Assessment Committee Annual Report

Assessment Committee Membership:

Candace Barnett (Committee Chair)
Jordana Stephens Berry (Office of Student Affairs & Admissions)
Lea Bonner (Experiential Education)
Phillip Bowen (Dept. Pharmaceutical Sciences)
Liza Chapman (Alum)
Annesha Lovett (Dept. Pharmacy Practice & Committee Vice Chair)
Jennifer Knaack (Dept. of Pharmaceutical Sciences)
Jacquelyn McRae (P3 Student)
Erika Vance (P2 Student)
Haileen Zhang (Dept. Pharmaceutical Sciences)
Objectives (Status ✓ = complete)

2013-14 Objectives:
1. Meet with the ACPE site team. (✓)
2. Assist the Office of Student Affairs and Admissions in determining the factors that contributed to the high yield in the number of students entering the doctor of pharmacy program in 2013. (✓)
3. Assist Rho Chi in determining why some students do not use their tutoring services. (✓)
4. Conduct survey of focus groups to determine if they are operating effectively. (✓)
5. Recommend a methodology for improving response rate for preceptor midpoint evaluation of students for IPPEs and APPEs. (✓)
6. Follow up with the Curriculum Committee on their use of the focus area survey results. (✓)

On-going objectives:
1. Update the College Evaluation Plan. (✓)
2. Examine and distribute results from AACP surveys and other recurring assessments (including licensure examination results, graduating students’ practice intentions survey, survey of alumni one year post graduation, P3 self-assessment of preparedness for entering the fourth year, Comprehensive Progression Examinations, Rho Chi Tutoring program summary). Request disposition reports from data users on selected items. (✓)
3. Examine data on correlates of success in the Doctor of Pharmacy Program and transfer to data users. (✓)
4. Monitor course failures and attrition rate. (✓)
5. Remain available as individuals and a group to advise on assessments on an as-needed basis. (✓)

ACPE Site Visit. The Assessment Committee members met with the ACPE site team on Wednesday October 30, 2014, which was Day 2 of the three day site team visit. The Assessment Committee members had prepared for the visit by looking over the questions posted on the ACPE website.

High Yield for Entering Class of 2013. A questionnaire was designed and administered to the P1 class. When friendliness of the Admissions Office was set aside as an explanation for their decision to come to Mercer, location in Atlanta was the most frequently provided factor that influenced the students’ decisions to attend Mercer. The move to a 90 hour pre-pharmacy curriculum was not a factor that influenced their decision to come to Mercer. Likewise the timing and amount of the deposit were not factors in their decision to come to Mercer. An executive summary and report were transferred to Dean Matthews. J Berry will share the results with the Admissions Committee.

Rho Chi Tutoring Services Usage. Students in the P1, P2, and P3 years were surveyed. Student perceptions of the benefits of individual tutoring sessions and student-led group help sessions were measured. Students were also asked about the factors that influence student attendance at help sessions. The majority of students who use individual tutoring find it is helpful in improving their understanding of course material and subsequent exam performance. The majority of students perceive the group help sessions as beneficial. They would be more likely to attend group help sessions if a review of course material were provided in addition to the Q/A format. The report contained recommendations for increasing awareness of the individual tutoring sessions. Recommendations were also made for increasing awareness of group help sessions, format of the sessions, and timing of the sessions. The report was submitted to the Dean and discussed at the Executive Committee, where it was decided that these findings from the data collected should be presented to the faculty at an upcoming faculty meeting because adopting the recommendations made in the full report will require faculty participation.

