

July 2012

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Assessment of Pharmacist Attitudes Regarding Introductory Pharmacy Practice Experience Hours

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Due to a lack of previous research, the objective of this study was to obtain an understanding of the attitude that preceptors have toward IPPE hours.

Abstract

Introductory pharmacy practice experience (IPPE) hours are a means of integrating experiential education as a key role early on in pharmacy education. The Accreditation Council for Pharmacy Education (ACPE) has offered little guidance on mandatory and specific objectives to accomplish during IPPE hours, thus it is possible that preceptors do not feel adequately prepared, nor do they have a full understanding of what is required of them when they agree to precept an IPPE student. Given the lack of previous research conducted, the objective of this study was to obtain an understanding of the general attitude that preceptors have toward IPPE hours. A self-administered Internet-based questionnaire was completed by 100 respondents. The survey included multiple choice, Likert-type scale (1 = strongly disagree to 7 = strongly agree), sliding scale, and open-ended questions assessing preceptor's knowledge of academic IPPE hour requirements, college of pharmacy expectations, time commitment and work site issues, expectations of the student, formality of IPPE hours, personal experience as a preceptor, an open-ended response and demographic information. Upon analyzing the data, researchers found that respondents presented with a generally positive attitude regarding IPPE hours (5.79 ± 1.03). Respondents expressed a desire to receive a zero to two hour online preceptor training (5.17 ± 1.25). In general, pharmacists indicated sufficient staffing to accommodate IPPE students (3.92 ± 1.38) and were undecided regarding monetary reimbursement (4.39 ± 1.53). Survey participants preferred receiving a guided checklist of activities for completion (5.45 ± 1.27), student resumé (5.19 ± 1.30) and previous didactic course work (5.33 ± 1.41); however, survey participants expressed a desire for flexibility in determining the specifics of the experience (5.41 ± 1.11) while having students complete hours in a more concentrated time frame (5.19 ± 1.44). This exploratory research project was conducted to serve as baseline data to stimulate further investigation regarding IPPE hours.

Introduction

With the transition from a bachelor of science (BS) to that of an entry level doctor of pharmacy (PharmD), in order to enter into the profession of pharmacy, many colleges of pharmacy have been forced to change curriculums and implement early experiences to prepare students for their future careers. Although experiential education has always been integrated into the end of a pharmacy education, it now plays a key role earlier in the process. According to the most recent Accreditation Council for Pharmacy Education (ACPE) Standards and Guidelines, the pharmacy curriculum must consist of IPPEs for "not less than 5% of the curricular length" and advanced pharmacy practice experiences (APPEs) for "not less than 25% of the curricular length."¹ This, in turn, equates to not less than 300 hours of IPPE rotations and not less than 1,440 hours of APPE rotations to be completed by students throughout their pharmacy education. The aforementioned ACPE guidelines also state that community and institutional health system pharmacy practice must account for at least 50 percent of the IPPE hours, and simulations can account for no greater than 20 percent of the introductory hours. As the number of accredited pharmacy colleges increases, the number of students in need of sites for IPPE completion has put some strain on both the process of placement as well as the quality of the experience a student receives.¹

Along with potential strain from a large number of students completing experiential hours, pharmacist preceptors may potentially feel overwhelmed and unable to offer a beneficial experience for each intern. ACPE guidelines do not specifically assert what must be accomplished through IPPEs, but rather state that these experiences must "permit students, under appropriate supervision and as permitted by practice regulations, to assume direct patient care responsibilities." The guidelines further state that IPPEs should be started early in the curriculum and be "interfaced with didactic course work that provides introduction to the profession, and continue in a progressive manner leading to entry into the advanced pharmacy practice experiences." With such strong emphasis on the importance of experiential activities throughout the pharmacy curriculum, and with little guidance on mandatory and specific objectives to accomplish during IPPEs, it is possible that preceptors do not feel adequately prepared nor do they have a full understanding of what is required of them when they agree to precept an IPPE student. Colleges of pharmacy are encouraged to create a list of topics that the college deems necessary for a student to accomplish during the IPPEs, but with the increasing number of accredited colleges of pharmacy it is hard to ensure that the overall IPPE experience is adequate for all students. Due to a lack of previous research, the objective of this study was to obtain an understanding of the attitude that preceptors have toward IPPE hours.¹

