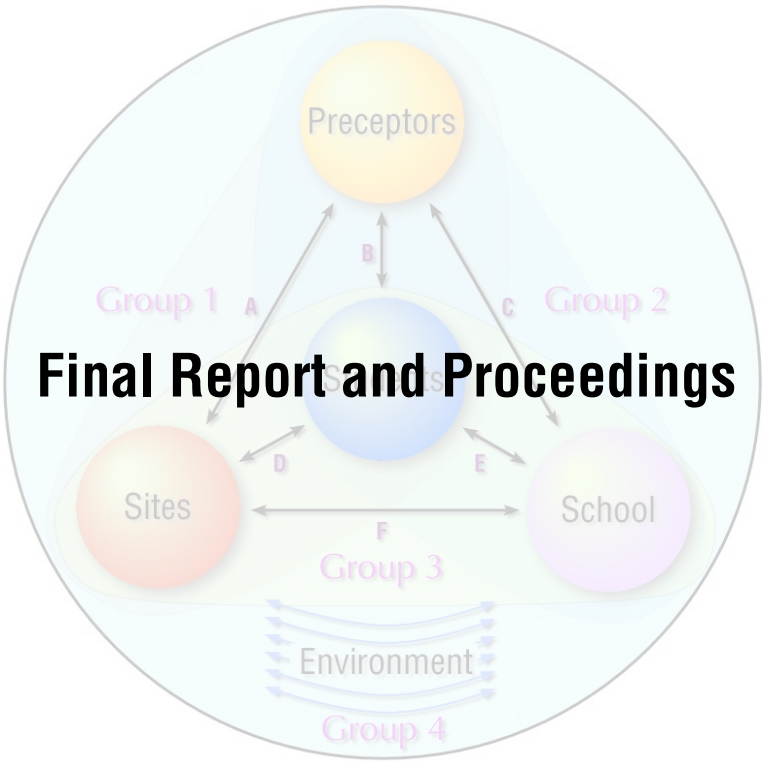
American Association of Colleges of Pharmacy

Academic Practice Partnership Initiative

Summit to Advance Experiential Education in Pharmacy



Final Report and Proceedings

Edition 1

Chicago, Illinois
June 17–18, 2005

With grant support from Merck & Company, Inc.

"Problems cannot be solved by thinking within the framework in which the problems were created."

— Albert Einstein

Preface

The AACP APPI Summit to Advance Experiential Education in Pharmacy builds on the significant work that has been done through committees and task forces, and other efforts by AACP members and colleague pharmacy organizations, to develop strategies that stakeholders in practice and education can employ to improve experiential education and the quality of pharmacy practice in the United States. It was also designed to advance efforts of the Institute of Medicine to stimulate the reform of health professions education.

This *Final Report and Proceedings* provides documentation of the processes and outcomes of the Summit, from its inception to the post-conference analysis, of the work completed by Summit participants. The purpose of this report is to preserve all of the ideas and plans generated by participants to achieve excellence in pharmacy experiential education. Following the Summit, all of the small group work and activities were compiled, analyzed, and synthesized to yield nine major recommendations with supporting strategies offered by the Summit working groups; these are outlined in the conclusions section of this report.

A debt of gratitude goes out to the 69 individuals from diverse backgrounds who convened in Chicago in June 2005, most at their own expense, who rolled up their sleeves, opened their minds to new techniques and new ways of thinking in order to help advance experiential education in pharmacy. Many other faculty members also contributed to the process through other means. The collective work is described in detail in the following pages.

The members of the Implementation Team wish to thank AACP for their inspiration, support, vision, and opportunity to develop and present the Summit. It is our hope that this document will aid AACP in advancing its vision to improve the quality and quantity of experiential education in pharmacy.

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August 31, 2005

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Executive Summary

The American Association of Colleges of Pharmacy (AACP) convened the AACP ***Academic Practice Partnership Initiative Summit to Advance Experiential Education in Pharmacy*** in Chicago on June 17–18, 2005. The Summit was a tangible response to issues the American Association of Colleges of Pharmacy leadership and various committees have studied closely for many years: the quality and consistency of pharmaceutical care delivery in pharmacy practice and the resulting influence on experiential learning. The Summit brought together representatives from the spectrum of pharmacy practice, regulation, professional organizations, and education to develop action plans that would define and prioritize strategies to:

1. Increase the quantity of exemplary experiential learning sites across the United States.
2. Recruit and train qualified experiential faculty members and preceptors.
3. Elevate the quality of care delivered at experiential learning sites.
4. Streamline processes for preceptor recruitment, training, assessment, communication, and feedback.
5. Ensure that experiential learning in pharmacy inculcates skills, values, and attributes related to the five core competencies that all health professionals should possess (i.e., provide patient-centered care, work in interdisciplinary teams, employ evidence-based practice, apply quality improvement and utilize informatics).

Summit Participants

Invited participants ranged from pharmacy practitioners/preceptors serving in a variety of settings and pharmacy students/residents to representatives from professional organizations, education, and accreditation/regulatory agencies. All colleges and schools of pharmacy were invited to submit an application to participate in a competitive selection process. Specific school/college participants were selected based on geographic and institutional diversity, program experience, strength, innovations, and diversity and experience of the individuals. A total of 69 participants attended the conference, including speakers, AACP staff, Implementation Team members, and facilitators (*Appendix A)*.

Summit Format

Appendix B outlines the activities of each day of the Summit. The Summit used a model for breakthrough change that has been used successfully by a wide variety of industries and health care organizations, including the Institute of Medicine in its landmark Health Professions Education Summit. Consequently, participants prepared for the Summit by completing assigned readings and a survey and, then during the Summit, worked in small groups using quality tools designed to enhance creative problem solving. The APPI Summit pre-conference preparatory materials may be found at the following web site: *http://courses.washington.edu/pharm560/APPI/APPIRelationships.html*. This website includes pre-conference readings on experiential education and quality in education. Participants also received a background paper for the Summit developed by the Summit Implementation Team, which reviewed key elements of assigned readings and defined the working relationships that served as the basis for small group assignments during the first day of the Summit.

The purpose of the pre-work readings and survey was to efficiently introduce the complexity of advanced practice experiences to all participants. Much is known about the problems the schools and profession are facing in expanding the number and quality of experiential sites. Thus, the pre-work allowed participants to quickly acknowledge what is known in order to move promptly to a problem solving process. By having participants list and read others' expectations, barriers, and possibly strategies, valuable time at the Summit was not used rehashing what is known.

Furthermore, the advanced sharing of strategies was intended to jump-start the process of problem solving.

The pre-Summit survey assignment was made available on the website to all Summit participants as well as others who have a vested interest in improving experiential education. Individuals were asked to define expectations for various relationships, outline barriers, and provide strategies to overcome these identified barriers. This exercise was designed to capture the attendees' thoughts and experiences in experiential education and to provide all other stakeholders an opportunity for input to the Summit.

Data from the survey were collected and categorized by combinations of relationships from a framework developed for the Summit. The framework examined relations among students, preceptors, sites, schools, and the environment, i.e., influences from legislation, professional organizations, insurers, employers, etc. The resulting document was distributed to participants to further stimulate ideas and discussion (*Appendix C*).

Summit Activities

The activities for Day One and Day Two were planned to insure that multiple perspectives developed. The use of multiple viewpoints on the problem of increasing quality and quantity of experiential education was essential to devising creative solutions. During Day One of the Summit, participants worked in four groups defined by the relationships among: 1) Preceptors, Students, and Sites, 2) Preceptors, Students, and Schools; 3) Sites, Students, and Schools; and 4) the Environment. Participants submitted their preferences for groups assignments based on their interest areas. Assignments were made based on individual preference while ensuring appropriate balance of stakeholders within each breakout group. Using a "brainwriting" exercise, each group member generated ideas yielding in excess of 360 strategies for improving experiential education in pharmacy. Within groups the ideas were collected and categorized into Affinity Charts, which grouped related ideas or affinities. Each set of affinities was labeled by group consensus. The labels were used to construct an "Interrelationship Digraph" (ID) that ultimately resulted in identifying "drivers" or root causes and targets for change. Descriptions of these activities can be found in *Appendix D*. The data from each group were collected and recorded. Day One activities were designed to illuminate the root causes (drivers) and possible outcomes (targets) of selected inter-relationships. All of these data were pooled and submitted to an affinity analysis. The analysis generated the themes that were used in Day Two.

On Day Two, participants were presented with the list of themes generated from Day One activities. Participants divided into work groups based on their personal self-assessment of interest and ability to contribute to changes in the theme area. Day Two work groups used a similar set of creativity and innovation tools for identifying strategies and prioritizing action plans.

Summit Outcomes

The five themes that emerged from the Summit are as listed. Under each theme are the drivers that emerged as the most critical to effecting immediate change. It is important to understand that the identified drivers represent only a fraction of the strategies identified by the Summit work groups; however, these must be addressed first to effect the targeted change.

1. *Theme 1*: Improve the quality of student learning such that students emerge ready, willing, and able to perform interdisciplinary patient-centered care.

    - Require that students enter pharmacy school, rotations, and ultimately pharmacy practice with progressive foundational knowledge, attitudes, and skills
    - Schools must identify and provide/create adequate support networks for students

- Set high standards for admission and hold students accountable

2. *Theme 2*: Improve recruitment, training, and development of preceptors.

   - Create strategies and programs to develop and improve rotation sites
   - Standardize the infrastructure of the experiential education process among stakeholders
   - Develop and deliver training methods and ongoing preceptor development tools

3. *Theme 3*: Create the common administrative framework and tools for the management of efficient and effective experiential learning programs.

   - Develop the resources required to manage efficient and effective experiential learning programs
   - Establish programs for experiential education/director development

4. *Theme 4*: Ensure that regulations and accreditation standards promote rigorous accountability and provide incentives for improvements in patient-centered care.

   - Licensing boards should remove barriers that limit patient-centered care and education
   - Develop vision, goals, and metrics about practice and experiential education

5. *Theme 5*: Ensure quality assessment and improvement tools are used as a catalyst to drive practice improvements across all facets of pharmacy education.