Focus Group Survey. A survey of the Fall 2013 and Spring 2014 focus group members was conducted. The results indicated the focus groups were operating effectively and according to guidelines with few exceptions. The results were sent to the faculty with suggestions for continuous quality improvement.
Preceptor Midpoint Evaluation of Students. The response rate for Mercer and the other Southeastern Pharmacy Experiential Education Consortium (SPEEC schools) is 40% in spite of simplifying the instrument. The SPEEC schools are currently surveying preceptors to determine contributing factors to the low compliance rate. Discussion of this objective at a faculty meeting brought to light the need for greater communication to preceptors that the midpoint evaluation had been simplified to a single item if students were passing at midpoint, which the Office of Experiential Education will now emphasize further. The Assessment Committee recommended that the midpoint be required for the students to place in their Professional Development Portfolios in order to enlist them in ensuring compliance.

Focus Area Update. The Curriculum Committee reviewed the data collected by the Assessment Committee on focus areas and determined, in conjunction with the Director of Advanced Pharmacy Practice Experiences, that industry seems to be the next logical focus area to develop. Veterinary Pharmacy also merits consideration, but currently we have no APPE sites for this specialty.

RECURRING ASSESSMENTS:

College Evaluation Plan (CEP). The Assessment Committee updated the CEP and reformatted it to more clearly illustrate its relationship to our mission-based goals.

Examination of Results from AACP Surveys. In 2013-14 the Assessment Committee examined the results of the following AACP surveys: Survey of Graduating Students (GSS) [class of 2013] and the Alumni Survey (AS) [administered in 2013 to the 2011 graduates]. Data were transferred to the entire faculty and specific parties responsible for using the data, who provided written dispositions of how they would use the data for program improvement. The response rate on the AS, which measured perceptions of development & communication, the curriculum, and general impressions, was only 12.3%. The response rate on the GSS, which measured perceptions of preparation for professional competencies/outcomes, the curriculum, pharmacy practice experiences, student services, the student experience, facilities/experiential sites/educational resources, and overall impressions, was 27.3%. The low response rates were most likely due to fewer follow up requests being sent in summer 2013 than in previous years. For the majority of items on both surveys, the responses were similar to the responses from the previous year and from national comparison data. Thus no actions other than continued monitoring of items were warranted based on the data.

Comprehensive Progression Examination Oversight. In October 2013 the item analyses from the 2013 administration of the Comprehensive Progression Examinations (CPEs) were distributed to course coordinators for use in teaching during the 2013-14 academic year and in making revisions to selected items for the 2014 exam. For the P1 exam, 14 of 144 questions were brought to the faculty’s attention, for the P2 exam, 9 of 128 questions, and for the P3 exam, 15 of 128 questions. The faculty completed a form which documented which questions they would change and which questions would result in adjustments in teaching practices. The results for the 2014 EOY exams were as follows: The first time pass rates were 100.0% for P1 students, 96.6% - P2, and 99.3%- P3. Of the five P2 students who failed, all passed on the second multiple choice exam attempt. One P3 student failed both multiple choice attempts, and passed the oral examination.

Graduating Students’ Practice Intentions. A survey of our 2013 graduates revealed that 59.6% planned to practice in chain or independent community pharmacies; 8.3% - hospital pharmacy practice; 18.4% - residencies; 2.8% - graduate school, and 11.9% undecided. The number of students answering undecided most likely reflects the current job market.

NAPLEX and MPJE Results from 2013 Graduates. The pass rate for Mercer’s 120 first time NAPLEX test takers in May-Aug 2013 was 97.50% compared to the national pass rate of 96.57% and state of 97.79%. The first time MPJE pass rates for Mercer’s 90 graduates testing for GA and 72 graduates testing for any state in May-Aug 2013 were 90.00% and 88.89% respectively (Nat’l=93.95%, state=90.58%). To address the decline in MPJE scores, the Curriculum Committee and faculty involved in teaching law audited our coverage of law in the
curriculum to ensure that the content we cover is consistent with the MPJE blueprint published by the National Association of Boards of Pharmacy. Also, several faculty members who teach various aspects of law identified strategies to encourage and enhance our students’ preparation for this examination.

