in the next few years that will be explored.

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

| |
|--|
| 28. Practice Facilities |
| To support the introductory and advanced pharmacy practice experiences (required and elective) and to advance collaboratively the patient care services of pharmacy practice experience sites (where applicable), the college or school must establish and implement criteria for the selection of an adequate number and mix of practice facilities and secure written agreements with the practice facilities. |

2. College or School's Self-Assessment

| | |
|--|--------------|
| The college or school collaboratively advances the patient-care services of its practice sites. | Satisfactory |
| The college or school establishes and implements criteria for the selection of an adequate number and mix of practice facilities. | Satisfactory |
| The college or school establishes and implements criteria to secure written agreements with the practice facilities. | Satisfactory |
| Before assigning students to a practice site, the college or school screens potential sites and preceptors to ensure that the educational experience would afford students the opportunity to achieve the required competencies. | Satisfactory |
| At a minimum, for all sites for required pharmacy practice experiences and for frequently used sites for elective pharmacy practice experiences, a written affiliation agreement between the site and the college or school is secured before students are placed. | Satisfactory |
| The college or school identifies a diverse mixture of sites for required and elective pharmacy practice experiences. | Satisfactory |
| The college or school has sites that provide students with positive experiences in interprofessional team-based care. | Satisfactory |
| The academic environment at practice sites is favorable for faculty service and teaching. | Satisfactory |
| There is adequate oversight of practice sites and efficient management and coordination of pharmacy practice experiences. | Satisfactory |
| The college or school periodically assesses the quality of sites and preceptors in light of curricular needs and identifies additional sites when needed. The college or school discontinues relationships that do not meet preset quality criteria. | Satisfactory |

3. College or School's Comments on the Standard

| |
|--|
| Focused Questions |
| <input checked="" type="checkbox"/> Capacity assessment (surplus or shortage) of the required and elective introductory pharmacy practice experiences (IPPEs) and advanced pharmacy practice experiences (APPEs) sites and preceptors for present and, if applicable, proposed future student enrollment |
| <input checked="" type="checkbox"/> Strategies for the ongoing quantitative and qualitative development of sites and preceptors and formalization of affiliation agreements |
| <input checked="" type="checkbox"/> How the college or school is collaborating with practice sites to advance patient care services |

- How the college or school assesses the quality of sites and preceptors in light of curricular needs and discontinues relationships that do not meet preset quality criteria
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The Office of Experiential Education (OEE) is responsible for developing, maintaining, assigning and monitoring all IPPE/Co-op and APPE students and sites. Two Co-op coordinators within the office oversee the IPPE/Co-ops. APPE rotations are managed by two program managers within the office. Students are required to complete IPPE/Co-ops in both community and institutional settings. All early assurance track students have a third elective IPPE/Co-op opportunity in the setting of their choosing (see Standard 14). Standards for experiential sites and preceptors are contained on the [OEE's web site](#) (Appendix 28.4.1). (Q2, 4)

All APPE sites and preceptors must also meet defined [criteria](#) to be considered for participation (Appendix 28.4.1). Written affiliation agreements for the majority of APPE sites are secured by the OEE prior to rotation start dates. In few cases, such as government agencies (i.e., CDC), that do not sign affiliation agreements, all necessary paperwork, such as student volunteer service agreements, are completed by the student and OEE as required (Q2, 4).

Unlike APPEs, most IPPE/Co-ops do not require written agreements because they are governed by direct employer-employee relationships. Each IPPE/Co-op stakeholder is provided a copy of the Co-op education employer handbook. In addition to this handbook, our Co-op coordinators ensure that preceptors receive educational assessments at the end of IPPE/Co-ops. These assessments are electronically administered to allow for ease of use. The IPPE/Co-op software, called PlacePro, is used to manage resumes, interviews, and placement histories. The NU Co-op office is implementing a new application for assessment and reflections. (Q2)