   - Identify the "what" and "who" to assess
   - Articulate why assessment improves quality and change

In response to the five themes, groups developed a variety of preliminary action plans. These plans addressed strategies needed to implement change. For example, strategies ranged from incorporating experiential education throughout the curriculum to developing standardized clauses for use in affiliation agreements. The urgency for advancing experiential education was expressed in some strategies, such as "A national, impartial consortium of key stakeholders (including but not limited to, associations, employers, schools and students) conducts market research with preceptors and sites to determine needs for training and development by December 2005." Several groups used strategies focused around standardized assessments and improved assessment tools for both students and preceptors with a specific action to have colleges/schools use the JCPP Future Vision of Pharmacy Practice in 2015 initiative (the JCPP statement may be found at *http://www.aacp.org/Docs/MainNavigation/Resources/*6725*_JCPPFutureVisionof PharmacyPracticeFINAL.pdf*) to assess sites, students, and preceptors. Technological solutions also emerged, including on-line training programs for preceptors and experiential directors. A number of organizations were identified as being key leaders to implement strategies leading toward change. For example, AACP and ACPE were jointly called to identify barriers limiting experiential education and develop tools to surmount those barriers.

Participants were asked to evaluate the Summit and were generally pleased and enthusiastic about the outcome of the Summit. They reported that the pre-work helped them prepare for the Summit; that they were able to actively contribute to process; that the Summit met their expectations; and that they were ready to continue the process of finding and improving experiential sites.

Two ideas were clear from the evaluation forms: the tools used to help focus on quality and innovation were unique and valuable, and the contribution of the Summit to pharmacy education will not be understood until the strategies that began to emerge are facilitated, implemented and successful.

Recommendations

The following recommendations were derived from the Summit to capture all the group work from both Day One and Day Two. Analysis of these data allowed identification of nine recommendations with several suggested strategies for achieving the recommendations. While these recommendations focus particularly on experiential education, it should be considered that experiential education is only one facet of a pharmacy curriculum. Attention and effort directed toward supporting and improving experiential education are expected to impact the entire design of pharmacy curricula and pharmacy practice. Because Summit participants were cognizant of the potential impact of their plans, many of the following recommendations used language that included all stakeholders.

Recommendation 1: Define and measure practice competencies for students and practitioners.

Potential strategies:

- Develop quality metrics for practice that incorporate goals stated in the "Pharmacy Practice in 2015" vision. Measurement guidelines are needed to provide consistency in identification of practice level.
- Convene experiential education stakeholders at local and regional levels to determine experiential program outcomes and measures.
- Appoint a national, impartial consortium of key stakeholders (associations, employers, schools, students) to determine global targets for knowledge and skills needed by students entering their APPEs. Once these have been determined, then schools can work with preceptors and academicians locally to determine what should be tested given school resources and practice level at progressive practice sites.

Recommendation 2: Students should enter the final professional year adequately trained to begin providing patient-centered care as outlined in the JCPP "Pharmacy Practice in 2015" vision.

Potential strategies:

- Improve the recruitment of pharmacy students by educating pre-pharmacy advisors, counselors, and laypersons about the types of individuals needed in pharmacy as well as the various functions pharmacists perform. Developing a profile of traits common to successful APPE students would facilitate schools in this educational process.
- Appoint a national taskforce of key stakeholders to develop a systematic assessment plan tools associated tools that uses multiple strategies to assess knowledge, skills, and attitudes prior to admission, prior to clerkships, and prior to licensure. Schools could then use this as a starting template to design their own assessment strategies.

Recommendation 3: Recruit and train qualified experiential faculty members and preceptors.

Potential strategies:

- Appoint a national, impartial consortium of key stakeholders (associations, employers, schools, students) to conduct market research with preceptors and sites to determine needs for training. These needs would act as a guide for development of preceptor training programs by individual schools.
- Develop a basic training program for new preceptors. The contents of this program would be consistent between schools and organizations.

- AACP should facilitate the development of a universal preceptor-training program. This program would contain educational and presentation materials that could be easily adapted to either a traditional didactic educational presentation, computer-adapted training, and to distance learning.

Recommendation 4: Modulate number of APPE sites needed by increasing the quantity of exemplary experiential learning sites across the US or decreasing the number of APPEs during the last professional curricular year.

Potential strategies:

- Develop a national database of sites to ensure that training locations are used to their full potential. This database would not contain sites that are filled regularly by the nearby school and would only include sites where a preceptor had agreed to be on the list. This list could be administered centrally by AACP via the Professional Experience Program (PEP) special interest group (SIG).
- Explore development of quality experiential education at work sites. Some programs currently used by non-traditional Doctor of Pharmacy programs allow student learning to occur at the work site. If a learning plan were overseen by the school, and completed under the close supervision of a pharmacist preceptor whose qualifications had been verified by the school, it might be possible for quality experiential education to occur at the work site.
- Increase individual APPE length to decrease overall total number of sites needed. If schools in one area chose a consistent APPE block model, it would also facilitate synchronization of students at sites that take students from multiple schools.
- Schools should actively market to attract new preceptors and sites to the experiential education program. This would occur through enaction of a structured "marketing plan" for site and preceptor development.
- Business and marketing plans should be developed to generate new funds to support experiential education and recruit new sites and preceptors.

Recommendation 5: Create a common administrative framework for experiential education administration.

Potential strategies:

- Develop a regional APPE calendar. Common start and stop dates for rotations would be best decided by a committee of experiential educational directors from pharmacy schools who share sites with each other.
- AACP and ACPE should develop a standard nomenclature for describing various experiential education options. Publication of such a nomenclature would allow standardization of language used to describe educational experiences.
- Involve national organizations and all schools and colleges of pharmacy to develop a standard affiliation agreement format with "interchangeable clauses" that provide consistency with some required flexibility.
- The PEP SIG should become the primary developer, facilitator, and implementer of a PEP director development program. Such a program would basically be experiential education in experiential education administration.

Recommendation 6: Identify tools that increase efficiency of experiential education program administration.

Potential strategies:

- Develop a global process for conducting site visits that uses teams (similar to the residency accreditation model) to assess performance and provide recommendations for site improvement. Team members could include, in addition to experiential educational directors, faculty administering the admissions process, pharmacy practice faculty doing educational research, development directors, other preceptors, and perhaps students?
- Schools and colleges should continue to archive and share ideas for applying technology to experiential education as "best practices" and in other forums. Although this occurs informally, it would be desirable to have a methodical approach to sharing innovations.
- Conduct a benchmark survey of schools and colleges to determine and define a minimum level of infrastructure needed to adequately manage the experiential learning program. This could be done formally by the PEPSIG.
- Streamline processes for preceptor communication, feedback, and input. Technology can enhance this process, but only if a structured format for communication exists, the feedback is used, and the way in which the feedback is used is communicated back to the preceptors.

Recommendation 7: Work with professional and regulatory organizations to improve quality of practice and experiential education.

Potential strategies:

- PEP Directors and school/college leadership should meet with local/state association leaders to define ways to collaborate. This might include cross-representation and sharing resources related to experiential education site and preceptor recruitment and capitalize on opportunities for students, faculty, and pharmacists to share educational venues and communication vehicles.
- Schools and colleges should implement or refine formal communication vehicles to share information about experiential education opportunities and responsibilities between schools/colleges and their respective local/state associations.
- Stakeholders (schools, students, pharmacy practitioners, pharmacy organizations, pharmacy administrators) should work to identify and/or create information systems that provide for ready access to patient information among care providers including health systems, primary care, and pharmacists, across varying venues of practice. This information will thus provide measurable data without breaching patient confidentiality.
- Stakeholders (schools, students, pharmacy practitioners, pharmacy organizations, pharmacy administrators) should work with legislators and pharmacy boards to remove impediments to the achievement of the "Pharmacy Practice in 2015" vision statement and address preceptor training in their state practice acts. These efforts should include working with NABP to update model laws and regulations to ensure the scope of pharmacy practice emphasizes quality patient outcomes.

Recommendation 8: Define and recognize exceptional sites and preceptors.

Potential strategies:

- Define "excellence" in practice. Another part of the APPI is actively involved in this strategy.
- Create a system to recognize "best practice" preceptors. Communicate to all preceptors strategies employed by "best practice" preceptors. This information would ideally be part of a preceptor education program.

Recommendation 9: Ensure quality assessment and improvement tools are used as a catalyst to drive practice improvements across all facets of pharmacy education.

Potential strategies:

- Convene a summit of stakeholders in experiential education to define common goals and work toward quality assurance on a continuous basis.
- Engage groups of representative stakeholders to make decisions about employing quality assurance and assessment strategies in the experiential education program on a continuous basis.
- Train all faculty, preceptors, and experiential program staff in the use of assessment tools as a means toward continuous quality improvement in pharmacy education and as part of a supportive network for pharmacy students.
- Collaborate with leaders in quality and health professions education to define core elements for continuous quality improvement and promote their integration into schools and colleges of pharmacy planning and assessment activities.

The Summit provided a process for organizing individuals to achieve consensus and develop explicit action plans. As a result of the small group processes, participants committed to being responsible for working on specific aspects of their group's plans, which have been captured as strategies to achieve the recommendations described above. Consequently, the Summit Implementation Team recommends that AACP follows up with these individuals as soon as possible to fulfill the goals of the Summit and build on the momentum AACP created through the Summit. Furthermore, the team recommends that AACP consider appointing task forces or committees, partnering with pharmacy practice and other organizations as appropriate, and working to strengthen relationships with other health professional organizations and consortia.

In order to ensure that the vision and strategies stimulated by the Summit are implemented, AACP should continue to assume a leadership role. It will be important to develop ongoing partnerships with schools, professional organizations and others who can take responsibility for helping to implement specific action plans. AACP should also identify and charge work groups consisting of Summit participants, the Summit Implementation Team, AACP Board members, and others to follow up on specific identified strategies and plans. Work groups should be charged with presenting progress on Summit findings at both national and local meetings of various stakeholders for the purpose of encouraging their contributions to implementation strategies.

Many of the action plans and strategies developed at the Summit are multifaceted and will require the collaborative efforts of many stakeholders to achieve, i.e., developing adequate assessment and support infrastructures to improve the quality and quantity of experiential education. We encourage AACP to maintain a strong leadership role on these issues to ensure the required progress among partner organizations.

Introduction

Background

Collaboration among schools, practice organizations, and the practice community to meet the challenges of a changing practice environment was identified as a priority by the American Association of Colleges of Pharmacy (AACP) Janus Commission in 1997.[1] The evolving changes in the practice environment mandated changes in the education of pharmacy students, in order to produce pharmacists capable of providing quality care to patients.

Experiential education is an important component in the pharmacy education process, and accounts for more than 25 percent of the curriculum. Students are able to learn and hone skills in the practice site that are not easily taught in the traditional classroom setting. Even skills taught in the practice laboratory environment can rarely be practiced extensively enough for students to become competent. Because every patient presents with a unique medical and social history, and a variety of prescription medications, over-the-counter products, and non-drug therapies, it is only in the practice environment that students can truly achieve enough practice to attain competency.