**Student Evaluations of Didactic and Experiential Teaching.** The cumulative and individual scores for student evaluations of faculty teaching and courses in the didactic and experiential curriculum were compiled and distributed to applicable data users. For the didactic curriculum, on a 5-point scale, the mean rating for course overall was 4.03 for Fall 2013 and 4.24 for Spring 2014. The mean rating for overall teaching ability was 4.23 for Fall 2013 and 4.34 for Spring 2014. For the experiential curriculum, the mean rating in academic year 2013-14 for overall teaching ability of primary APPE preceptors was 4.49 and for IPPE preceptors was 4.73 on a 5-point scale. The mean overall rating of the site/experience was 3.65 (4-point scale) for APPEs and 4.67 (5-point scale) for IPPEs.

**P3 Preparedness to Enter P4 Year.** In spring 2014, P3 students (Class of 2015) rated on a 4-point scale (poor, fair, good, excellent) how well prepared they felt to perform 27 practice activities. Students entered their individual results in their portfolios and were encouraged to pursue self-directed learning prior to starting the P4 year. The cumulative results were examined, noting there was one item where at least 1/3 rated their feelings of preparedness as fair or less. This was “evaluate serum drug levels” – 4.0% rated their preparedness as poor and 30.7% as fair. The information was transferred to the Director of Advanced Practice Experiences for who sent communication to the Class of 2015 students and preceptors concerning the role of APPEs in refining all 27 practice functions including evaluation of serum drug levels. The Graduating Class of 2014 was also administered the same survey. Preparedness for all 27 practice functions was rated as good or excellent for 88.9-99.2% of the respondents, which was an improvement over their responses in 2013, prior to entering their P4 year, when two items (analyze scientific literature and evaluate serum drug levels) were rated as poor or fair by 1/3 of the students. This provided evidence that continued learning related to these practice functions had occurred in the P4 year. All data were also transferred to the Curriculum Committee.

**Rho Chi Tutoring Program Summary:** The Assessment Committee examined statistics on the pass rate for students within courses for which they received tutoring (89% - fall 2013, 83% - spring 2014) noting its continued success. The Assessment Committee also assisted in examining why some students do not use tutoring or attend help sessions, the results of which are summarized above and will be used to enhance academic support effective 2014-15.

**Correlates of Success:** An analyst examined data from the graduating classes 2011-16. Individual NAPLEX scores from the Classes of 2011-13 were included in the analyses. The following bullets summarize the results:

- **PCAT:** When examining PCAT sectional scores and GPA in each professional year, the Biology and Chemistry scores are the best predictors of GPA in the first and second professional years. The prediction value decreases from the first professional year to the fourth professional year. No specific PCAT sectional scores significantly correlate to GPA in the third and fourth professional years. PCAT sectional scores do not predict who will or will not fail a course, nor do they predict the number of courses failed. PCAT sectional scores for Biology and Chemistry are statistically significant predictors of performance on the P1, P2, and P3 Comprehensive Progression Exam. PCAT sectional scores for Biology and Chemistry are statistically significant predictors of NAPLEX Total scores. There is not a statistically significant relationship between PCAT sectional scores and MPJE.

- **Undergraduate Degree:** Of the variables undergraduate degree status and number of undergraduate hours, degree is the best predictor of program GPAs, Comprehensive Progression Exam (CPE) scores, and course failures. A degree-hours interaction was found. Students who took many undergraduate hours without completing a degree had lower program GPAs than others. Students with degrees had higher CPE scores. The odds of a student having one or more course failures were about two times greater without a degree.
- **Prerequisites**: An analysis of the five new prerequisites (Anatomy, Physiology, Microbiology, Biochemistry and Statistics), indicates a negative correlation of grades in the prerequisite courses to program course failures (the higher the grade, the less likely for course failure), and a positive correlation to program GPAs and Comprehensive Progression Exam scores (these correlations were small, but statistically significant).

