

FINAL REPORT OF THE COUNCIL OF DEANS COSTS OF EXPERIENTIAL EDUCATION TASK FORCE

*American Association of Colleges of Pharmacy (AACP)
Report as of May 2009*

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ABSTRACT

Purpose: To examine the costs of experiential education and the impact of these expenditures on the quality and quantity of introductory and advanced pharmacy practice experiences now and in the future.

Methods: Two surveys were developed to identify the preparation and costs associated with experiential programs at colleges or schools of pharmacy (colleges) and the practice site, respectively. An email was sent to the AACP listserv of deans – 110 received the email who shared the survey instructions for completion with their director(s) of experiential education. Thirty-six experiential directors responded. These same directors forwarded instructions to their program preceptors for completion of the preceptor survey. Preceptor respondents totaled 899. Both surveys were completed anonymously. These surveys identified such activities as credentialing, teaching, service, and scholarship.

Results: Costs impacting experiential education programs include gross annual salaries, preceptor stipends and non-salary resources. These allocations varied for introductory and advanced pharmacy practice experiences. Costs for introductory experiences were less expensive than advanced experiential costs. The average number of advanced sites (289) was also greater than the reported introductory sites (167). Data revealed that experiential education programs lack preceptors to meet curriculum guidelines for a diverse and quality experience. Workload of the experiential education program was heavily weighted on both the experiential director and support staff.

Conclusion: Designation of activities that demand considerable time commitments will assist experiential directors in prioritization of workload for program faculty and staff and assist in the number of staff needed for a successful office of experiential education. This was true especially when the average total FTEs allocated for administrative activities of experiential offices ranged from 1.0 FTE to 1.8 FTE. Additional study extended beyond the current evaluation is needed to

extract costs at a more delineated level to capture a “big picture” examination of the detailed costs of experiential education.

BACKGROUND

The Accreditation Council for Pharmacy Education (ACPE) standards and guidelines for the professional program in pharmacy leading to the doctor of pharmacy degree, effective July 1, 2007, states the curriculum must include introductory pharmacy practice experiences (not less than five percent of the curricular length; 300 hours minimum) and advanced pharmacy practice experiences (not less than 25 percent of the curricular length; 1440 hours minimum).¹ These critical components of the doctor of pharmacy curriculum continue to have substantive and increasing costs associated with implementation, preceptor development and training, practice site development, faculty and staff hiring, technology resources, and meeting contractual obligations. Will these escalating costs create access issues for some colleges and lead to disparities in the quality and quantity of introductory pharmacy practice experiences (IPPE) and advanced pharmacy practice experiences (APPE)?

The AACP Council of Deans established a Costs of Experiential Education Task Force (Task Force) that was charged to:

- 1) conduct a strategic analysis of experiential education costs, and
- 2) develop specific recommendations that will help colleges better plan for and manage volatile experiential education costs.

The Task Force convened throughout a two-year period via in person meetings and teleconferences where articles on quality, cost and measurement of related activities were reviewed; discussions on outcomes and data collection; and execution of the charge were considered. Questions derived from the issue at hand included:

- What is the cost of experiential education in terms of expenditure, time, and manpower?
- What are the contributing factors that go into cost?
- What are the different components that contribute to experiential education?
- What is the average amount of expenditures spent across the board for experiential education?

Some challenges were denoted by the Task Force that may be encountered in this study:

- Data may not be available to determine direct and indirect costs and expenditures for pharmacy.
- Pharmacy and medicine have different models, so comparison to previous medical approaches to evaluating experiential education (still termed clerkships in medicine) is difficult.
- Values may be defined differently by colleges and experiential education sites.

A methodology was adopted that included executing a survey among member AACP pharmacy institutions. All aspects of this study were approved by the Institutional Review Board of the

Northeastern Ohio Universities Colleges of Medicine and Pharmacy. The Task Force began this discovery process by creating a list of experiential education activities commonly performed by offices of experiential education and preceptors (faculty and non-faculty). Demographic and budgetary considerations were then incorporated. Consideration for the inclusion of student value in experiential sites and indirect expenditures were determined appropriate but not for the current stage of this process. Two separate surveys were created to target the specific activities - one for directors of experiential education and one for practicing pharmacists and non-pharmacists who serve as preceptors for each college or for more than one college, where appropriate. It was anticipated that data from these surveys would assist in:

1. Determining an average “amount of time” offices of experiential education and preceptors spent doing the various activities.
2. Ascertaining an average “cost or salary” per each unit of time spent doing the activity.
3. Assessing the potential impact of (1) and (2) on the overall experiential education program.