The need for high quality experiential training sites and preceptors at pharmacy schools has increased dramatically in the past five to seven years, primarily due to three factors. The first factor was the elimination of the Bachelor of Pharmacy degree and subsequent conversion by all pharmacy schools to a Doctor of Pharmacy only degree program. Schools making this transition in most cases tripled or even quadrupled the number of advanced pharmacy practice experiences (APPEs) needed for each student. Second, an acute pharmacist shortage in the late 1990s prompted existing programs to increase enrollment. Finally, this same shortage has prompted a number of new pharmacy schools to open. In 2004, 8,158 students nationally received the first professional degree; the same year, enrollment in existing degree programs climbed to 43,908 students.[2] Assuming that nearly all of these students will graduate means that within a few years, nearly 11,000 students will be graduating annually: an increase of over 2,800 students. Fourth professional-year students complete an average of 7.7 APPEs.[3] Thus, within the next few years, US pharmacy schools will need to identify over 20,000 new APPEs.

Development of the Academic Practice Partnership Initiative

AACP was prompted by its leadership to take action to help schools overcome the current challenges in experiential education. Two pivotal reports containing recommendations for experiential training were published in 2004. The AACP 2003/2004 Professional Affairs report[4] recommended improvements in the quality of experiential training, including standards for preceptors and resources for experiential education directors (EEDs). The 2003/2004 Argus Commission recommended that AACP identify examples of exemplary practices and convene a national invitational conference on experiential education.[5] In response to these recommendations, AACP announced in late 2004 the launch of the Academic Practice Partnership Initiative (APPI), an effort to summarize current strategies in experiential education program development and identify new and innovative tools for responding to the need for quality training sites for pharmacy students. This initiative is comprised of three components: creation of practice profiles of exemplary patient care practices and experiential education sites, a library of resources for preparing and supporting practitioner educators and experiential education personnel, and a summit of stakeholders to develop a plan for advancing experiential education and the academic/practice partnership.

The APPI is a multi-year initiative designed to:

1. Increase the quantity of exemplary experiential learning sites across the United States.
2. Recruit and train qualified experiential faculty and preceptors.

3. Elevate the quality of care delivered at experiential learning sites.
4. Streamline processes for preceptor recruitment, training, assessment, communication, and feedback.
5. Ensure that experiential learning in pharmacy inculcates skills, values, and attributes related to the five core competencies that all health professionals should possess (i.e., provide patient-centered care, work in interdisciplinary teams, employ evidence-based practice, apply quality improvement and utilize informatics).

AACP-Merck Partnership

AACP's vision to connect academia and practice, impart new experiential knowledge and skills to students, and equip students to deliver care in today's healthcare system requires long-term partnerships. Merck and Company has made a generous commitment to the profession's shared vision for improving experiential education and provided financial support to assist with initialization of the APPI.

APPI Request for Proposals

AACP issued a Request for Proposals in December 2004 to outsource the development of each of the three APPI components listed above. Components specified in the APPI Request for Proposal included development of a resource library for exemplary practice profiles; definition of "quality" in experiential education, enabling identification of exemplary teaching sites; and a consensus conference on increasing the quality and quantity of experiential education sites. This conference, subsequently titled the AACP-APPI Summit to Advance Experiential Education in Pharmacy, and referred to hereafter as "the Summit," was directed to be held no later than June 30, 2005.

Selection of the Summit Implementation Team

On February 1, 2005, AACP jointly awarded the Summit to Patti Gasdek Manolakis of PMM Consulting, Jann Skelton of Silver Pennies Consulting and a team of faculty from the University of Washington: Karan Dawson, Dana Hammer, Teresa O'Sullivan, and Stanley Weber. These six individuals, whose combined strengths provided the foundation for a successful Summit, formed the core of the Implementation Team, hereafter referred to as the "I-Team."

Initial Planning Efforts

The I-Team convened a Summit Planning Committee at AACP headquarters, inviting leaders in practice, pharmacy associations, and academia to assist in planning the Summit.

The 15 members of the Planning Committee were:

- Liz Cardello, American Pharmacists Association
- Stefan Merlo, National Association of Chain Drug Stores
- Krystal Miller, University of Toledo, pharmacy student
- Douglas Scheckelhoff, American Society of Health-System Pharmacists
- Margaret Sgritta, Holladay Healthcare
- Robert E. Smith, Auburn University - Harrison School of Pharmacy
- Beverly Talluto, Virginia Commonwealth University
- Otto Wachsmann, Stony Creek Pharmacy
- Gary Wirth, Ahold USA Pharmacy Department
- AACP staff members Lucinda Maine and Arlene Flynn and the I-Team

These individuals met with the I-Team and AACP staff to review data and guide the development of plans and strategies for the Summit. The committee met face-to-face on Monday, March 7, 2005 where they heard from leaders at ACPE and IOM, refined the Summit objectives, recommended key stakeholder groups for participation, recommended strategies and topics for the Summit plenary and small group sessions, and provided input into the selection of pre-work

that Summit participants should complete. A professional facilitator assisted with the generation of ideas and grouping of common topics. The Planning Committee generated over 200 ideas in a 20-minute period, then divided into four small working groups to categorize these ideas into general themes, using an affinity diagram, which helped to identify key themes for consideration by the I-Team in structuring the Summit. This work provided the foundation used to define the topics, pre-work, and small group themes for Day One of the Summit.

References used in this section:

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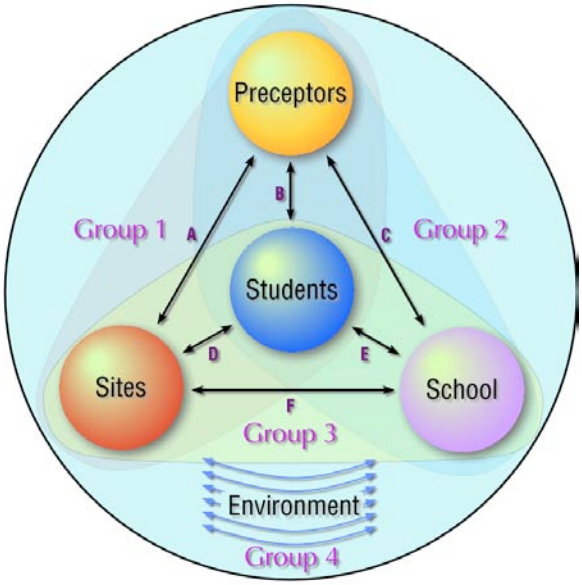
Summit Preparation

Formulating Initial Strategies for the Summit

Identification of stakeholder interactions as keys to success

After analyzing outcomes of the Planning Committee meeting, the I-Team determined that improvement in experiential education quality depended on the interaction among each of the stakeholders in the experiential education process; successful interactions result in higher experiential education quality. Identified stakeholders were students, sites, preceptors, schools, and regulatory/policy-development groups and professional practice associations active in the pharmacy environment. The following figure graphically depicts the stakeholders and their relationships. Each stakeholder is represented with a sphere; lines between the spheres depict the relationship.



In order to initiate and facilitate Summit discussions and working groups, and to focus discussions, the I-team grouped relationships into three triads and one more global "environment" group. Each of these four groups focused on slightly different areas but always included relationships of the entities with students:

Group One: Relationships among preceptors, students, and sites
Group Two: Relationships among preceptors, students, and the school
Group Three: Relationships among the school, students, and sites
Group Four: The environment (i.e., regulatory bodies and associations) and its relationships with schools, sites, preceptors, and students.

Delineation of important background publications

An initial literature search, consultation with AACP staff, and discussion by the I-Team identified important background papers for review. These publications helped to define the current state of experiential education programs in the United States, as well as generated initial recommendations for program improvement. Two pivotal reports came from the AACP 2003/2004 Professional Affairs Committee (Littlefield) and the AACP 2003/2004 Argus Commission (Cohen). These reports made the following recommendations:

- Develop a universal model for experiential learning.
- Develop and disseminate tools and resources to support experiential education.
- Improve quality standards and assessment in experiential education.
- Increase the number of quality practice sites (depth and breadth).
- Utilize students to elevate the quality of care in pharmacy practice sites.
- Improve preceptor development as educators and pharmacists.
- Improve the effectiveness and recognition and importance of Professional Experience Program (PEP) directors.

An initial literature search, consultation with AACP staff, and discussion by the I-Team enabled identification of important background papers to review. These publications helped to define the current state of experiential education programs in the United States, as well as generating initial recommendations for program improvement. Providing adequate background to the diverse Summit participants was crucial to providing a base from which Summit participants could focus on solutions to already identified and studied problems. In addition to the AACP 2003/2004 Professional Affairs Committee and Argus Commission reports, the I-Team analyzed conference proceedings from the Institute of Medicine (IOM) Health Professions Education Summit. Other important pharmacy-related publications and documents were also important for providing a foundation for Summit work. Harralson measured the realities of current experiential education programs during his tenure as an AACP Scholar-In-Residence. Plaza and Draugalis recently updated survey information measuring curricular variables of advanced practice experiences. The 1994 published standards and guidelines for professional experience programs were reviewed. Finally, other important pharmacy initiatives that relate directly to the Summit included the Accreditation Council on Pharmacy Education (ACPE) draft standards and Joint Commission of Pharmacy Practitioners (JCPP) Future Vision of Pharmacy Practice in 2015. Information from these reports and the articles noted above were summarized in the background paper that was provided to all Summit participants in advance.

Development of web site

A web site was designed to enable accrual and organization of ideas from stakeholders and to stimulate their thinking before the Summit. This site served as the hub of information exchange between the I-Team and Summit participants. It included background information, a collection of all of the required and recommended background readings, the Summit agenda, the Summit diagram with explanations and seed ideas, and a central database for collecting input into expectations, barriers, and strategies prior to the Summit. Although conference participation would be limited to a relatively small number of individuals, the web site enabled other interested individuals to contribute to the idea-generating process as well.

Identification of site and dates for Summit

AACP staff, working with members of the I-Team, identified Summit dates of June 17 and 18, 2005. The Summit was held at the Sheraton Gateway Suites, near Chicago O'Hare Airport. This location in a central US area and near a major airport facilitated travel for all attendees. Participants provided their own funds for travel and lodging.

Identification and selection of participants

The Summit was organized as an invitational event (due to the twin constraints of funding and allowing an "ideal" size for small group work) and included two-person teams (faculty member, preceptor) from 12 schools; representative(s) appointed by AACP, the American Society of Health-system Pharmacists (ASHP), the American Pharmacists Association (APhA), the National Community Pharmacists Association (NCPA), the National Association of Chain Drug Stores (NACDS), the National Association of Boards of Pharmacy (NABP), and the National

Association of State Association Executives (NASAE); faculty working on the two other APPI initiatives; a few invited guests; key AACP staff; and members of the I-Team for a total of 71 invited participants.