The OEE is charged with an ongoing task of monitoring and planning experiential site capacity. Regular discussions with the dean and the chair of DPHSS occur to ensure at least a 5% surplus in site availability (see Appendices 28.2.1 and 28.3.1). In general, the number of sites and preceptors has kept pace with enrollments. In addition to the predominance of IPPE/Co-op locations in the greater-Boston area and in Massachusetts, and in response to student interest/need, there are numerous sites available throughout the country and internationally. All IPPE/Co-op preceptors are contacted each semester (three times per year) about availability. The OEE maintains approximately 120 active IPPE/Co-op sites, as many as 30 additional sites for occasional use and over 200 APPE sites. APPE site availability provides approximately 30% overage to ensure adequate capacity to absorb any preceptor schedule changes throughout the year; however, most of the overage capacity is in community practice. (Q1)

According to the AACP graduating student survey our students are satisfied with the quality of their IPPE/Co-ops. Most (95.2%) either agreed or strongly agreed that their IPPE/Co-ops were of high quality (national 83.5%). A lower percentage (84.9% vs. 87.7% nationally) of students thought the process for assigning these sites was fair. This is probably due to the fact that students compete against each other by going on job interviews to secure their IPPE/Co-op rather than simply receiving an assignment. (Q7)

In 2012, the OEE switched software management programs from PEMS to E-value. The software was selected by the BCHS to manage all clinical programs (Nursing, Physical therapy, Physicians Assistant, Audiology, Counseling and Applied Psychology). For pharmacy, it is the primary tool in managing the APPE program, including scheduling, evaluation, student and preceptor tracking, and reporting. The placement or “match” piece was an improvement over that seen with PEMS. The OEE annually reviews APPE placement results to serve as a basis for developing APPE projections for subsequent years. During the 2013-14 academic year, 95.7% of placements matched with students’ first, second or third preferences for rotations, most recently during the 2014-15 academic year, 97.0% of APPE placements were matched with students’ first, second, or third preference. For the upcoming 2015-16 cycle, this number was 95.3%. Students report satisfaction on the graduating students survey where 91.7% (89.4% nationally) agreed or strongly agreed with the statement that the process for assigning APPEs was fair. (Q5-7)

The school is fortunate to be able to take advantage of the robust diversity of healthcare facilities that Boston offers. Because the majority of our sites are within the city and the greater Boston metropolitan area, students are able to secure a variety of experiences with a wide range of patient populations. The school has gathered data on the clinical and economic impact of students’ work during APPEs and has published the results in AJPE (Appendices 28.6.3-4). The school works collaboratively with practice sites to advance patient care services, which is accomplished through our clinical faculty, including eight co-funded faculty members, who deliver patient services at hospitals, ambulatory care clinics and community health centers. (Q1, 3, 6).

The school has many partners to provide IPPE/Co-ops and APPEs in the community setting. In 2010, the school hired a co-funded faculty member with a practice site in an independent community pharmacy; however, this faculty left the university in 2013 but continues to teach IPPE/Co-op and APPE students as an adjunct preceptor. During the 2014 strategic planning retreat, the DPHSS faculty reaffirmed the need to increase community practice expertise at the school and is working on advancing recommendations to meet this strategic goal. (Q2, 3)

The AACP graduating student survey reveals that 98.6% reported that their pharmacy practice experiences allowed direct interaction with a diverse patient population (national 97.7%) and 100% reported that their pharmacy practice experiences allowed them to collaborate with other healthcare professionals (national 97.7%). Similarly, more than 90% of alumni consistently agree that the college/school provided an adequate number and mix of practice facilities for experiential education. (Q5-7)

Fundamental to the development of quality clinical experiences is the development of criteria to guide the selection of sites and preceptors, which are applied by OEE personnel in the selection and placement process. New preceptor orientation is currently conducted via visits at practice sites or via teleconferences. The OEE maintains relationships with preceptors via telephone and via on-site visits designed to ensure quality and provide instructional assistance when needed. APPE preceptors and sites are contacted at least annually to determine their interests in continuing in the program. Routine contacts, at minimum, help the school inquire about expanding or reducing participation in the following academic year. The Co-op coordinators work with a primary contact at each site to manage and plan IPPE/Co-op placements. Additional site contact may be initiated based on student or preceptor feedback revealing challenges during an APPE or IPPE/Co-op. In such cases the OEE responds immediately to facilitate corrective actions and discussions with preceptors, which may include additional site visits. (Q2, 4)