RESULTS

Experiential Director Survey: Demographics

The Task Force gained insight from the demographic results of the director’s survey. This information provided data on the qualifications and salary of the directors of experiential education. Although the Task Force did not set out to verify qualifications, the demographic results showed a prominence in directors with practice and management experience – qualifications denoted in Appendix C of the ACPE standards and guidelines.¹ A notable component of the overall program costs included experiential education director salaries.

The experiential education director survey was completed by 36 respondents (15 female and 21 male) and represented all districts designated by the National Association of Boards of Pharmacy. Ninety-two percent of these respondents were more than 35 years of age, and 34 were pharmacists with two directors responding that were non-pharmacists. A breakdown of the respondents’ education and training is shown in Table 1 below. Eighteen respondents also held additional education/training in residencies, fellowships, certifications and/or a master’s degree.

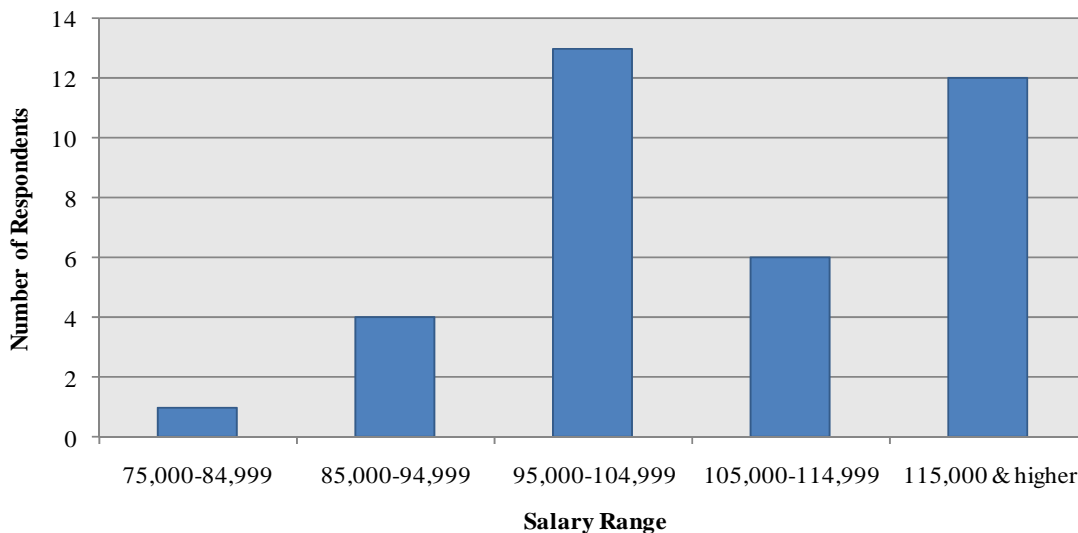
Table 1. Education/Training

DEGREE/TRAINING HELD	RESPONDENTS
Bachelor’s	4
BS/PharmD	14
PharmD	12
BS/PhD	1
PhD	1
MEd	2
PGY-1 Residency	1
PGY-2 Residency	1
Total Respondents	36

When asked if their profession required licensure, 86 percent stated “yes” and three percent stated certification was also required. Ninety-four percent of respondents whose profession requires licensure indicated that they have an active license.

Seventy-one percent stated their practice setting was a college of pharmacy. Other practice settings included community, acute care, ambulatory care, and academia. The respondents had an average of 22 years of experience as practicing pharmacists and an average of seven years as directors of experiential programs. All but one director was employed more than 0.5 FTE at a college of pharmacy. Eighty-six percent of the respondents reported to have an estimated gross annual salary of \$95,000 or higher. Minimum salary ranged from \$75,000 - \$84,999 (three percent). Refer to Figure 1.