- **Pharmacy Experience**: Previous pharmacy experience before enrollment was slightly negatively correlated with program GPAs and Comprehensive Progression Exam (CPE) scores in the first and second professional years. Previous pharmacy experience was not correlated with MPJE scores or course failures. Length of pharmacy experience prior to enrollment was slightly negatively correlated with program GPAs and CPE scores in the first and second professional years.

- **The Global Score**: The Global Score is statistically significant and positively correlated with program GPAs and Comprehensive Progression Exam scores, and is negatively correlated with course failures (the higher the Global Score, the fewer course failures). The Global Score includes points for the following criteria: cumulative undergraduate GPA, pre-pharmacy GPA, PCAT composite percentile and writing scores, interviews, and prescreening scores (personal statements, letters of reference, undergraduate college/university, whether a bachelor’s degree will be received prior to enrollment, work/pharmacy experience, and extracurricular activities). When isolated, the prescreening score is not a statistically significant predictor of program GPAs, Comprehensive Progression Exam Scores, or course failures.

- **Interview Scores**: Of the interview scores [Associate Dean for Student Affairs and Admissions(ADSAA), Director of Admissions, Faculty Interviewer, Student Interviewer, and Student Host], only the Dean’s interview scores were consistently statistically significant predictors and positively correlated with program GPA and Comprehensive Progression Exam scores.

- **Program Progression**: Of the pre-admission variables, the undergraduate Microbiology grade and undergraduate cumulative GPA were the best predictors that a student would become off track due to course failures. The undergraduate Microbiology grade was a statistically significant predictor for dismissals (the lower the Microbiology grade, the more likely the student would be dismissed). Of the post-admission variables, the program GPA continues to be the best predictor of being on track to graduate.

- **Licensure Exams**: Of the post-admission variables, the best predictors of NAPLEX scores were GPA in the fourth professional year (cumulative program GPA), and Comprehensive Progression Exam (CPE) scores in the second and third professional years. Of these three predictors, CPE in year three is the single best predictor. Comprehensive Progression Exam scores in the third professional year along with the grade received in the Law class were the best set of predictors of MPJE scores.

- **Preadmission Factors as a Set of Predictors Indicating Program Success**: Data used for analysis of preadmissions predictors of program success includes the graduating class of 2010 – 2013 as it contains a complete data set defined as:

  - **Program GPAs**: The most reliable multivariate set of preadmission predictors for program GPAs includes the Global score and undergraduate degree status. Students who have completed a bachelor’s degree prior to enrollment and have higher Global scores from the admissions process are most likely to have higher program GPAs in each year.
  - **Comprehensive Progression Exam (CPE) Scores**: A reliable multivariate model for predicting CPE scores includes the Global score, PCAT Biology section, and PCAT Verbal section. CPE scores tended to be higher for those with higher Global scores and PCAT sectional scores for Biology and Verbal.
  - **Failures**: The best model for predicting whether a student will fail one or more courses is undergraduate GPA and undergraduate degree status. For every one unit decrease in the undergraduate GPA (e.g., from 4.0 to 3.0), the odds of having one or more course failures increases about fivefold. For example, the predicted probability of a student with a 4.0 undergraduate GPA and a degree having one or more course failures is about 5 percent. A student with a 3.0 and a degree has about a 25 percent predicted probability of having one or more course failures. The odds of having one or more course failures were 1.72 times greater for those without a degree.
  - **Licensure Exams**: The most accurate and reliable model for predicting NAPLEX total scores from preadmission variables includes the Global score and the PCAT composite percentile score. Although a weak predictor, the Global score is the only statistically significant preadmission predictor of MPJE scores.
Professional Development Network (PDN). The PDN was evaluated by administration of a survey questionnaire to PDN faculty and inclusion of evaluation items on the student experience survey administered by the OSAA. Results were transferred to the ADSAA and included the need to schedule more formal PDN meetings, the need to identify ways to enhance alumni involvement with the PDN, and the need to schedule another PDN advisor training session to acquaint and re-acquaint advisors with the Moodle portal, discuss what activities are required of advisors, and encourage their suggestions.