The school makes several preceptor development resources available as described in Standard 26. Resources and various policies and procedures are also made available via the home page on the E*Value portal (e.g., directions on how to retrieve student evaluations, policies that deal with harassment and discrimination, etc). On the 2014 AACP preceptor survey, fewer preceptors (67.2% NU vs 78.6% nationally) strongly agreed or agreed with

the statement "I know how to utilize policies of the college/school that deal with harassment and discrimination". This lower agreement can be explained by the fact that in the IPPE/Co-op setting the employer's policies on the harassment and discrimination govern employer - employee relationship and preceptors may not need to be aware of school's policies on these issues. After discussing AACP survey data, OEE personnel reviewed relevant policies with preceptors during 2014-15 site visit initiative and will continue to periodically send reminders to preceptor regarding university and school policies. Preceptor responses on the questions "I receive needed support from the Office of Experiential Education" and "There are adequate facilities and resources at the practice site to precept students" were similar to national data. (Q 2, 6, 7)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

29. Library and Educational Resources

The college or school must ensure access for all faculty, preceptors, and students to a library and other educational resources that are sufficient to support the professional degree program and to provide for research and other scholarly activities in accordance with its mission and goals. The college or school must fully incorporate and use these resources in the teaching and learning processes.

2. College or School's Self-Assessment

| | |
|---|-------------------|
| The college or school ensures access for all faculty, preceptors, and students to a library and other educational resources that are sufficient to support the professional degree program and to provide for research and other scholarly activities in accordance with its mission and goals. | Needs Improvement |
| The college or school fully incorporates and uses library and other educational resources in the teaching and learning process. | Satisfactory |

3. College or School's Comments on the Standard

Focused Questions

- The relationship that exists between the college or school and their primary library, including the level of responsiveness of the Director and staff to faculty, student, staff needs, and any formal mechanisms (e.g., committee assignments) that promote dialog between the college or school and the library.
- A description of how the college or school identifies materials for the library collection that are appropriate to its programs and curriculum and assesses how well the collection meets the needs of the faculty and students
- A description of computer technology available to faculty and students
- A description of courses/activities throughout the curriculum in which students learn about the available educational resources
- A description of library orientation and support for faculty and preceptors
- A description of how remote access technologies and mechanisms that promote use of library information from off-campus sites by faculty, students, and preceptors compare with on-campus library resources
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The NU Libraries comprise Snell Library, the African American Institute Library, and the Law School Library. Snell Library is the main library, covering all subject areas, and is a popular destination for undergraduates and graduate students, who refer to it as "Club Snell." All four floors of the library are now open 24 hours a day, 7 days a week, year-round, for Northeastern affiliates. The library service desk is staffed close to 100 hours per week. Professional librarians are available in an adjoining office for walk-in research assistance every day of the week, for a total of

64 hours per week. There are two service desks that offer computer help 24 hours a day, staffed by Information Technology Services (ITS). Space and technology renovations, as well as updates to the library systems are described in detail in Appendix 29.6.1 (Q3, 7, 8).

The University Libraries' holdings include, as of June 30, 2013: 874,493 printed volumes, 399,488 e-books, 60,270 licensed electronic journals, 9,817 videos, 102,265 printed government publications, and 6,267 linear feet of archival and manuscript collections. More than 90% of the collections budget is now directed toward electronic resources. Through ILLiad (interlibrary loan service), faculty, students and staff may request books, articles, book chapters, and other materials not held at the university. Articles and book chapters are received electronically. Electronic document delivery generally takes 24-48 hours, but sometimes a document arrives within a few hours, and some items requested are not available for delivery. ILLiad is a popular service and the school is among its largest group of users across the university. There is currently no charge for interlibrary loan service, except for copies of some (usually older) print dissertations. A full list of available resources is available on [library's web page](#). Pharmacy specific resources are represented in Appendices 29.3.1 and 29.4.1. (Q7)