Figure 1. Experiential Education Director Gross Annual Salary

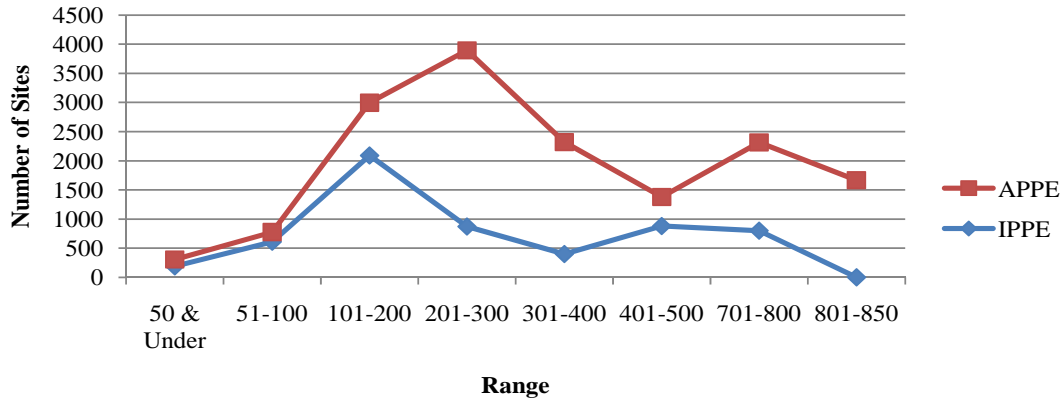


Director Survey: Student Site Placement

The Student Site Placement section of the experiential education directors survey focused on the availability and types of experiential sites. Key findings included the availability of preceptors and IPPE sites.

The average number of IPPE sites reported was 167 and the average number of APPE sites was 289. Figure 2 shows the varying availability of sites. As denoted, advanced sites are more plentiful compared to introductory sites likely due to the developing nature of IPPEs in programs across the academy.

Figure 2. IPPE and APPE



Experiential sites are equally identified by the college (50 percent) and by the college or student (50 percent). Colleges prefer students to complete rotations within their approved rotation sites. However, out-of-state rotations were allowed by 32 of the respondents' college (89 percent). When surveyed if the program's experiential personnel confirmed expectations for intern practice established by the Board of Pharmacy in the state where the student completes a rotation, 61 percent responded "yes" and 39 percent responded "no." Half of the respondents stated they did not have enough preceptors to meet their curriculum guidelines for a diverse and quality experience. The most common areas demonstrating gaps include institutional (44 percent), ambulatory care (39 percent), acute care (36 percent), and critical care (19 percent). A total of 94 percent of the respondents stated the appropriateness of practice sites was verified by conducting site visits, and 78 percent conducted an examination of documents as well. The impact of performing these activities is examined in more detail in the section on Duties of the Experiential Education Program.

Director Survey: Duties of the Experiential Education Program

Upon first analysis, the majority of the experiential program duties emerged as being performed by the director. Further analysis revealed that the program's support staff, although not fully responsible for particular tasks, greatly assisted the director in carrying out these duties. Of the duties that were performed predominately by the director (totaling 14 out of 20), the staff performed these duties on a weekly basis equal to (3 activities) or more than (6 activities) the director. The data shows the remaining duties (5 activities) performed by the director may have received minimal assistance by the staff in its execution. When reviewing these same duties on a yearly basis, the staff only performed two activities equal to the director and four activities greater than the director. The experiential education activities surveyed was not an all inclusive list; those activities surveyed are listed in Table 2.

Staff responsibilities focused on the verification of various licensures, certifications, immunization; organization of health records, drug testing, etc.; and completion of affiliation agreements/contracts. These six activities were performed more often by staff on a weekly basis but performed higher on a yearly basis by directors. This might imply that the directors spend a

great deal of time overseeing these activities. Should the directors be actually performing these duties, this data will assist directors in analyzing the appropriate allocation of duties.

Table 2. Program Duties

DIRECTOR AND STAFF EXPERIENTIAL EDUCATION DUTIES	<u>DIRECTOR</u> PERCENT PERFORMING DUTY	<u>STAFF</u> PERCENT PERFORMING DUTY	<u>DIRECTOR</u> NUMBER OF HOURS PER WEEK PERFORMED (AVG.)	<u>STAFF</u> NUMBER OF HOURS PER WEEK PERFORMED (AVG.)	<u>DIRECTOR</u> NUMBER OF WEEKS PER YEAR PERFORMED (AVG.)	<u>STAFF</u> NUMBER OF WEEKS PER YEAR PERFORMED (AVG.)
Verify that affiliated sites possess current licensure(s) for pharmacy	33	48	1	2	30	18
Verify that preceptors possess current licensure(s)	49	71	1	3	29	19
Verify whether affiliated sites provide immunizations	26	31	1	3	24	7
Verify whether preceptors possess immunization certification	17	24	1	2	26	8
Verify whether sites allow students to administer immunization (allowable by state law)	37	18	1	1	15	4
Recruit preceptors	100	58	6	6	72	20
Train preceptors	100	58	6	5	27	20
Evaluate preceptors	94	52	6	9	32	20
Conduct site visits	100	41	7	18	57	31
Review of portfolios or student assignments	85	49	9	8	39	53
Assignment of or confirmation of final grades	85	72	7	8	13	13
Handling of student problems	100	85	6	6	36	37
Handling of preceptor problems	100	76	3	4	32	31
Complete affiliation agreements/ contracts	69	79	4	6	44	27
Coordinate IPPE activities	81	55	7	12	42	43
Develop and update forms and tools, etc.	100	73	7	7	27	32
Conduct assessments	25	6	8	9	40	11
Supplement site training	38	15	4	3	6	1

on blood borne and airborne pathogens						
Train students to IPPE/APPE policies and procedures	97	66	7	3	13	13
Organization of health records, drug testing, etc.	49	91	5	9	11	31