Invitations for school participants to submit applications for attendance at the Summit were sent to all schools and colleges of pharmacy in April. Forty-two schools expressed an interest in attending the Summit by submitting an application outlining their faculty-preceptor team member proposals. Invitations were limited to 12 school teams; these were selected based on geographic and institutional diversity, program experience, strength, innovations, and diversity and experience of the individuals. The school teams invited to the Summit were from (using the APhA-ASP regional classificatio of schools) Region 1: Northeastern University; Region 2: State University of New York at Buffalo and Wilkes University; Region 3: University of Tennessee; Region 4: Wayne State University and University of Illinois at Chicago; Region 5: Drake University and the University of Minnesota; Region 6: St. Louis College of Pharmacy and Texas Southern University; and Region 8: University of the Pacific and University of New Mexico. Region 7 was represented by members of the implementation team at the University of Washington. Additional individuals invited specifically by AACP included a faculty member who designed an innovative community preceptor training program, two individuals who have overseen the statewide pharmacy experiential education congress in Texas, and an experiential education director from a newly-opened pharmacy school. Additional stakeholders included four students/new graduates who had served as national-level leaders of student pharmacy organizations, an international expert on quality and creativity, and the chair of a similar initiative in Canada.

Participant Pre-Work

Each individual participating in the conference was asked to visit and respond to the questions on the web site, complete assigned readings, and review responses to the questions on the web site. Participants were pre-assigned to a Summit Day One group based on a survey of their group preferences.

Suggested publications for conference attendees to read prior to the Summit were posted for attendees to read on the web site. By early June, a background paper was also finalized and provided for attendees to review. The background paper was written to identify the current status and constraints of advanced practice experiential programs in the US.

As part of meeting pre-work, each attendee was asked to read contributions of the others, and then list five expectations that each stakeholder ("sphere") has for one another, five barriers to improving the quality and quantity of advanced practice experiences, and five strategies to overcome barriers. Participants were encouraged to think "out of the box" with regard to their responses. No ideas or suggestions were off-limits. Comments generated by the pre-work participants were made available to attendees of the Summit. One list contained perceived barriers to quality experiential education. Creation of this list prior to the Summit was purposeful: Summit attendees were asked to creatively plan how to overcome the barriers, rather than focus on what the barriers were. Another list comprehensively outlined expectations each element of the educational process has for each of the other elements. Defining expectations allowed each partner in the learning process to understand the needs of other partners and increased creativity in the process of overcoming barriers. Finally, a list of strategies was also developed. Identifying a list of some strategies for overcoming barriers to the quality of experiential education allowed Summit attendees to start thinking creatively prior to the conference and allowed non-attendees to input ideas into the creativity process. Summit participants were asked to draw on these ideas during the brainwriting activity on Day One. The results of this electronic brainstorming exercise are in *Appendix C*.

Selection of Day One Breakout Groups

Attendees were asked to rank their top 3 choices for small group placement as part of the pre-work activity. Pre-assignment of four working groups (with each group representing one of the relationship groups outlined earlier) was made prior to the conference. The work groups were appointed to achieve a balance of practitioners, academicians, students, and professional organization representatives in each group. Individual rankings were given strong consideration to the extent possible during the pre-assignment process.

Training of I-team to Serve as Facilitators

Prior to the Summit, members of the I-Team completed approximately 12 hours of training in facilitating use of the quality and creativity tools. This training was provided by Bob King, CEO of Goal QPC, an internationally recognized expert in quality and creativity processes. He designed the activities used in the IOM Health Professions Education Summit and worked with the I-Team to plan and implement a mix of activities and tools to meet the specific goals of the Summit. This training enabled the I-Team members to take the lead in facilitating the small group creativity exercises outlined in *Appendix D*.

Components of Participants' Notebooks

Each Summit participant received a notebook at the start of the conference. The notebook contained the Summit overall agenda and resources from which to draw upon during the small group work (i.e., Summit background paper; JCPP Vision Statement; Summary of pre-work expectations, barriers, and strategies), participant rosters, speakers' slides, instructions for the morning and afternoon breakout group work—including creativity tool overviews, group participant lists, and an individual session agendas

Summit Proceedings and Outcomes

Description of Summit Participants

Sixty-nine people participated in the Summit. Twenty-eight attendees were full-time pharmacy school faculty members; many of these individuals were experiential education directors. Fifteen attendees were primarily pharmacist practitioners, working in a variety of settings ranging from inpatient to community pharmacies to pharmacy management. In addition to the six members of the I-Team, three staff members from AACP attended. Four attendees were current or newly graduated pharmacy students. Nine attendees represented professional pharmacy organizations, including the Academy of Managed Care Pharmacists, American Pharmacists Association, National Community Pharmacists Association, American Society of Health-system Pharmacists, National Council of State Pharmacy Executives, National Association of Boards of Pharmacy, National Association of Chain Pharmacists, and the Accreditation Council for Pharmacy Education. One attendee represented Merck and Company. One attendee was a chief architect of the IOM report. One was a quality and creativity expert. One faculty member from a Canadian pharmacy school attended in preparation for leading a similar conference in Canada. Unforeseen events just prior to the Summit prevented participation by two invitees: one faculty member representing NABP and one consumer representative. A list of attendees can be found in *Appendix A.*

In addition to helping administer the Summit, staff members from AACP also participated as a keynote speaker and as participants in small group work.

Day One Activities

The goal of Day One was to generate ideas and strategies for improving pharmacy experiential education via a series of exercises. The exercises identified a series of steps, both initial and long-term, that need to occur in order to increase quality and quantity of experiential education sites. The ideas identified on Day One were then analyzed to detect common themes and set the stage for action plan development on Day Two.

Morning plenary summary

The Summit began with a series of keynote speakers, to provide attendees with needed background information, generate enthusiasm for the process, and outline charges for the Summit generally and morning exercises specifically.

Lucinda Maine, Executive Vice President of AACP, reinforced the need for developing a workable plan at the Summit. She identified the issues of highest concern to AACP as:

1. How to select, train, support, and reward the best preceptors and help them advance their practice.
2. How to operate experiential education with adequate administrative leadership.
3. How to construct the curriculum of experiential learning across the PharmD program and evaluate it in a valid and reliable way.
4. How to make sure students become pharmacists with the right portfolio of patient-centered knowledge, skills, and abilities.

Robert Smith, Professor and Head, Department of Pharmacy Practice Harrison School of Pharmacy at Auburn University, and Beverly Talluto, Assistant Dean of Experiential Education, School of Pharmacy at Virginia Commonwealth University each outlined the status of the components of the APPI that they are directing. Robert Smith's group is defining exemplary practice profiles. Beverly Talluto and her colleagues are developing a resource library for experiential education team members.

Jeff Wadelin, Associate Executive Director and Director of Professional Degree Program Accreditation for ACPE, spoke of the proposed experiential education guidelines in the revised ACPE Standards. This is the first time that ACPE has specifically addressed experiential education programs as a separate standard, which is a significant change from past standards where experiential education was considered under the overarching standard of professional education.

Ann Greiner, a primary organizer of the IOM Health Professions Education Summit and author of the IOM *Health Professions Education: A Bridge to Quality* summit report, explained the evolution of that summit and how it fits into the IOM *Crossing the Quality Chasm* Initiative. She urged Summit attendees to make educational reforms competency-based and strategically planned, with clear accountability.

Jannet Carmichael, a Clinical Pharmacy Coordinator at the Veteran's Affairs Sierra Pacific Network then appealed to attendees brainstorm ways in which traditional practice barriers could be overcome, particularly barriers to exchange of important information between health care professionals providing care to a patient. She described her highly interdisciplinary practice, advocated higher-level training and practice opportunities, specifically noting that advanced training, collaborative practice agreements, and evidence-based guidelines all being associated with an advanced level of pharmacy practice, and that sites and preceptors with these characteristics should be recruited and supported.

After the final keynote presentation, Bob King provided background and a brief introduction to the quality and innovation tools that would be used in the breakout working groups. *Appendix D* contains a brief description of each tool used. These tools were designed to insure that multiple perspectives were developed. The use of multiple viewpoints on the problem of increasing quality and quantity of experiential education was essential to devising creative solutions.

Morning breakout group work

Following the morning plenary session, participants met in their small groups for 90 minutes. During this time they engaged in three creativity exercises designed to help them brainstorm, collate and prioritize strategies in response to the following question: "How do we improve experiential education in pharmacy?" Each group considered the question from the perspectives assigned to their group (e.g., Group 1: Preceptors, sites and students). In each group, participants further subdivided themselves into 3 roundtable subgroups of 5 or 6 participants.

The first activity, *brainwriting*, allowed participants to independently generate ideas in response to the question. Each table of participants then collated its ideas into common themes in the *affinity diagram* exercise. Each table of participants then compared its common themes to determine priorities in the *interrelational digraphing* (ID) exercise. Individual ideas generated from the brainwriting exercise are presented with their affinity headers and followed by the corresponding ID in *Appendix E.*

Over all four groups, the brainwriting exercise generated over 360 ideas for improving experiential education in pharmacy. The affinity diagrams then categorized these ideas into 54 themes. The interrelationship digraphing exercise identified the 12 highest priority ("primary drivers") themes that became the bases for creation of action plans. Some themes were considered both targets and drivers because of the nature of how they affected each other.

The themes that emerged from the brainwriting and affinity diagram exercises from each group are listed in the tables below. They are grouped as drivers and targets as determined by the interrelationship digraph exercise.