[The Northeastern University Writing Center](#) has office hours in a space within the library. Staff can now easily refer students who frequently ask for writing assistance to a location a short walk from the unified service desk and the associated reference desk. (Q7)

All library databases have the same content accessible on and off campus. Access and licensing terms are the same for faculty, current students, and preceptors. The only exception is Micromedex, whose vendor, Truven Health Analytics, specifically refused to allow access from clinical sites, even for solely educational purposes. (Q6)

A liaison from the library to the school is available to provide guidance and support on access to the library's resources in support of class assignments and research. The liaison librarian has been working at the NU Libraries for 13 years and has more than 20 years of experience working in libraries. (Q1)

Since 2002 the pharmacy liaison librarian has worked in conjunction with faculty to conduct library training sessions for more than 100 students each year in the required Drug Information and Evaluation course (PHMD 6223). In 2014 the pharmacy liaison librarian and the health sciences librarian created ten 5-minute video tutorials for PHMD 6223 to facilitate a "flipped classroom" experience, then visited the class to get feedback and answer questions. Librarians who are specialists in Refworks and Endnote software have worked with the PHMD 6223 course to provide instruction and individualized assistance since 2012. Additionally, the pharmacy student Blackboard portal contains a drug information resources guide (Appendix 29.6.2) available to all students. (Q4)

Professional librarians select library materials in assigned subject areas (selectors) and receive requests for purchases from faculty and students, which are usually filled if they are one-time purchases (not subscriptions) and not prohibitively expensive. Selectors also review new course descriptions and program proposals to determine whether needed materials are available in the library, and if not, in many cases, if they do not require ongoing subscriptions, they are purchased. An approval plan, in which books in profiled subjects are sent automatically to the library by a preferred vendor, now provides access to monographs electronically instead of in print; in this way the library regularly adds ebooks to the catalog that are published by university presses and professional and scholarly publishers. Selectors review the subject profiles in the approval plan periodically to ensure that appropriate materials are included. Selectors also have limited book funds with which to select and purchase other ebooks and, on occasion, print books. The library's main vendor visited the library in 2011 to review the approval plan with each selector and visited again in 2014 to review changes and updates and to answer questions. Selectors also seek out additional relevant electronic, print, multimedia, and other materials for acquisition. (Q1, 2)

The selector for the school maintains regular contact with the dean and faculty, soliciting requests for books, serials, electronic resources and library instruction, and dialogues with the school regarding major purchasing decisions. When necessary, the selector works with the school and with the collection development librarian to carry out serials reviews, reviewing usage of journals and databases and identifying low-use (and high cost-per-use) resources that are considered for cancellation (but not necessarily cancelled). The selector also works with other librarians, including collection managers for health sciences, biology, and general sciences, to discuss interdisciplinary purchases. For the past three years, the STEM (Science, Technology, Engineering, Math) librarians at Snell Library, which include the pharmacy selector, have met more formally and consistently as a group to discuss issues of concern to all. The selector maintains a pharmacy and pharmaceutical sciences web page ("subject guide") with links to licensed and other resources. The [subject guide](#) is heavily used by pharmacy students; as of October 6, 2014, it is the second most-used out of 83 subject guides in the NU Libraries, with [13,579 hits](#) so far that year. (Q1, 2)

Research assistance, including traditional and nontraditional reference services, are available in multiple forms—in person, phone, email, text message, and a 24-hour chat reference service called QuestionPoint. There is a research assistance office for unscheduled, walk-in assistance by professional librarians, now adjacent to a centrally-located *unified service* desk. The unified service desk opened in the fall of 2013, and prevents users from having to travel to multiple service points to have their questions answered. At that desk, circulation staff—who are trained to handle questions about library policies, book and DVD checkouts, document delivery, reserves, and fines, work alongside ITS staff, who answer computer, software, and technical questions. The desk staff refer all research questions to the new research assistance office, staffed by a librarian every day of the week. In the 2013-14 fiscal year, there were 3,627 in-person research assistance inquiries; 670 email reference transactions; 437 chat reference consultations; 114 text message inquiries; and 221,552 library subject guide hits. Walk-in assistance often leads to consultations (usually scheduled appointments) with library subject specialists; last year there were more than two thousand research consultations. (Q7)