Director Survey: Budgetary Impacts

Respondents were asked to provide various budgetary data by site and by preceptor (IPPE vs. APPE). Data revealed that the costs associated with the introductory pharmacy practice experiences were less expensive than those pertaining to advanced experiences by site and by preceptor. Faculty gross annual salary was the highest expenditure allocated toward the experiential education program for both IPPE and APPE. By site, total faculty salary for IPPE averaged \$121,000 and total faculty salary costs for APPE averaged \$1,170,268. By preceptor, total faculty salary for IPPE averaged \$100,000 and total faculty salary costs for APPE averaged \$718,500.

Funds allocated for preceptor stipends (\$304,342) were ranked as the second highest cost affecting APPE where costs for administrative staff salary (\$92,295) ranked second for IPPE, by site. By preceptor, non-salary resources (\$200,000) was the second highest costs for APPE while preceptor stipends (\$95,550) ranked second highest for IPPE. No results were received for non-faculty salary, by preceptor. Figures 3 and 4 show cost aspects for areas impacting the IPPE and APPE components of the program by Site and by Preceptor, respectively.

Figure 3. Costs Impacting IPPE and APPE By Site

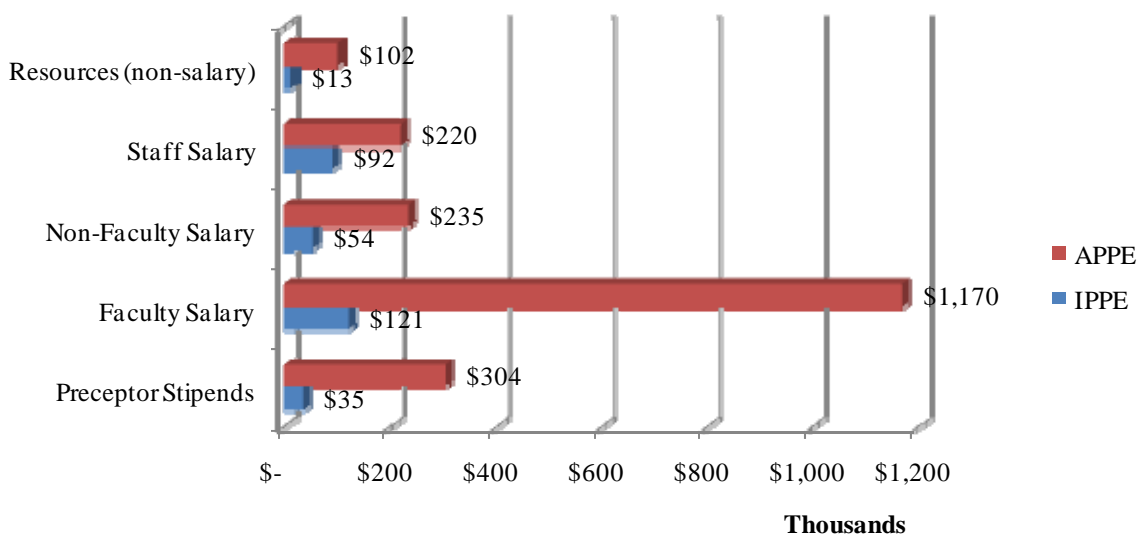
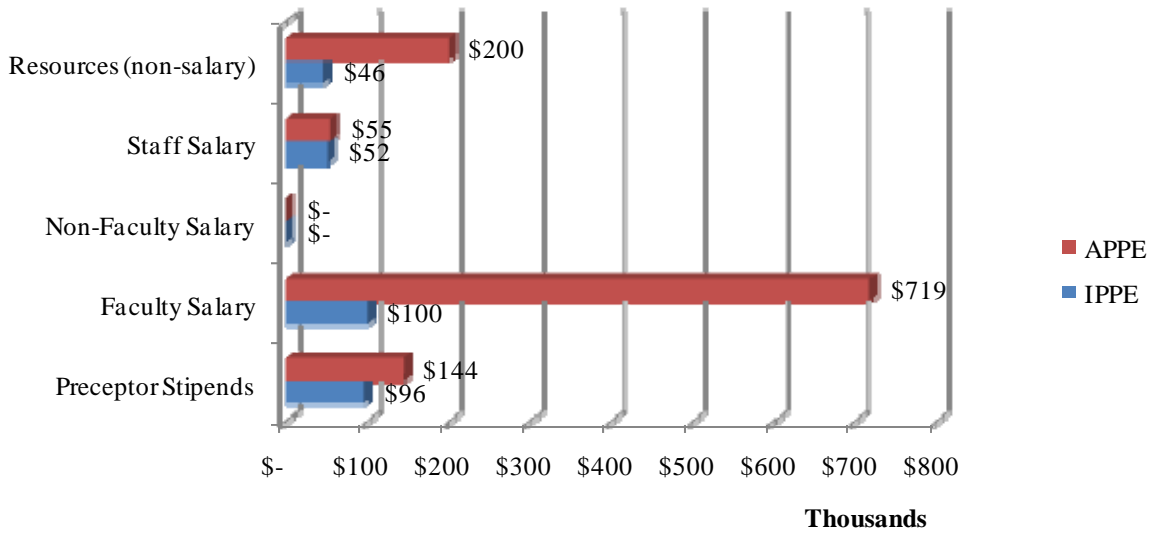
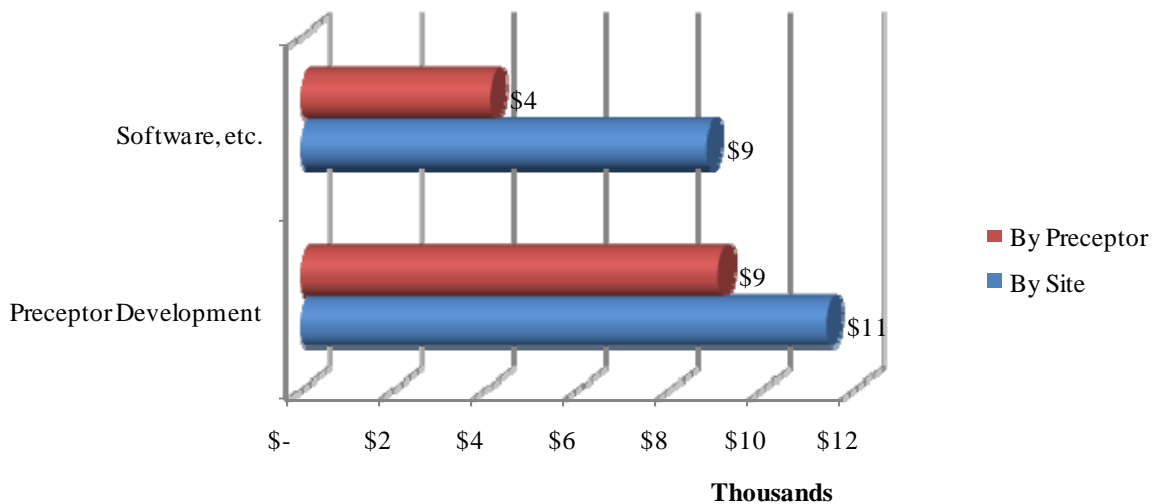