Methods

A database was obtained from the Ohio State Board of Pharmacy listing pharmacists licensed in Ohio. Nine hundred and ninety-three pharmacists were randomly selected, via randomization of names, representing various practice sites throughout Ohio. A self-administered questionnaire formatted with Qualtrics Survey Software was emailed to participants with a set of instructions in February 2012. The respondents were asked to complete the survey in a two-week time period.

Following a literature review, the researchers discovered no previous data existed assessing preceptor's experiences and attitudes regarding IPPE hours. A preliminary survey consisting of five general, open-ended questions regarding IPPE hours was given to five IPPE preceptors. This survey was sent and received by a faculty member outside of the research group to ensure anonymity and eliminate bias. Based on responses gathered, the researchers developed the questionnaire used in this study, which was revised seven times. Survey revisions included changes in categorizing questions, consolidation of questions, formatting, word choices, and correcting typographical errors. The survey was pilot tested by the researchers evaluating the length, format, flow and understanding of the survey.

The questionnaire consisted of eight sections, including demographics. The sections assessed: preceptor's knowledge of academic IPPE hour requirements (4 questions), college of pharmacy expectations (11 questions), time commitment and work site issues (5 questions), expectations of the student (11 questions), formality of IPPE hours (8 questions), personal experience as a preceptor (2 questions) and an open-ended response (1 question). The demographic information gathered included: gender, age, highest degree obtained, number of years in practice, number of years as a preceptor, number of APPE rotations and IPPE rotations he/she is a preceptor for per year, number of schools he/she takes students for rotations (APPEs and IPPEs) per year and type of practice site. The survey included multiple choice, Likert-type scale (1 = strongly disagree to 7 = strongly agree), sliding scale, and open-ended questions. The institutional review board at Ohio Northern University approved the final survey in January 2012.

Results and Discussion

The questionnaire was sent to 993 licensed pharmacists in the state of Ohio, 100 of whom completed the survey (10 percent response rate). The results of the questionnaire regarding preceptor's attitudes towards IPPE experiences are presented in *Table 1* and the demographics are presented in *Table 2*.

Table 1: A seven-point Likert-type scale was used: 1, strongly disagree; 2, disagree; 3, somewhat disagree; 4, neither agree nor disagree; 5, somewhat agree; 6, agree; 7, strongly agree.

Pharmacist attitude toward IPPE hours	
Question	Mean ± Standard Deviation unless otherwise indicated
<i>Academic IPPE Hour Requirements</i>	
I know the number of IPPE hours that students must complete according to the Accreditation Council for Pharmacy Education (ACPE) requirements. Yes No	43% 57%
I know what the preceptor requirements are according to ACPE regarding IPPE hours. Yes No	48% 52%
I know that students cannot be paid for IPPE hours. Yes No	90% 10%
I understand that formal agreements must be in place between the school and pharmacy for IPPE hour completion. Yes No	85% 15%
<i>College of Pharmacy Expectations</i>	
The goals of the IPPE experience are made clear by the college of pharmacy.	5.03 ± 1.25
The guidelines of the IPPE experience are made clear by the college of pharmacy.	5.04 ± 1.23
In my experience as a preceptor, I have received preceptor training for IPPE hours. Yes No	28% 72%
It would be beneficial to complete a preceptor training session to better prepare me for IPPE students.	5.17 ± 1.25
I would be willing to complete a training session that lasts 0-2 hours 3-5 hours 6+ hours	70% 29% 1%