Library orientations are provided throughout the year to the university community and include general tours, workshops, individual consultations, and classroom instruction sessions. The university libraries provide these services for faculty (including adjuncts) to support research, curriculum development, and teaching. In the 2013-14 fiscal year, university librarians based in Snell Library instructed a total of 7,291 people during 333 instruction sessions. Individual and small-group research consultations during that time totaled 2,035. (Q5)

Librarians provide customized workshops covering library resources and search strategies for a class, and customize additions to a course Blackboard pages for the resources covered in the sessions. These training sessions are often provided in the classroom environment. A new multipurpose training room with multiple workstations opened in the library in fall 2014, and will be available in the future for library instruction and other types of training. (Q5)

Preceptors who receive adjunct faculty appointments are eligible to receive an NU ID, which grants them full access to library facilities on campus. They are also able to receive a sponsored Information Technology account that enables remote access to the library resources. This account requires renewal every 180 days. (Q6, 7)

Student and faculty survey data show high satisfaction with library resources (on and off campus) and computer technology. However, only 57% of preceptors (vs. 80% nationally) agree or strongly agree that "the college/school provides me with access to library and educational resources". Few preceptors take advantage of obtaining library access. Steps will be taken to identify preceptor barriers and in turn strategies will be employed to improve the process. (Q9)

4. College or School's Final Self-Evaluation

| | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Compliant | <input type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|---|--|--|--|

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharmacy

30. Financial Resources

The college or school must have the financial resources necessary to accomplish its mission and goals. The college or school must ensure that student enrollment is commensurate with its resources.

2. College or School's Self-Assessment

| | |
|--|-------------------|
| The college or school has the financial resources necessary to accomplish its mission and goals. | Satisfactory |
| The college or school ensures that student enrollment is commensurate with its resources. Enrollment is planned and managed in line with resource capabilities, including tuition and professional fees. | Satisfactory |
| Tuition for pharmacy students is not increased to support unrelated educational programs. | Satisfactory |
| The college or school has input into the development of and operates with a budget that is planned, developed, and managed in accordance with sound and accepted business practices. | Needs Improvement |
| Financial resources are deployed <u>efficiently</u> and <u>effectively</u> to: | Satisfactory |
| support all aspects of the mission, goals, and strategic plan | Satisfactory |
| ensure stability in the delivery of the program | Satisfactory |
| allow effective faculty, administrator, and staff recruitment, retention, remuneration, and development | Satisfactory |
| maintain and improve physical facilities, equipment, and other educational and research resources | Needs Improvement |
| enable innovation in education, interprofessional activities, research and other scholarly activities, and practice | Needs Improvement |
| measure, record, analyze, document, and distribute assessment and evaluation activities | Needs Improvement |
| ensure an adequate quantity and quality of practice sites and preceptors to support the curriculum | Needs Improvement |
| The dean reports to ACPE, in a timely manner, any budget cuts or other financial factors that could negatively affect the quality of the professional degree program or other aspects of the mission of the college or school. | Satisfactory |
| Business plans, including revenue and expense pro forma for the time period over which the change will occur and beyond, are developed to provide for substantive changes in programmatic scope or student numbers. | N/A |
| The college or school ensures that funds are sufficient to maintain equivalent facilities (commensurate with services and activities) across all program pathways. | Satisfactory |

3. College or School's Comments on the Standard

Focused Questions

- How the college or school and university develop annual budgets (including how the college or school has input into the process) and an assessment of the adequacy of financial resources to efficiently and effectively deliver the program and support all aspects of the mission and goals.
- An analysis of federal and state government support (if applicable), tuition, grant funding, and private giving
- A description of how enrollment is planned and managed in line with resource capabilities, including tuition and professional fees
- A description of how the resource requirements of the college or school's strategic plan have been or will be addressed in current and future budgets
- How business plans were developed to provide for substantive changes in the scope of the program or student numbers, if applicable
- An assessment of faculty generated external funding support in terms of its contribution to total program revenue
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements

(School comments begin here)