Figure 4. Costs Impacting IPPE and APPE By Preceptor



By comparison, minimal costs were allocated toward preceptor development and cost of experiential education software. Figure 5 shows that on average more funds were allocated for preceptor development and software by site than by preceptor. These expenditures were not segregated by IPPE and APPE as they impact the education program as a whole.

Figure 5. Preceptor Development and Software Expenditures by Site and by Preceptor

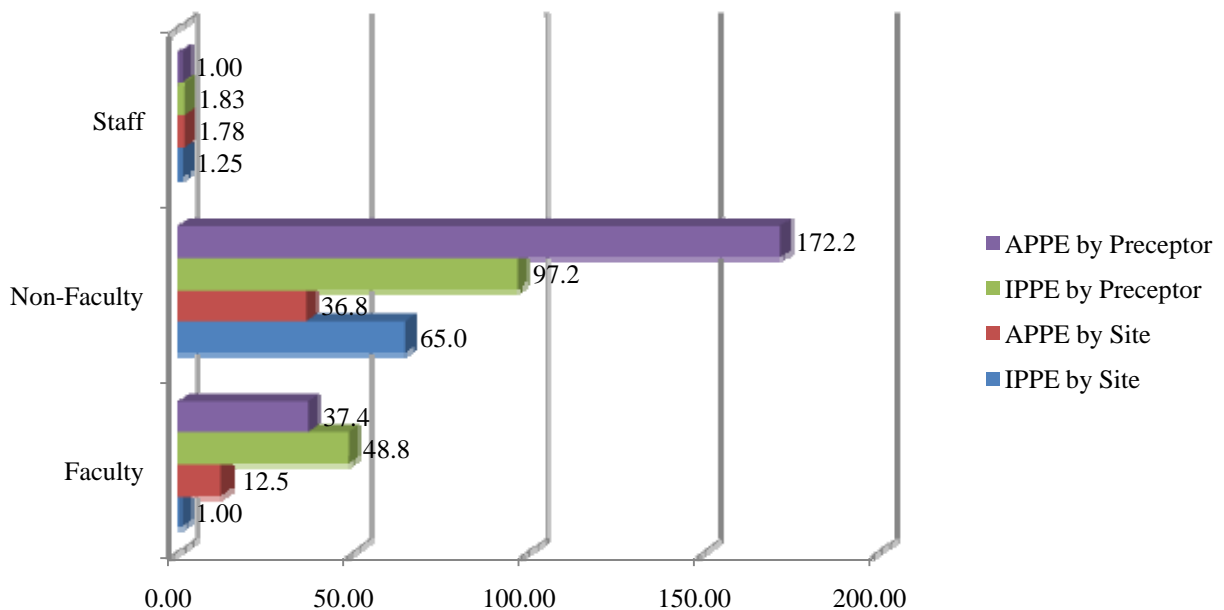


Seventy-nine percent of the respondents stated their college invests funds in programs that affect the clinical educational program (e.g. residency programs, fellowships, etc.). The average reported amount per academic year was \$155,744. The minimum expenditure amount reported

was \$8,000 whereas the highest stated amount was \$500,000. The majority of these investments went toward residency programs presumably as a support mechanism related to experiential education. The survey revealed that experiential education programs lack preceptors to meet curriculum guidelines for a diverse and quality experience. Practice areas with gaps include institutional, ambulatory care, acute care, and critical care experiences.

Experiential directors were asked about total full-time equivalents (FTEs) allocated for faculty, non-faculty, and for those administrative activities performed by experiential offices. The results are shown in Figure 6, depicting 1.8 or less FTEs for experiential offices (IPPE and APPE) and a diverse response for faculty and non-faculty FTEs.

Figure 6. FTE Allocation for Experiential Programs



Preceptor Survey Results: Demographics

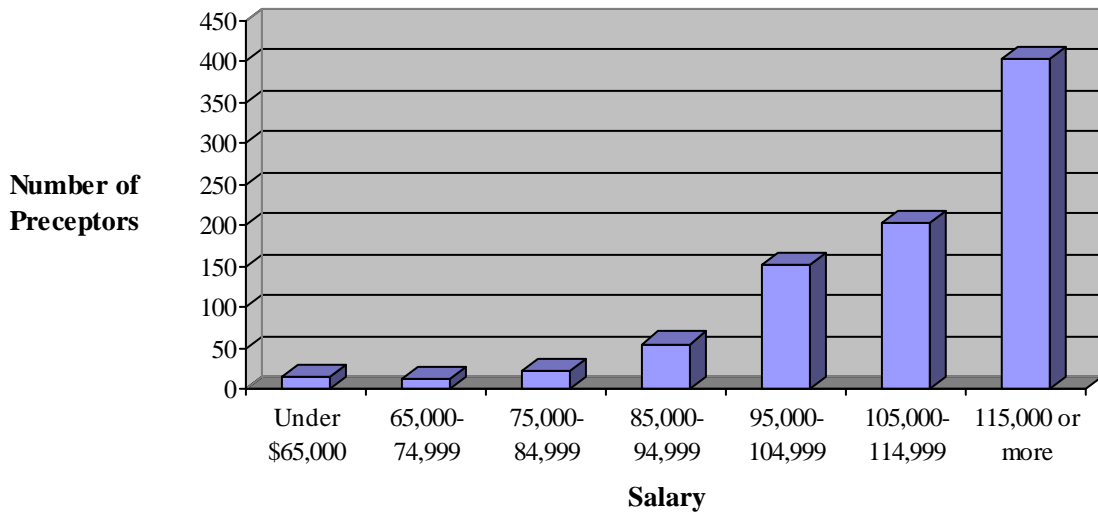
The preceptor survey was completed by 899 respondents (47 percent female and 53 percent male). All districts designated by the National Association of Boards of Pharmacy were represented with District 2 composing 27 percent of the respondents. Ninety-nine percent of these respondents were more than 26 years of age and 98 percent were pharmacists. The respondents held varying degrees and training. A breakdown of the respondents' education/training is shown in Table 3. These results clearly meet the qualities and experience required by the ACPE standards and guidelines.¹