Group 1: Relationships among preceptors, students, and sites

Primary Drivers	Secondary Drivers	Other Drivers	Primary Targets	Secondary Targets	Other Targets
Ample time & support need to be provided to preceptor	Rotations provide flexibility to allow for student individuality	Develop inter-disciplinary relationships	Experiential program should result in a win-win-win for the preceptor-student-site	Use constructive feedback in evaluating sites, students, & preceptors	Advanced practice experiences should incorporate active learning to strengthen & improve professional development
Site responsibility to provide a quality educational experience	The development & training of the preceptor to provide a quality educational experience	The preceptor must set expectations of both the site & student to ensure delivery of a quality educational experience	Student activities & responsibilities to ensure they receive a quality educational experience	Students must set expectations of both the preceptor & site to ensure they obtain a quality educational experience	Preceptor's responsibilities to provide a quality educational experience
Characteristics, qualities, & expectations of students entering advanced experiential programs	Identification & delineation of the ideal characteristics & responsibilities of the preceptor	Identification of development of quality sites	Modification of the length of advanced experiential rotations	Programs or mechanisms to support continuous preceptor development	Implementation incentives to develop high quality sites

Group 2: Relationships among preceptors, students, and school

Primary Drivers	Secondary Drivers	Other Drivers	Primary Targets	Secondary Targets	Other Targets
Stakeholders should work together to define common goals	Stakeholders redefine metrics to measure pharmacy care	Students, preceptors, & schools should agree upon & articulate expectations of each other	Schools must provide preceptor training	Schools/sites must provide resources	Students, preceptors, & schools should agree upon & articulate expectations of each other
The schools should develop defined processes for experiential education management and quality assurance.	Have schools measure commitment and resources for preceptor development	Schools should adopt standardized communication mechanisms among students, preceptors, and the schools focused on experiential education	The school and preceptors must work together to train, support and assess students while on their experiential rotation	Schools, preceptors and students should work together to identify new quality preceptors	Schools should adopt standardized communication mechanisms among students, preceptors, and the schools focused on experiential education
COP provide adequate resources for programs	(No 2° Driver)	Experiential processes (e.g. length of rotation) must be standardized nationally Schools must support flexibility & choice among diverse practice settings	(No 1° Target)	SCOPs should use quality assurance principles in their evaluation of preceptors & students Schools will actively recruit, prepare, retain, & reward preceptors	Experiential processes (e.g., length of rotation) must be standardized nationally Schools must support flexibility & choice among diverse practice settings

Group 3: Relationships among sites, students, and school

Primary Drivers	Secondary Drivers	Other Drivers	Primary Targets	Secondary Targets	Other Targets
Obtain admin support for experiential programs	Increase preceptor involvement in program development & assessment	Create effective assessment methods in experiential programs	Create value-added aspects for experiential education	Develop preceptor development programs for experiential programs Enhance effectiveness of student preparation for experiential education	Create effective assessment methods in experiential programs
Articulate goals, objectives, & vision of experiential education	Develop standards & assessment tools for experiential education	Define & develop sites to meet criteria for "best practice" sites for experiential education	Train & develop preceptors. Improve communication among school, student, & preceptor	Increase recruitment & interest of practitioners to be preceptors	
Create efficient administrative systems	Develop preceptor training programs	Standardize schedules across the country	Schools should increase the diversity of sites	Develop assessment tools & use them to the benefit of student, site & public. Standardize schedules across the country	Identify increase & utilize resources/incentives for the site Increase & modify communication among schools, students & sites

Group 4: The environment and its relationships with sites, students, schools and preceptors

Primary Drivers	Secondary Drivers	Other Drivers	Primary Targets	Secondary Targets	Other Targets
Licensing & accreditation should reflect pharmacists' roles in experiential education	The scope of practice should emphasize quality patient outcomes	Align payment & reimbursement to support Rx activities in pt care & experiential education	Formally assess outcomes of experiential education	Establish new sites that embody the characteristics of successful sites	Improve & increase preceptor training
(No 1° Driver)	Increase the rigor of quality assurance of experiential education through accreditation (include performance measures) Increase funding for experiential education & research	Improve communication systems for practice & experiential education (i.e. best practices)	(No 1° Target)	Build stronger reward & recognition system to support experiential learning Define, expand, & enforce scope/standards of practice for pharmacy by boards of pharmacy	Increase the support & understanding of other health disciplines re: contemporary pharmacy practice & education
Improve school – state assoc relationships	Develop a compensation model for provision of pharm care services	Develop a compensation model for provision of pharm care services Standardize	Create incentives to precept students	Enhance & empower students' involvement as professionals	Standardize training models for preceptors & students. Enhance preceptor development & ongoing growth

		training models for preceptors & students			

Afternoon breakout group work

After a lunch break, small groups reconvened for more than two hours to focus on the identified drivers and begin to create action plans. Groups engaged in three additional creativity exercises (described in *Appendix D*): imaginary brainstorming, tree diagram, and process decision program chart (PDPC).

Using the primary driver identified in the morning session (some groups also chose their secondary driver), each table of participants in each group generated creative strategies to address the driver through the *imaginary brainstorming* exercise. These strategies were then placed into a *tree diagram*, which aids in the development of action plans to address the drivers. The tree diagrams were further refined through the *PDPC* exercise, where participants brainstorm what could possibly go wrong during implementation of the identified strategies. As a consequence of the PDPC exercise, initial strategies could be improved and amended. Details of each groups' exercises are shown in *Appendix E.*

Afternoon plenary session

In the afternoon plenary session, each group gave a summary report of its driver(s) and tree diagram(s). Some groups phrased their drivers in the form of a question while others crafted statements. These reports, and the resulting recommendations, are summarized below,

Group 1*: Relationships among preceptors, sites, and students*

Group 1 looked at the question of improving experiential pharmacy education from the perspective of interactions among the preceptors, students, and sites. This group was subdivided into 3 groups that independently examined the topic. In all, 18 themes emerged from this deliberation.

1. Use constructive feedback in evaluating sites, students, and preceptors
2. Advance practice experiences should incorporate active learning to strengthen professional development, competence, and improve patient outcomes
3. Ample time and support need to be provided to preceptor
4. Experiential programs should create a win-win-win for the preceptor/student/site
5. Develop interdisciplinary relationships
6. Rotations need to provide flexibility to allow for student individuality
7. Preceptor's responsibilities to provide a quality educational experience need to be explicitly defined
8. Define student activities and responsibilities to ensure they receive a quality educational experience
9. Students must set expectations of both the preceptor and site to ensure they obtain a quality educational experience
10. The preceptor must set expectations of both the site and student to ensure delivery of a quality educational experience
11. Sites must accept responsibility to provide a quality educational experience
12. Development and training of the preceptor to provide a quality educational experience is essential
13. Implementation incentives to develop high quality sites need to be identified
14. Characteristics, qualities, and expectations of students entering advanced experiential programs must be considered in designing experiential programs
15. Identify and delineate the ideal characteristics and responsibilities of the preceptor

16. Programs or mechanisms to support continuous preceptor development are necessary
17. Identify and develop quality sites
18. Modify the length of advanced experiential rotations

Three of the defined drivers were further developed into strategies by the subgroups.

Strategy: Adequately support preceptors. The following actions were identified as necessary in achieving preceptor support.

- Effort should be directed toward helping preceptors provide time for student interactions.
- Develop and implement training to assist the preceptor with more time efficient teaching and skills that encourage independent student learning.
- Ensure that sites provide environments that support student learning.

Recommendation: AACP should facilitate the development of a universal preceptor training program.

Strategy: Develop a culture of responsibility in the preceptor and site that encourages quality experiential education.

Actions identified:

- The site should be encouraged to support preceptor development by allowing release time for seminars and workshops, and by providing registration fees.
- All members of the pharmacy team at the site (technicians through supervisors) should understand their roles in the experiential education process.
- Student learning should fit the service provided by the site and should provide added value where possible.
- Preceptors should be properly rewarded and thanked.
- Expectations of all involved should be as clear as possible from the beginning.

Experiential education also occurs at the pharmacy student's work site. The value of "on the job" training should not be ignored.

Recommendation: Schools and colleges should continue to archive and share ideas for increasing the quality of experiential education as "best practices" and in other forums.

Recommendation: Quality experiential education occurring at work sites should be explored as a tool to increase the quality of experiential learning.

Strategy: Identify and delineate the ideal characteristics and responsibilities of the preceptor.

Actions identified:

- Assist schools and colleges with developing tools that can identify and quantify the required qualities and personal characteristics that lead to optimal student learning.
- Encourage stakeholders to align with the JCPP vision of the future of pharmacy practice.
- Identify ways for preceptors to develop a culture of student learning.
- Require a preclinical competency exam before students can enter clerkships.

Recommendation: Schools and colleges should share tools or other mechanisms for the identification and recognition of quality preceptors.

Recommendation: Regulatory agencies (ACPE) should encourage schools and colleges to implement mechanisms that ensure students are ready to enter the advanced experiential learning portion of the curriculum.

Group 2: Relationships among preceptors, students, and schools

In response to the question "How do we improve experiential education in pharmacy?" from the perspective of the relationships among preceptors, students and schools, the three subgroups of this group identified 15 areas of emphasis; some of which overlap**:**

1. Stakeholders should work together to define common goals.
2. Schools must develop defined processes for experiential education management and quality assurance.
3. Colleges of Pharmacy must provide adequate resources to execute experiential programs.
4. Stakeholders need to redefine metrics to measure pharmacy care.
5. Have schools measure commitment and resources for preceptor development.
6. Students, preceptors, and schools should agree upon & articulate expectations.
7. Schools should adopt standardized communication mechanisms among students, preceptors, and the schools focused on experiential education.
8. Experiential processes (e.g. length of rotation) must be standardized nationally.
9. Schools must support flexibility and choice among diverse practice settings.
10. Schools must provide preceptor training.
11. The school and preceptors must work together to train, support and assess students while on their experiential rotation.
12. Schools/sites must provide resources.
13. Schools, preceptors and students should work together to identify new quality preceptors.
14. Schools should use quality assurance principles in their evaluation of preceptors & students.
15. Schools will actively recruit, prepare, retain, and reward preceptors.

Of these themes, the following three were considered "primary drivers" that influence progress of the subsequent themes (one from each subgroup). These are the first three listed. Subgroups then created action plans to facilitate achievement of these drivers:

Strategy: Stakeholders should work together to define common goals.

The term "stakeholders" refers to those parties included in the world of pharmacy experiential education: schools, students, practitioners/preceptors, employers, patients, regulators, others. The action plan emphasized several areas.

Actions identified:

- Hold a summit of key stakeholders (those who are leaders and have authority) at local levels to advance experiential education in their communities. These efforts should be an ongoing process and could include defining outcomes and quality measures for experiential education, model preceptorships, and differences between dispensing and care in pharmacy practice.
- Schools must provide preceptor training (including web-based)
- Schools must assist sites by communicating clear expectations for experiential education
- Schools must engage preceptors in curriculum and other appropriate school committees.

Recommendation: Convene a summit of stakeholders in experiential education to define common goals and work toward quality assurance on a continuous basis.

Recommendation: Schools must provide preceptor training, engage preceptors in school-based efforts and clearly communicate expectations about experiential education.

Strategy: Schools must develop defined processes for experiential education management and quality assurance.