The school has sufficient financial resources to meet its mission and make progress toward goals identified in the strategic plan. Financial resources are commensurate with enrollment and allow for quality programming. The university's academic financial affairs are administered by the Office of the Senior Vice President for Administration and Finance. Budgeting and accounting oversight is provided by the Financial Affairs Committee of the Board of Trustees. The university operates on an annual fiscal year (FY) calendar, July 1 through June 30, and prepares financial statements in accordance with generally accepted accounting principles. A system of internal controls is in place to safeguard the university's assets and to ensure that all funds are properly accounted for and expenditures are made with appropriate authorization. (Q1)

In 2011, the university began a phased transition from a traditional centralized budgeting system to a decentralized, hybrid responsibility centered management (RCM) system. The RCM model is designed to increase unit level accountability by giving units, in our case the BCHS, control of revenue as well as their expenses. (Q1)

Within the college, department chairs and the school dean provide budget requests directly to the college dean and the associate dean for administration and finance. The school dean works closely with the chairs when preparing budget requests from the departments; however, departments submit budget requests directly to the college. This model limits the ability of the school dean to revise budgets or make financial decisions at the school level based upon the strategic goals of the school. The school and college are evaluating methods for modifying the budget creation and allocation process to ensure more control of resources allocated to the school by the dean. (Q1)

Most pharmacy students come to the university directly from high school. The university's central Office of Admission is responsible (with input from the pharmacy program) for the admission of these students. Annual budgets within the school are primarily based upon student enrollment and are distributed directly to department chairs and the dean, who are responsible for management and oversight of their respective accounts. Our annual budgets have been stable and sufficient to meet operational needs. The school's operational budgets increased from \$9,812,645 in FY2013 to \$12,294,758 FY2014 to \$12,650,189 in FY2015. These increases, in particular the 25.2% increase from FY2013 to FY2014, reflected resources allocated to accommodate the over-enrollment of early assurance pharmacy students in the fall of 2009 and 2010 (previously reported to ACPE). The stability of

our budget and increase in resources, when required, allows for consistent delivery of quality programming and recruitment of faculty, administrators and staff. It also enables, in addition with other available resources, curriculum innovation, interprofessional activities and scholarship. (Q3, 7)

The school has carefully evaluated recent decreases in freshman pharmacy applications concurrent with increases in the number and quality of undergraduate students applying to the university. As a result, there has been a corresponding decrease in the number of students admitted into pharmacy early assurance pathway. The school has taken several actions to address enrollment management and meet strategic goals, beginning with opening a direct-entry pathway that allows the school to admit students directly into the P1 year (see Standard 17). Also, BCHS Dean Reynolds recently met with the Vice President for Enrollment Management, Sundar Kumarasamy, to discuss freshman admissions and strategies to increase the application pool, acceptance rate and yield in terms of numbers and quality of students. The university has an [N.U.in admissions track](#), which admits students into Northeastern University College of Professional Studies (CPS) in the first fall semester. The students spend the fall studying abroad and then enter the Boston campus in their declared major in the spring semester of their freshman year. Previously, the school did not accept students from the N.U.in track; however, after discussions with the school's executive committee and faculty, a decision was made to open this pathway to prospective early assurance students. Dean Zgarrick has worked with the CPS and the Dean of Admissions to facilitate the admission of N.U.in enrollees to the pharmacy early assurance pathway starting in 2016-17. (Q3, 4)

Our experience with direct-entry admissions over the past 2 years has revealed that the school needs new resources dedicated to admissions. The school's Admissions Committee has worked diligently over the past 2 years and a professional staff position was reconfigured to dedicate 0.15 FTE of the position to direct-entry track admission. However, as the school anticipates admitting more students via the direct-entry pathway to meet our enrollment target of 145 PharmD students per class, additional resources will be necessary to manage recruitment, screening, interviewing, selection and matriculation of these students. (Q3, 4)

Our tuition is slightly higher than that of the national average for private schools of pharmacy, but is competitive with other research universities in the Boston area, and is lower than both of our peer matchmates in private institutions (Duquesne University and University of Southern California; Appendix 30.2.1). For many students the higher tuition is offset by financial aid (average tuition discount 34.9% university-wide). (Q2)