Table 3. Preceptor Education/Training

DEGREE/TRAINING HELD	RESPONDENTS	INCLUDING ADDITIONAL EDUCATION/TRAINING
Bachelor's	14	
BS/PharmD	267	MBA=1; MD=1
BS/PharmD/PGY-1 Residency	87	MBA=2
BS/PharmD/PGY-1/BPS Certification/Other	80	MS=40; PhD=3; RN=1; DVM=1; DNM=1
BS/PharmD/PGY-1/PGY-2/BPS Certification/Other	37	MD=1
BS/PharmD/PGY-1/PGY-2/ Fellowship/BPS Certification/Other	24	MS=13
PharmD Candidate	1	
PGY-1 Residency	1	
Total Respondents	511/899	

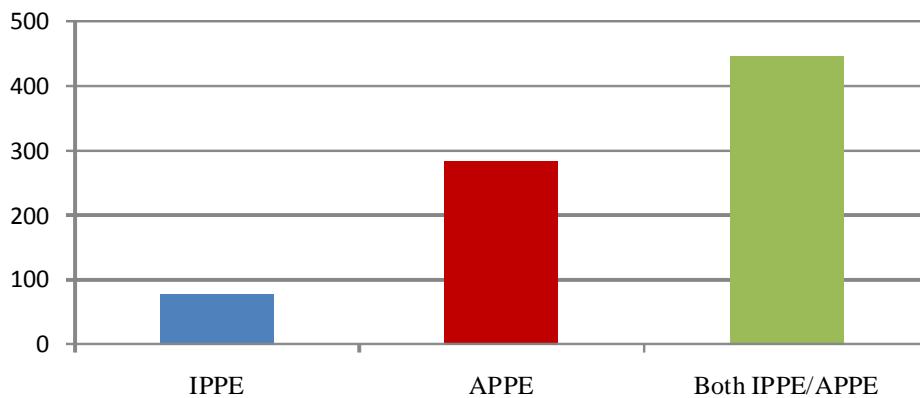
Ninety-nine percent stated their profession required licensure, of which the same percent held active license. Only 17 percent stated their profession required certification. The respondents had an average of 18 years experience as a practicing pharmacists and an average of 10 years serving as a preceptor of experiential programs. When surveyed as to their faculty status, 10 percent were designated as full-time faculty, six percent as shared faculty, and 84 percent were not employed by colleges of pharmacy. When surveyed as to holding a faculty or adjunct title, 92 percent of the respondents held titles in pharmacy, 3.7 percent in medicine, 0.7 percent in nursing and 3.7 percent in other areas. Preceptors estimated gross salary varied – 814 of the respondents had an estimated gross salary of \$85,000 or more (refer to Figure 7).

Figure 7. Estimate Gross Salary for Preceptors



Practice settings for responding preceptors were acute care (37 percent), community-retail (15 percent), and ambulatory care (9 percent). Other practice settings (20 percent) ranged from academia, community health centers, government facilities, to industry settings. Seventy-four percent of these practice sites were considered urban. The average number of colleges that the respondents precept for was two; in fact, 95 percent of the respondents reported precepting for four colleges of pharmacy or fewer. The average number of sites at which respondents precepted were one; specifically, 89 percent reported to precept at one site, and an additional five percent precepted at two sites. Sixty-three of the respondents have never had to turn down a request for a rotation due to commitments to another college or university suggesting capacity is available that is not being utilized. Preceptors that did have to turn down a rotation (37 percent) only encountered this issue on an average of twice per academic year. Figure 8 shows the level of students precepted which include 19 percent of non-pharmacy students. Only 24 percent of the preceptors provide lectures at a college of pharmacy.

Figure 8. Level of Student Precepted



Preceptor Survey Results: Preceptor Activities

The weekly activities that preceptors spend most of their time on include direct observation of student performance during rotation, providing patient care services without students present, and participating in drug distribution process. These activities were also reported as the activities on which preceptors spend most of their time over the course of a year. In addition, over the course of a year, preceptors also spent most of their time on conducting patient discussions outside of rounds/clinics and assisting students with drug information requests. Refer to Table 4 for a more detailed listing.