Actions identified:

- Obtain adequate resources regarding staff to direct and coordinate the experiential program and facilities in which to conduct their business.
- Learn about best practices for executing experiential education both within and outside the profession—AACP and ACPE could identify best practice guidelines with input from others.
- Implement standardized communication mechanisms among its correspondence with students and preceptors, and between students and preceptors.
- Measure stakeholder satisfaction with the experiential education program, student knowledge and skills, and conduct comparisons of performance among sites and preceptors

Recommendation: Best practices regarding implementation of experiential education should be identified and utilized by schools and colleges of pharmacy.

Recommendation: Schools and colleges of pharmacy should conduct comprehensive assessments of their experiential education programs to ensure quality and improvement.

Strategy: Colleges of Pharmacy must provide adequate resources to execute experiential programs.

The last driver was closely related to the second.

Actions identified:

- Generate new funds to support experiential education, such as creating endowments, engaging alumni support, lobbying state legislatures, and assessing and reallocating current college funding.
- Develop a marketing business plan for the experiential education program and use it to advocate with school and campus administration to aid in efforts to achieve the above.
- Employ marketing to attract new preceptors to the program including showcasing exemplary preceptors, providing preceptor rewards and recognition, demonstrating how students add value to sites, and cooperating with other schools by constructing realistic goals for all parties involved.

Recommendation: Schools should develop business and marketing plans to generate new sources of funding to support experiential education.

Recommendation: Schools should actively market to attract new preceptors and sites to the experiential education program.

Group 3: Relationships among schools, students and sites

Group 3 was charged with improving experiential education from the perspective of the relationships among the sites, students and schools. Group recommendations centered around five major strategies:

Actions identified:

- Schools should create efficient administrative systems
- Schools should increase preceptor involvement in experiential programming development and assessment
- The school should articulate the goals/objectives and vision of experiential education to all
- Obtain administrative support for experiential programs
- Develop standards and assessment tools for experiential education

Recommendation: Increase preceptor involvement in experiential program development and assessment.

Recommendation: Ensure that all parties understand the goals, objectives and vision of experiential education.

Recommendation: Create efficient experiential administrative systems, automating information gathering and dissemination wherever possible.

Strategy: Increase preceptor involvement in experiential program development and assessment.

Actions identified:

- Orient preceptors about the experiential program and obtain their continuous feedback on program components.
- Motivate preceptors to be enthusiastic, motivated teachers.
- Involve preceptors in decisions on experiential education.

Recommendation: Create an orientation program and effective communication system to consistently orient and update preceptors on precepting and school-related issues.

Strategy: Schools should articulate the goals, objectives and vision of experiential education to all stakeholders.

Actions identified:

- Identify all pertinent stakeholders and develop systems to request information and feedback.
- Identify and communicate examples of best practices.
- Provide consistent, enthusiastic, and creative communications to all stakeholders.

Recommendation: Create a system to recognize “best practice” preceptors. Communicate to all preceptors the advice obtained from “best practice” preceptors.

Strategy: Create efficient administrative systems.

The action plans outline processes to:

- Make administrative systems recognized within school budgets.
- Make administrative systems resource efficient.
- Make administrative systems produce quality education components.
- Make administrative systems adaptable, flexible, and simple.
- Make administrative systems handle large numbers of APPEs.

Group 4: The Environment and its relationships with students, schools, preceptors and sites

Group 4 was charged with identifying strategies to answer the question of how the environment, through its interface with preceptors, schools, sites, and students, can improve experiential education in pharmacy. This 16-member group was subdivided into 3 small groups, each concurrently participating in the creativity, innovation, and planning activities. In all, their recommendations centered around twelve major strategies:

1. *Compensation*. Align payment and reimbursement to support pharmacists' activities in patient care and experiential education. Develop a compensation model for providing pharmaceutical care services.
2. *Preceptors*. Improve and increase preceptor training, development, and ongoing growth and continuing education. Standardize training models for preceptors and students.
3. *Outcomes*. Formally assess the outcomes of experiential education.
4. *Regulatory and Accreditation*. Licensing, accreditation, and pharmacy practice regulations should be modified to reflect pharmacists' roles in experiential education and scope of practice and should emphasize quality patient outcomes. Regulatory barriers to advanced practice and education should be removed.
5. *Sites*. Establish new sites that embody the characteristics of successful sites, drawing upon existing programs, practice associations, other schools, interdisciplinary collaboratives, and large multi-site systems.
6. *Resources*. Increase funding for experiential education and research (e.g., through state and federal agencies, private payers, private foundations).
7. *Quality and Performance Measures*. Increase the rigor (including the use of performance measures) of quality assurance of experiential education through accreditation.
8. *Communication and Information Sharing*. Improve communication and information systems (e.g., information technology, learning communities) for practice and patient information exchange, medication reconciliation, and experiential education.
9. *Incentives*. Build stronger reward and recognition systems to support experiential learning. Create incentives to precept students.
10. *Interdisciplinary Support*. Increase the support and understanding of other health disciplines re: contemporary pharmaceutical practices and education.
11. *Students*. Enhance and empower students' involvement as professionals.
12. *Environmental Relationships*. Improve school/state association relationships to foster collaboration in site development and preceptor recruitment and training.

After going through the *ID* exercise to determine which actions are predicted to drive progress in many of the other strategic areas identified, each subgroup developed an action plan for one of their main driving strategies. Three primary areas of action were identified: improving school–association relationships; ensuring that the scope of pharmacy practice emphasizes quality patient outcomes; and increasing the rigor of quality in experiential education through accreditation. The groups' recommendations are outlined below.

Strategy: Improve school–association relationships.

Actions identified:

- Set common goals and expectations at the leadership level by including students, faculty, and state association boards; advocating to state board and legislators; and reviewing and updating bylaws to address barriers and omissions.
- Improve communication among schools and associations via newsletters, websites and other electronic communication. Utilize opportunities to identify a point person from

each respective group and hold social events at meetings. A model from Texas was suggested for possible adaptation to fit other states.
- Increase professionalization through preceptor training, student recruitment, and other mentorship collaborations. Preceptor education and training could be offered as a collaborative effort between schools and associations, should include programs on teaching strategies, and could be offered statewide as CE or certificate programs. In addition, faculty and students should be encouraged to present posters or other presentations during association meetings. Recruitment of students into the profession could be enhanced by expanding schools' admissions committees to include preceptors, new practitioners, and association representatives. Efforts to encourage students to join professional associations should also be pursued. Other strategies for enhancing professionalism include collaborating on a student code of conduct, offering student rotations at pharmacy associations, identifying exemplary practice sites for rotations, and rewarding preceptors with association membership.

Recommendation: Identify ways to bring association representation into activities at schools/colleges (e.g., admissions committees, strategic planning efforts and/or advisory board).

Recommendation: Invite students and faculty to participate in state association meetings, leadership committees and/or boards, and to collaborate in providing continuing professional development/CE.

Recommendation: Develop a preceptor training program in collaboration with schools/colleges and respective state and national pharmacy practice associations.

Recommendation: Formalize communication vehicles to share information between schools and associations.

Recommendation: Collaborate with associations for preceptor recruitment and PR by involving leadership and tapping into opportunities during professional meetings, and/or via communication vehicles to support efforts of schools/colleges in preceptor recruitment.

Strategy: Ensure scope of pharmacy practice emphasizes quality of patient outcomes.

Actions identified:

- Modify legal requirements to achieve provider status and to broaden pharmacist and technician allowances, by creating more allies, engaging and influencing lawmakers, and updating NABP's model laws and regulations.
- Optimize workforce and workflow by creating consistent standards for technician training and robotics use, working to redefine pharmacy as a place for care, and implementing mechanisms to decrease the pharmacist shortage.
- Revamp access to medical information by embracing systems that remove "paper charts" and re-educating all practitioners that HIPAA was intended to increase information sharing.
- Inform the public about pharmacists' scope of practice by educating consumers and patients about patient care services available from their pharmacists and marketing the value of those patient care services.
- Generate profession-wide consensus by implementing the JCPP consensus vision: Pharmacy Practice 2015 and sharing best practices. It was also recommended to engage consumer groups to express expectations of pharmacy.

- Use quality outcomes to validate scope of practice by establishing standard measures and assessing the correlation between quality sites and experiential education. Publish and present outcomes within pharmacy and outside the pharmacy audience.

Recommendation: Work with NABP to update model laws and regulations to ensure the scope of pharmacy practice emphasizes quality patient outcomes.

Recommendation: Identify and/or create information systems which provide for ready access to patient information among care providers including health systems, primary care, and pharmacists, across varying venues of practice.

Recommendation: Develop and validate measures of quality outcomes in experiential education and pharmacy practice.

Strategy: Increase the rigor of quality assurance of experiential education through accreditation.

Actions identified:

- Develop quality metrics by testing and validating metrics, using non-pharmacy models and employing consensus development and education to build support for positive contribution of metrics. The plan recommends that a small, manageable number be used initially and that metrics be should be used to tier programs on quality parameters. It is further recommended to seek recognition of metrics by boards and other relevant bodies.
- Achieve an appropriate balance of input from experts and stakeholders by strengthening accreditation standards to define "musts," convening a local panel of stakeholders to refine and adapt standards locally, and reviewing the structure of visiting accreditation teams. It is further recommended that a national bank of core and elective rotation descriptions is developed.
- Use metric-based accreditation to reward high performers, using both monetary and non-financial rewards. Seek local, state, and national support for rewards. Ensure that assistance to improve is available for low performers (e.g., partnering them with high-flyers).
- Emphasize continuous improvement using benchmarks and tracking over time. Define core elements for improvement and characterize school/college diversity. Incorporate continuous quality improvement (CQI) into school's strategic plan, and integrate into AACP

Recommendation: Develop and validate quality metrics for experiential education and integrate them into accreditation processes.

Recommendation: Collaborate with leaders in quality and health professions education to define core elements for continuous quality improvement and promote their integration into schools and colleges of pharmacy planning and assessment activities.

At the conclusion of the presentations, each participant in the audience was asked to vote on the two actions felt to be of highest priority at this time. The action plan getting the highest number of votes was the development and training of the preceptor to provide quality educational experiences. The second highest priority action plan was for schools to improve articulation of goals/objectives and vision of experiential education to their students and preceptors. The third highest priority was identification and delineation of the ideal characteristics and responsibilities of preceptors. After this vote, comments from the audience about the day's activities and action plans were invited. Briefly summarized, the comments made were:

1. It was difficult for group 4 to address issues and interesting that issues that were quite varied.
2. Should we be concentrating particularly on increasing quality in community pharmacy sites?
3. A student noted that her community site experience was superior to her acute care experience.
4. Another student noted that it was extremely important to include students on all committees, because they are the ones who can answer the questions about site quality and curricular holes.
5. A preceptor commented how important it was for pharmacy schools to increase interaction with associations and to involve preceptors in experiential and other academic decision-making.
6. A consumer noted that his concerns were with medication errors, pharmacy wait times, and insurance problems.