Pharmacist attitude toward IPPE hours (continued)	
Question	Mean ± Standard Deviation unless otherwise indicated
<i>College of Pharmacy Expectations (continued)</i>	
I would rather complete a(n) On-line training course Home-study session Course that I attend in person I have no preference	55% 10% 17% 17%
Most students are given a list of IPPE requirements from the college of pharmacy.	5.29 ± 1.12
In the instances where I have received a list of IPPE requirements, in general the list was manageable.	5.05 ± 1.16
In the instances where I have received a list of IPPE requirements, in general the list was easy to understand.	5.13 ± 1.04
In the instances where I have received a list of IPPE requirements, in general students were held accountable in completing the requirements.	5.10 ± 1.11
In the instance where I have received a list of IPPE requirements, in general the requirements were appropriate for the experience.	5.04 ± 1.10
<i>Time Commitment and Work Site Issues</i>	
I believe that the adequate amount of time for a student to spend at a particular IPPE site is 0-20 hours 21-40 hours 41-60 hours 61-80 hours 81-100 hours 100+ hours	17% 19% 14% 29% 6% 15%
It would be beneficial for students to complete IPPE hours at more than one practice site.	5.69 ± 1.24
I am provided adequate staffing to spend time teaching an IPPE student.	3.92 ± 1.38
I have enough time during a typical day to provide a valuable learning experience for an IPPE student.	4.42 ± 1.38
What percentage of time is appropriate for a student to spend with the pharmacist, technician and other interns or students, while completing IPPE hours? (To respond, please slide each bar to the percent of time you feel appropriate. The categories should add up to 100%. If a choice is not applicable use 0%) Pharmacist Technician Other interns or students Independently	51.99% 27.84% 16.72% 15.87%
<i>Expectations of the Student</i>	
It is beneficial to receive an outline of a student's academic course work prior to IPPE hours.	5.33 ± 1.41
It is beneficial to receive a student's resumé prior to IPPE hours.	5.19 ± 1.30

Pharmacist attitude toward IPPE hours (continued)	
Question	Mean ± Standard Deviation unless otherwise indicated
<i>Expectations of the Student</i> (continued)	
The level of a student's knowledge base has a significant impact on a student's IPPE experience.	5.61 ± 1.00
Before coming to my IPPE site, I would prefer that students have a basic knowledge of (check all that apply). Basic counseling skills Pharmacy calculations SIG codes Top 100 drugs	59% 74% 78% 74%
In general, IPPE students are professional when communicating with other health care professionals.	5.29 ± 1.00
Generally, IPPE students are professional when communicating with patients.	5.19 ± 1.01
During IPPE hours, students should complete a project.	4.66 ± 1.32
Students should be given assignments to complete away from the IPPE practice site.	4.18 ± 1.37
I think that IPPE hours should predominantly be a reinforcement of student's previous course work.	4.59 ± 1.26
I am responsible for teaching new things to the student during their IPPE hours.	5.40 ± 1.09
Generally, I think students approach IPPE hours with a positive attitude.	5.36 ± 1.11
<i>Formality of IPPE Hours</i>	
I understand how to structure IPPE hours.	4.53 ± 1.42
I would be willing to precept more students if the time requirements for IPPE hours were shorter.	4.29 ± 1.08
I would like to receive a complete checklist of tasks for a student to complete during their IPPE hours.	5.45 ± 1.27
It would be beneficial to be provided with daily activities for the student and I to accomplish.	4.63 ± 1.41
I feel a formal evaluation evaluating the IPPE student would be beneficial.	5.01 ± 1.31
It is beneficial to have the students work more days a week for a shorter duration (i.e. five days a week for two weeks) rather than have the students work less days a week for a longer duration (i.e. one day a week for ten weeks) to complete their IPPE hours.	5.19 ± 1.44
I should have flexibility in deciding what to do with a student during their IPPE hours.	5.41 ± 1.11
I think preceptors should be compensated for being a preceptor to IPPE students.	4.39 ± 1.53
<i>Personal Experience as a Preceptor</i>	
Generally, I approach IPPE hours with a positive attitude.	5.79 ± 1.03
I completed IPPE hours while in pharmacy school. Yes No	41% 59%
I believe that the IPPE hours I completed in pharmacy school were beneficial.	5.53 ± 1.38