Table 4. Preceptor Activities

ACTIVITY	AVERAGE HOURS PER WEEK	AVERAGE WEEKS PER YEAR
Orient students to my site.	3.63	8.93
Develop teaching materials for my rotation.	2.82	9.57
Participate in development activities to enhance my ability as a preceptor.	2.34	7.42
Prepare and conduct a midpoint student assessment.	1.35	6.62
Prepare and conduct a final student assessment.	1.70	7.26
Directly observe student performance during rotation.	15.26	19.00
Pre-round with students.	1.46	7.01
Participate with inpatient teaching service.	2.02	6.89
Participate with ambulatory teaching service.	2.05	5.28
Conduct patient discussions outside of rounds/clinic.	2.91	11.77
Provide patient education with students prior to discharge or before leaving an ambulatory setting	2.10	7.68
Attend and assist with student journal club presentation.	0.95	6.80
Attend and assist with student case/disease state presentation.	1.75	9.52
Assist students with drug information requests.	2.66	12.58
Assist students with P&T drug monograph	0.94	4.79
Assist with student health care provider in-service.	0.84	4.39
Participate in drug distribution process.	9.17	17.60
Provide patient care services without students present.	13.70	27.54
Work on scholarship such as articles/monographs.	1.37	7.86
Attend conferences or other personal development.	7.54	7.98
Mentor student poster project/presentation.	1.06	5.43
Coordinate student activities within my site for the students assigned to other preceptors	1.19	6.45
Serve on experiential committee for the college.	0.25	1.00
Serve as an individual advisor for a student on rotation.	3.37	6.64

Only 17 percent of respondents said they require compensation for precepting students. Those receiving compensation from a college for precepting students equaled 34 percent. Eighty-two percent indicated that serving as a preceptor was not a requirement for pharmacists at their sites.

CONCLUSION

The Task Force met its charge to conduct a strategic analysis of experiential education costs through the application of two surveys to experiential education directors and program preceptors. Findings from this study provided insight on specific aspects of the experiential education program expenditures or impact on these, such as the completion of activities by the offices of experiential education and preceptors. Activities completed by staff weighed heavily in

regard to time commitment on their responsibilities as well as the director's responsibilities, indicative of much needed collaboration in the execution of experiential education programs. This outcome may prove useful when determining if each program has a sufficient level of staffing.

The previous outcome noted and those recounted in the following list may assist deans and directors in allocating costs and/or time commitments for experiential education programs.

Activities

- Staff weekly time commitments focused on: verification of various licensures, certifications, immunization; organization of health records, drug testing, etc.; and completion of affiliation agreements/contracts.
- Director weekly time commitments focused on: recruitment, training and evaluation of preceptors; conducting site visits; handling of student and preceptor problems; development and updating of forms and tools; and training students to IPPE/APPE policies and procedures.
- Preceptor weekly and yearly time commitments focused on: directly observing student performance during rotation, providing patient care services without students present, and participating in drug distribution process.
- Experiential programs ability to meet curriculum guidelines for a diverse and quality experience denoted gaps in areas such as institutional, ambulatory care, acute care, and critical care experiences.

Costs

- Program costs associated with introductory pharmacy practice activities were less expensive than those pertaining to advanced practice activities.
- Faculty salaries are the highest costs allocated for both IPPE and APPE (by site and by preceptor).
- Preceptor stipends were ranked as the second highest cost affecting APPE by site and non-salary resources by preceptor.
- Costs for administrative staff salary ranked second highest for IPPE by site and preceptor stipends by preceptor.
- Non-salary resources were essentially the same when comparing the percentage of the other costs impacting the program.

The survey findings also addressed the second charge for the Task Force – develop specific recommendations that will help colleges better plan for and manage volatile experiential education costs. These recommendations resound in the outcomes of the activity data. Directors will be able to use this data to assist in allocation of duties for faculty, staff and preceptors; determine adequate levels of staffing; be cognizant of expenditures impacting the program such as salaries, non-salary resources, and differences in costs for introductory and advanced experiences to improve budgetary planning efforts.

While this study assisted the Task Force in determining an average “amount of time” offices and preceptors spend on various activities of the experiential education program, it did not ascertain an average “cost or salary” per each unit of time spent doing the activity. The two surveys developed, while not all inclusive, held assumptions that were not pertinent to all colleges queried. This may have restricted the respondents’ answers. Data emphasized that variances exist within each program – from the qualifications of directors to the number of hours preceptors engage in certain activities. While a value of unit was requested (number of hours per week/year) for program activities, responses were quite diverse. The number of respondents and responses to each survey question limited the ability to accurately examine the actual costs of experiential education and the impact of these costs on the quality and quantity of pharmacy practice experiences. These limitations are such that the Task Force proposes further investigation of this cause; additional study to extract costs at a more delineated level would need to be executed using the current evaluation as a baseline. Additional areas identified by the Task Force in its final evaluations included considering further investigation of private versus public institutions, the number of rotations per year by colleges, stipend correlations and the inclusion of student and FTE data. The Task Force recommends that if an additional evaluation is executed, the AACP Experiential Education Section should be maximally engaged. The Task Force further recommends that AACP include director of experiential education demographic data in the AACP *Profile of Pharmacy Faculty*.

ACKNOWLEDGMENTS

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