Preparation and Themes for Day Two

Following adjournment for the day, the I-Team met to determine themes for Day Two breakout groups. This was done by creating an affinity diagram of all Day One headers that came from the individual groups' affinity diagrams. Headers were grouped together into common themes that seemed to cut across groups. The five themes that emerged were:

1. Improve the quality of student learning such that students emerge from their PharmD training ready, willing, and able to perform interprofessional, patient-centered care.
2. Improve recruitment, training, and development of preceptors.
3. Create the common administrative framework and tools for the management of efficient and effective experiential learning programs.
4. Ensure that regulations and accreditation standards promote rigorous accountability and provide incentives for improvements in patient-centered care.
5. Ensure quality assessment and improvement tools are used as a catalyst to drive practice improvements across all facets of pharmacy education.

The goal of Day Two was to design action plans for enacting the five themes outlined. The processes used to do this on Day Two were similar to those used on Day One.

Morning plenary summary

The brief morning plenary session on Day Two offered an open microphone period for additional reflection from Day One activities and a venue for announcing the five breakout group themes. Participants were asked to select the group in which they believed they could contribute the most to solving the assigned problem (forming groups of people with focused expertise and experience who are committed to working on a theme of interest to them took priority over achieving a balanced of number of participants and their demographics in each group, as was done on Day One). The resulting Day Two groups varied in size and representation of participants. Groups were adjourned to their respective breakout rooms to begin the day's activities.

Breakout group work, including details of action plans

After the morning plenary session, participants met in their small groups for a few hours. Participants in larger groups further subdivided themselves into roundtable groups of 5 or 6 participants each. Each group and subgroup repeated the brainwriting activity from Day One, this time focusing on their group's theme as the question. For example, Group 1 answered the question: "How do we improve the quality of student learning such that students emerge from their PharmD training ready, willing, and able to perform interprofessional, patient-centered care?" This activity generated numerous ideas on how to accomplish the goal (theme).

Participants then engaged in a *word and picture association* activity to stimulate creativity and innovation (described in *Appendix D*). The goal of the activity was to generate unique ideas regarding a word or picture unrelated to the topic/theme, then apply these ideas back to the topic/theme. This activity was similar to the imaginary brainstorming performed in Day One. The resulting ideas were then added to the ideas generated through the brainwriting process and an affinity diagram was created from all of the ideas. An interrelational digraph (ID) was performed on the resulting headers from the affinity diagram exercise to identify targets and drivers. Groups selected the primary and/or secondary drivers upon which to conduct the next set of activities. Following a short break, groups reconvened to perform tree diagrams and PDPCs on their selected drivers. Results from these activities are shown in *Appendix F*.

Afternoon plenary

In the afternoon plenary session, each group gave a summary report of its driver(s) and tree diagram(s). The working group outcomes are summarized below:

Group 1: Improve the quality of student learning such that students emerge ready, willing, and able to perform interdisciplinary patient-centered care.

Group 1 was charged with identifying strategies to answer the question of how to improve the quality of student learning such that students emerge ready, willing, and able to perform interdisciplinary patient-centered care.

In all, their recommendations centered around ten major strategies, with the top three strategies identified by an asterisk:

1. Incorporate active student-centered learning throughout pharmacy education
2. Refine student communication skills
3. Incorporate teamwork and interdisciplinary learning throughout curriculum
4. Schools must identify and provide or create adequate support networks for students*
5. Students need to enter pharmacy school, rotations, and practice with foundational knowledge* and attitudes
6. Foster collaborative student/preceptor relationships
7. Set high standards and hold students accountable*
8. Allow students to choose individual rotations
9. Incorporate experiential education throughout curriculum
10. Initiate standard assessments through curriculum (i.e., for students, preceptors, sites, etc.)

After going through an exercise to determine which actions drive progress in other areas, three primary areas of action were identified: creating adequate support networks for students; setting high standards for which students should be held accountable; and setting requirements for foundational knowledge, skills, and attitudes which students must demonstrate upon entry and at key transition points in pharmacy education and practice.

The group felt that the time available would allow them to determine an action plan for one of these drivers. The group chose to focus its efforts on the one driver that was determined to influence progress in every other strategic area they had identified:

Strategy: Require that students enter pharmacy school, rotations, and ultimately pharmacy practice with foundational knowledge, attitudes, and skills.

Actions identified:

1. *Pre-admission Strategies and Activities*. Enhance admission criteria and screening tools to better select students with appropriate foundational knowledge, skills, and attitudes. With respect to admission criteria, pre-entry requirements need to include general education abilities in such areas as communication, problem solving, teamwork, and advanced sciences. Tools to assess individual and team working skills, adaptability to change, growth, and leadership need to be identified and implemented as part of the pre-admission process. Likewise, attitudes need to be assessed using a variety of strategies ranging from standardized national examinations to oral examinations. In order to effectively improve pre-admission assessment tools that evaluate all three domains (knowledge, skills, and attitudes), research for predictors of success (e.g., surveys of "ideal" students, exit interviews to determine predictors of success from students' pre-pharmacy experiences) needs to be conducted. Improving the quality and scope of pre-admission assessments may also require the creation of new assessment tools. The creation of new tools as well as the enhancement of existing tools such as the PCAT will require an investment in admissions resources (personnel, money) and faculty to conduct the necessary research and implementation plans. Furthermore, because the vision is to use the pre-assessment tools and techniques as a starting point and model for continuous quality improvement throughout the curriculum, all faculty will need to understand systematic student assessments that encompass all three domains (knowledge, skills, attitudes) in order to incorporate them into the courses they teach and coordinate. The development and integration of a systematic assessment processes will likely require some type of faculty development and reward. The group also recommends improving the recruitment of pharmacy students by educating pre-pharmacy advisors, counselors, and laypersons about the types of individuals needed in pharmacy as well as the various functions pharmacists perform. Finally, comprehensive assessment tools that use a variety of strategies and assess attitudes in addition to knowledge and skills will require an interdisciplinary approach that draws on the NABP, pharmacy educators, and practitioners.
2. *Pre-rotation Strategies and Activities*. Pharmacy students should be required to achieve a defined set of baseline knowledge, skills, and attitudes prior to beginning experiential education rotations. To foster knowledge, more student-centered/self-directed active learning, interprofessional processes should be utilized throughout the pharmacy curriculum. Developing strategies to foster an environment that promotes and enhances student professionalism and leadership is anticipated to improve the acquisition of necessary skills. Professional attitudes may be enhanced through the incorporation of practice experiences that include direct patient care.
3. *Pre-licensure Strategies and Activities*. Prior to licensure, pharmacy graduates should demonstrate appropriate foundational knowledge, skills, and attitudes. It is recommended that a practical, validated patient-care licensure exam be initiated as a component of licensure requirements.

Recommendation: Set high standards with a systematic assessment plan and associated tools developed by all stakeholders that uses multiple strategies to assess knowledge, skills, and attitudes prior to admission, prior to clerkships, and prior to licensure.

Recommendation: Train all faculty, preceptors, and experiential program staff in the use of assessment tools as a means toward continuous quality improvement in pharmacy education and as part of a supportive network for pharmacy students.

Recommendation: Encourage research in defining what contributes to stellar pharmacist practices including the effect of pre-admission requirements on student development of foundational knowledge, skills, and attitudes for pharmacy practice.

Recommendation: Improve the recruitment of pharmacy students by educating pre-pharmacy advisors, counselors, and laypersons about the types of individuals needed in pharmacy as well as the various functions pharmacists perform.

Group 2: Improve recruitment, training, and development of preceptors.

Group 2 was charged with identifying strategies to improve recruitment, training and development of preceptors. Group recommendations centered around seven major strategies:

1. Create programs and strategies to develop practice and rotation sites.
2. Develop innovative strategies for retaining experiential education preceptors.
3. Develop and provide incentives and rewards for preceptors.
4. Develop and deliver preceptor training methods and ongoing development tools.
5. Stakeholders must standardize the infrastructure of the experiential educational process.
6. Stakeholders will/must expand and try new recruitment efforts.
7. Provide efficient communication between school, sites, and preceptors.

Three primary areas of action were identified: developing and delivering tools and materials to provide preceptor training and ongoing development; creating programs and strategies to develop sites; and engaging stakeholders to standardize the infrastructure of the experiential education process.

Strategy: Develop and deliver tools and materials to provide preceptor training and ongoing development.

Actions identified:

- Improve communication between schools and sites by developing and utilizing tools that facilitate sharing of training materials, best practices, recognition programs. Develop processes that facilitate mentoring and resource sharing by preceptors.
- Develop and provide continuing education programs for preceptors that combine clinical practice education with teaching and precepting skills such as how to teach, mentor, and coach pharmacy students.
- Prepare pharmacy students to be future preceptors through instilling a sense of professional responsibility in the experiential learning process.

Recommendation: Appoint a national, impartial consortium of key stakeholders (association, employers, schools, students) will conduct market research with preceptors and sites to determine needs for training and development by the end of the year.

Recommendation: Develop a national database of sites to ensure that training locations are used to their full potential.

Recommendation: Develop a basic training “boot camp” for new preceptors.

Strategy: Create programs and strategies to develop sites.

Actions identified:

- Increase the quality of sites by setting clear expectations for sites, integrating best practice models into teaching sites, and providing immediate feedback to support site improvement.
- Increase the recruitment of quality sites by using existing preceptors to recruit new sites, developing additional shared faculty positions, and educating executives of major employers about the benefits of supporting experiential education.

Strategy: Stakeholders must standardize the infrastructure of the experiential education process.

Actions identified:

- Standardize key elements of the rotation structure such as program goals, activity documentation, and competency-based evaluation processes that are universal and adaptable.
- Standardize and simplify paperwork processes for sites and preceptors (i.e., affiliation agreements, preceptor applications).
- Standardize communication among stakeholders to provide quality and timely feedback to preceptors, document problems, and facilitate site assessment.

Recommendation: Involve national organizations and all schools and colleges of pharmacy to develop a standard affiliation agreement format with "interchangeable clauses" that provide consistency with some required flexibility.

Recommendation: Develop a global process for conducting site visits that uses teams (similar to the residency accreditation model) to assess performance and provide recommendations for site improvement.