Table 2: Demographic Results

<i>Demographics</i>	
Response rate	10% (100 of 1,000)
Age of Respondents	
21-30	10%
31-40	27%
41-50	23%
51-60	34%
61-70	4%
>70	2%
Gender	
Male	46%
Female	54%
Highest degree in Pharmacy	
Bachelor of Science in Pharmacy	64%
PharmD	36%
Years in practice	
0-5	12%
6-10	12%
11-15	15%
16-20	15%
>20	46%
Years as a preceptor for PharmD rotations	
0-5	66%
6-10	13%
11-15	8%
16-20	4%
>20	8%
Pharmacy Practice Setting	
Community chain	21%
Independent community	10%
Hospital	32%
Clinic	7%
Other	29%
Number of students respondents are a preceptor for APPE (clinical PharmD rotations) annually	3.09 ± 3.48
Number of students respondents are a preceptor for IPPE rotations annually	2.12 ± 2.95
Number of pharmacy schools for which respondents are a preceptor	2.05 ± 1.73

Currently, ACPE has general guidelines pertaining to preceptor training for IPPE hours. Only 48 percent of pharmacists that completed the survey knew what the preceptor requirements were according to ACPE regarding IPPE hours. A considerable percentage of respondents (72 percent) stated that they did not receive preceptor training for IPPE hours. However, they somewhat agreed (5.17 ± 1.25) that it would be beneficial to complete a preceptor training session to better prepare themselves for IPPE students. Only 8 percent of pharmacists that responded had any sort of disagreement with the statement, which claimed it would be beneficial to complete a preceptor training program. Furthermore, 70 percent of respondents would be willing to complete a training session that lasts zero to two hours. The preferred type of training session varied between the respondents. Fifty-five percent would rather complete an online training course, 10 percent preferred a home-study training session, 17 percent preferred a course that they would attend in person and 17 percent had no preference. Additionally, 41 percent of respondents completed IPPE hours while they were in pharmacy school, and respondents agreed that the IPPE hours that they completed in pharmacy school were beneficial (5.53 ± 1.38).

A considerable percentage of respondents (72 percent) stated that they did not receive preceptor training for IPPE hours.

Eighty-five percent of pharmacists that completed the survey understood that formal agreements must be in place between the school and pharmacy for IPPE competition. However, the percent of respondents that knew the number of IPPE hours that students must complete according to ACPE requirements was only 43 percent. A significant percentage (90 percent) also knew that students cannot be paid for IPPE hours. Respondents somewhat agreed (5.03 ± 1.25) that the goals of the IPPE experience are made clear by the college of pharmacy even though only 12 percent had any sort of disagreement with this statement. Similarly, respondents somewhat agreed (5.04 ± 1.23) that the guidelines of the IPPE experience are made clear by the college of pharmacy and only 11 percent had any sort of disagreement with this statement. Additionally, the respondents only slightly agreed (4.53 ± 1.42) that they understood how to structure IPPE hours, which could possibly increase with preceptor training.

Only seven percent of respondents either disagreed or somewhat disagreed that students should complete IPPE hours at more than one practice site; respondents generally agreed that more than one practice site was beneficial (5.69 ± 1.53). Also, respondents somewhat agreed to agreed (5.33 ± 1.41) that it would be beneficial to receive an outline of the student's academic course work prior to them beginning their IPPEs. Likewise, respondents somewhat agreed that it would be beneficial to receive a student's resumé prior to the start of IPPE hours (5.19 ± 1.30). Respondents agreed that the level of a student's knowledge base has a significant impact on a student's IPPE experience (5.61 ± 1.00). Seventy-four percent of respondents reported that they would prefer students to know pharmacy calculations before going to their IPPE site, 78 percent reported that they would prefer students to know SIG codes, and 74 percent would prefer that students know the top 100 drugs.