Extramural research funding, a strength of our school, increased from \$10,268,044 in FY2014 to \$12,515,390 in FY2015. While extramural funding is not used for regular school operations, it supports the research and innovation mission of the school and our strategic plan, engages our students in research, and supports faculty salaries (i.e., the university's faculty compensation model allows tenured and tenure-track faculty to supplement their salaries or provide off-term [e.g., summer] salary using grant funds). This model helps us recruit and retain qualified faculty. (Q2, 6)

Innovation in research and scholarly activities are supported by a number of offices/units within the university. The [Office of Research Administration and Finance](#) provides expertise and highly specialized services in research management. The [Office of Research and Graduate Education](#) supports research and innovation by conducting outreach to funding agencies and corporate and foundation sponsors, and developing partnerships with academic, clinical, and industry collaborators that increase the scope and impact of our research. They also provide internal grants to facilitate additional research projects. The [Center for Research Innovation](#) seeks to bridge the gap between laboratory research and need-based solutions. The BCHS Office of Research ([BCORe](#)) provides services to assist faculty in developing innovative research and scholarly activities. (Q8)

The school dean, with support from the BCHS and the university, oversees activities to acquire extramural funding. The school works with the BCHS development team to attract external funding to support the school and its
Northeastern University / Bouve College of Health Sciences, School of Pharmacy

operations. Specific members of the BCHS development team work with school faculty and administrators in the following areas: corporations and foundations, major gifts, annual fund, and alumni giving. In 2012, the school celebrated its 50th Anniversary at Northeastern. A fundraising campaign held during this celebration facilitated the creation of endowed student scholarships. In 2014 the University launched the [Empower Campaign](#) with the goal of raising \$1 billion by 2017 for student financial aid, faculty advancement and expansion, and innovation in education and research. BCHS Dean Reynolds is a member of an Empower Campaign committee. Overall, the school has made steady progress in securing private funding since the last self-study. (Q2)

Discussions of the SWOT analysis performed as part of the self-study process, our strategic plan, and the review of Standards 2016 identified several areas where additional resources may be needed in the future (Q4):

- Administrative support for admission of direct-entry students (discussed above);
- Assessment activities: while our assessment efforts have improved since the last self-study and allowed us to be in full compliance with Standards 2007, we need to assure appropriate funds are allocated for software that allows us to perform educational achievement analytics. Given the range of assessment and evaluation activities required under Standards 2016, and the school’s plans to expand use of ExamSoft to most courses, additional administrative support will be needed for our assessment efforts;
- Office of Experiential Education: Standards 2016 have enhanced requirements for preceptor development and quality assurance involving experiential sites. The OEE may need additional staff support;
- Renovation of teaching and research laboratories: Units are also responsible for paying for renovation of teaching laboratories, faculty and staff office space as well as research laboratories. Some research faculty note that budget allocations are insufficient to maintain and upgrade core laboratory equipment;
- Administrative support: The assistant dean for academic affairs, director of assessment, and director of undergraduate and professional programs hold faculty appointments that have teaching, service, scholarship, and practice expectations in addition to their administrative responsibilities. Providing these leaders with appropriate levels of administrative support will be necessary for them to maintain a balance of faculty and administrative responsibilities.

4. College or School's Final Self-Evaluation

| | | | |
|------------------------------------|---|--|--|
| <input type="checkbox"/> Compliant | <input checked="" type="checkbox"/> Compliant with Monitoring | <input type="checkbox"/> Partially Compliant | <input type="checkbox"/> Non-Compliant |
|------------------------------------|---|--|--|

5. Recommended Monitoring

(School comments begin here)

We will continue to monitor financial resources available to the school, particularly in light of decreases in enrollments into the early assurance cohort. The impact of new enrollment pathways will be continually monitored and evaluated. Given the areas where increases in resources may be needed, the dean should have more direct influence and control over the school's budget to prioritize these needs, identify sources of funding, and allocate funds appropriately. These discussions are ongoing and decisions will be made when the permanent deans are in place within the college and school (expected in 2016).