It is also interesting that respondents somewhat agreed to agreed (5.29 ± 1.00) that IPPE students are professional when communicating with other health care professionals. Only one respondent had any sort of disagreement with the statement. Likewise, preceptors somewhat agreed that IPPE students are professional when communicating with patients (5.19 ± 1.01). It is important to note, that no respondents disagreed that IPPE students are professional when communicating with patients. Respondents somewhat agreed to agreed that students generally approach IPPE hours with a positive attitude (5.36 ± 1.11). It was surprising to the researchers that respondents neither agreed nor disagreed that preceptors should be compensated for being a preceptor to IPPE students (4.39 ± 1.53). Respondents agreed that they generally approach IPPE hours with a positive attitude (5.79 ± 1.03), with only 2 percent expressing any level of disagreement.

...no respondents disagreed that IPPE students are professional when communicating with patients.

Respondents somewhat agreed to agreed that most students are given a list of IPPE requirements from the college of pharmacy (5.29 ± 1.12). When lists were provided, respondents agreed that: 1) the list was manageable (5.05 ± 1.16) with only 8 percent expressing any level of disagreement, 2) the list was easy to understand (5.13 ± 1.04), 3) students were held accountable in completing the requirements (5.10 ± 1.11) with only 4 percent expressing any level of disagreement, 4) the requirements were appropriate for the experience (5.04 ± 1.10) with only 4 percent expressing any level of disagreement.

Respondents somewhat agreed to agreed that they would like to receive a complete checklist of tasks for a student to complete during their IPPE hours (5.45 ± 1.13) with 87 percent of respondents expressing some level of agreement. However, respondents only slightly agreed that it would be beneficial to be provided with daily activities for the student and themselves to accomplish (4.63 ± 1.41). Similarly, respondents somewhat agreed to agreed that they should have flexibility in deciding what to do with a student during their IPPE hours (5.41 ± 1.11) with 85 percent expressing some level of agreement.

Respondents neither agreed nor disagreed that they are provided adequate staffing to spend time teaching an IPPE student (3.92 ± 1.38). Also, respondents neither agreed nor disagreed that they have enough time during a typical day to provide a valuable learning experience for an IPPE student (4.42 ± 1.38). However, respondents somewhat agreed to agreed (5.40 ± 1.09) that they are responsible for teaching new things to the student during their IPPE hours. Respondents somewhat agree that it is beneficial to have students work more days a week for a shorter duration (i.e. five days a week for two weeks) rather than have students work less days a week for a longer duration (i.e. on day a week for ten weeks) to complete their IPPE hours (5.19 ± 1.44), with only 11 percent expressing any level of disagreement. Respondents only slightly agreed that students should complete a project during IPPE hours (4.66 ± 1.32), though only 16 percent expressed any amount of disagreement. Respondents neither agreed nor disagreed that students should be given assignments to complete away from the IPPE practice site (4.18 ± 1.37).

A limitation to this study may be that results of the study can only be generalized to groups that are similar to those included in the study population. Study participants were limited to Ohio registered pharmacists and did not represent a national sample. Preceptors were not specifically targeted, and there was no way to identify preceptors from non-preceptors. The study included all pharmacists so that the research included the perspective of the entire profession of pharmacy. Future research should be conducted to continue to evaluate and improve the IPPE requirements for both the pharmacist and the student.

Conclusion

Respondents had a more positive view of the IPPE requirements than the researchers had initially expected. Survey participants reported they would like more guidance on areas to highlight while students are completing IPPEs at their site, such as a checklist of topics to be covered, outline of previous course work, and student resumé, but had a negative attitude toward the idea of strictly structured daily activities. Respondents were undecided in two areas: the need for additional staffing in order to accommodate IPPE students and reimbursement for their role as a preceptor. Only 48 percent of preceptors reported knowledge of the ACPE requirements for IPPE hours; a majority of preceptors reported a desire to be trained with a preferred method of a zero to two hour online program. Respondents indicated that students should spend time at multiple practice sites and in concentrated time blocks, and respondents preferred that students have a certain amount of training and knowledge base before beginning IPPE hours. Finally, this exploratory research project was conducted to serve as baseline data to stimulate further investigation regarding IPPE hours.

...participants reported they would like more guidance on areas to highlight while students are completing IPPEs at their site, such as a checklist of topics to be covered.

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