Group 3: Create the common administrative framework and tools for the management of efficient and effective experiential learning programs

Group 3 was charged with defining strategies for creating the common administrative framework and tools for the management of efficient and effective experiential learning programs. Six themes emerged from consideration by this workgroup:

1. Obtain resources (money from national organizations) required to manage efficient and effective experiential learning programs.
2. Establish programs for experiential education director development
3. Develop structure and standardization to promote efficiency and effectiveness of PEP
4. Construct a communication network and system that links the school, its sites, preceptors, and students for easy dissemination and collection of ideas, data, etc.
5. Inculcate professionalism in students and outcomes expectations for students.
6. Perform quality assurance throughout PEP.

Of these six themes, two were considered to be drivers to help achieve the other four: obtaining resources required to manage efficient and effective experiential learning programs, and establishing programs for experiential education director development.

Strategy: Obtain resources required to manage efficient and effective experiential learning programs.

Actions identified:

- Initial effort should be directed toward helping schools determine required resources for experiential education such as defining the necessary infrastructure, rotation needs, and training tools.
- At least on a regional basis experiential calendars, evaluation tools, quality assessment measures, preceptor development programs, and a minimum threshold of knowledge and abilities for starting advanced experiential practice should be defined and disseminated.
- School administrators should be educated and understand the need for appropriate budgets and supply the necessary technology. For example a school that would effectively manage experiential learning would necessarily construct a communications network and system linking the school, its sites, preceptors, and students for easy dissemination and collection of ideas, data, etc. Examples of these networks exist, but are not effectively in place at every school. Support for this resource development will require facilitation with both external groups such as professional organizations, employers, residents and preceptors, and internal groups such as the school's faculty, administration, students, staff, and the development office.

Recommendation: A benchmark survey of schools and colleges should be conducted to determine and define a minimum level of infrastructure needed to adequately manage the experiential learning program.

Recommendation: Regional and national meetings of school and college administrators and PEP directors should be facilitated to develop common calendars, tools, assessments, etc.

Recommendation: Schools and colleges should continue to archive and share ideas for applying technology to experiential education as "best practices" and in other forums.

Strategy: Establish a program for experiential education director development.

Because of the critical importance of the directors in preparing pharmacists, their roles should be more strongly supported.

Actions identified:

- Sample job descriptions should be developed along with accompanying performance evaluation and feedback tools and promotion guidelines.
- Scholarship in experiential education should be supported and the school faculty should be educated on the roles and activities of the PEP office.
- Collaboration should be fostered among PEP directors. Effort should be made to create a mentoring program, to identify and update a roster of PEP personnel, and to enhance utility of the PEP SIG.
- Tactics and tools for preceptor recruitment and development should be identified and shared.
- Components of a director development program should be offered at national meetings and/or on-line as appropriate.
- Strategies to protect the PEP director from career "burnout" should be developed and shared.

Recommendation: The PEPSIG should become the primary developer, facilitator, and implementer of a PEP director development program.

Group 4: Ensure that regulations and accreditation standards promote rigorous accountability and provide incentives for improvements in patient-centered care.

Group 4 was charged identifying strategies that would ensure regulations and accreditation standards promote rigorous accounting. Group recommendations centered around eight major strategies:

1. Ensure ongoing quality assessment and screening for experiential sites and preceptors.
2. Support and expand the scope of practice through accreditation and regulation.
3. Develop vision, goals, and metrics about practice and experiential education.
4. Improve guidelines for experiential education program goals and administration.
5. Provide incentives and recognition for preceptor participation.
6. Assess student mastery of competencies prior to, during, and following practice experiences.
7. Develop standards for preceptors and sites (this should be a multi-organization effort).
8. Remove regulatory barriers that limit patient-centered care and education.

The two areas the group focused on were how the Joint Commission of Pharmacy Practitioner's (JCPP) Future Vision of Pharmacy Practice could be supported through regulation and accreditation, and how licensing boards could support development and provision of patient-centered care and education.

Strategy: Develop vision, goals, and metrics about practice and experiential education that will enable attainment of the JCPP Vision of Practice in 2015.

Actions identified:

- Creation of ongoing competency metrics that can be used by students for learning outcome measurement and by preceptors for continuous professional development.
- Periodic (annual?) assessment of sites' progress toward meeting Vision 2015 goals.
- Development of model regulation language for laws that support and expand the role of technicians in the dispensing process.
- Development of a precepting model that promotes students as resources in the patient care process.
- Education of legislators to create laws promoting attainment of Vision 2015 goals.
- Promotion of patient care program development similar to the program developed in Asheville, North Carolina.
- Incorporate into the curriculum training for students on how to help patients lower health care costs.

Recommendation: Develop quality metrics for preceptor and site assessment that incorporate goals stated in the "Pharmacy Practice in 2015" vision.

Strategy: Remove regulatory barriers to patient-centered care and education.

Actions identified:

- Development of model regulations to expand role of technicians.
- Development of tools (e.g. survey practitioners/preceptors) to identify and overcome barriers.
- Development of "model regulations" for practice of pharmacy care by pharmacists.

Recommendation: Stakeholders (schools, students, pharmacy practitioners, pharmacy organizations, pharmacy administrators) should work with legislators and pharmacy boards to remove impediments to the achievement of the "Pharmacy Practice in 2015" vision statement and address preceptor training in their state practice acts.

Group 5: Ensure quality assessment and improvement tools are used as a catalyst to drive practice improvements across all facets of pharmacy education.

In response to the question "How can it be ensured that quality assessment and improvement tools are used as a catalyst to drive practice improvements across all facets of pharmacy education," Group 5 identified seven areas of emphasis:

1. Articulate why assessment improves quality & change
2. Identify what & who to assess
3. Design appropriate assessment process & tools
4. Stakeholders should work together to standardize assessment
5. Identify when assessment should occur
6. Help preceptor improve through mentoring & training
7. Help preceptors improve through assessment
8. Assess student performance

Of these, two were considered priority areas that would drive facilitation of the others: articulating why assessment improves quality and change, and identifying what and who to assess. The group chose to focus on the secondary driver since it was determined to be a more practical topic for which to develop action plans.

Strategy: Stakeholders need to identify what to assess.

Actions identified:

- Stakeholders in the experiential education program (they could be at local, regional and national levels) should be identified and included in decisions made about the program.
- This group should identify programmatic outcomes by reviewing what is currently in place, other models, examples and recommendations. The outcomes should include knowledge, skills, and abilities that graduates should possess upon exiting the program
- Assessment process should be identified and include benchmarking as well as provisions for technology and other support
- Quality assessment tools should be identified by creating an inventory and determining what current tools measure, conducting a gap analysis, and creating assessment tools for those areas where none currently exist.

Recommendation: Convene experiential education stakeholders at local and regional levels to determine experiential program outcomes and measures.

Strategy: Stakeholders need to identify whom to assess.

The discussion about who to assess focused more on content versus process.

Actions identified:

- Students should be assessed for knowledge and abilities, levels of development and professionalism; their satisfaction with the overall experiential education program should also be assessed

- Faculty and preceptors should be assessed on those characteristics that are known to facilitate learning such as teaching skills, their interest and motivation. Their satisfaction with the experiential education program should also be assessed
- Quantity of sites/rotations should be assessed, as well as quality of preceptors/staff, administrative support for experiential education, facilities and environment, and level of patient care activities
- The experiential education program's administrative structure, cost effectiveness and level of support for the program should be assessed.

Recommendation: Engage groups of representative stakeholders to make decisions about employing quality assurance and assessment strategies in the experiential education program on a continuous basis.

Summit Wrap-up

In the closing plenary session, each group gave a summary report of its driver(s) and tree diagram(s). Rod Shafer, President of the National Association of State Association Executives, spoke of the importance of schools partnering with state professional associations in the experiential education and practice improvement process. Peter Vlasses, Executive Director of ACPE, spoke next offering his reflections of the Summit. He also shared the ACPE draft standards and guidelines for experiential education. Lucinda Maine gave the adjourning address, assessing the success of the Summit. She reiterated the importance of the Summit as only a first step in the process of improving pharmacy experiential education and charged attendees to play an active role in actuating Summit recommendations and outcomes.

Conclusion and Recommendations

General Impressions

The Summit met its goal of bringing together stakeholders in pharmacy to create action plans directed toward improving the quality and quantity of experiential education in pharmacy. Crucial to the success of the Summit were the formulated plans and processes used to generate creativity and commitment to achieve breakthrough change for the profession. Summit planners and participants alike were optimistic about the value of the Summit because the outcomes they generated were concrete, the planning processes were enjoyable, and multiple views and ideas were encouraged that contributed to the creation of viable solutions. The final address of the Summit by Lucinda Maine further stimulated enthusiasm and commitment among participants because her address affirmed AACP's position that the Summit would actually lead to envisioned, positive changes.

Participant Evaluations

Participants were asked to evaluate the Summit and were generally pleased and enthusiastic about the outcome of the Summit. They reported that the pre-work helped them prepare for the Summit; that they were able to actively contribute to process; that the Summit met their expectations; and that they were ready to continue the process of finding and improving experiential sites.

Two ideas were clear from the evaluation forms: the tools used to help focus on quality and innovation were unique and valuable, and the contribution of the Summit to pharmacy education will not be understood until the strategies that began to emerge are facilitated, implemented and successful (*Appendix G*).

Recommendations

The following recommendations were derived from the Summit to capture all the group work from both Day One and Day Two. Analysis of these data allowed identification of nine recommendations with several suggested strategies for achieving the recommendations. While these recommendations focus particularly on experiential education, it should be considered that experiential education is only one facet of a pharmacy curriculum. Attention and effort directed toward supporting and improving experiential education are expected to impact the entire design of pharmacy curricula and pharmacy practice. Because Summit participants were cognizant of the potential impact of their plans, many of the following recommendations used language that included all stakeholders.

Identification of practice competencies

A general set of practice competencies that can be used both by sites and students has not been fully developed. Development of such competencies would aid in experiential education curriculum development.

Recommendation 1: ***Define and measure practice competencies for students and practitioners.***

The level of practice varies among sites and regions. It would be useful to use the JCPP Pharmacy Practice in 2015 vision and other guidelines such as those in the proposed ACPE accreditation standards to develop a practice competency rubric that could be used to identify quality of practice at a site and by a student.

Definition of practice competencies should involve all stakeholders in the experiential education process. Preceptors who feel they are part of the decision-making process will invest enthusiasm about the results of that process.

Development of practice competencies will enable identification of skills schools need to teach to students prior to the final professional year of the program.

Potential strategies for achieving Recommendation 1 include:

- *Develop quality metrics for practice that incorporate goals stated in the "Pharmacy Practice in 2015" vision.* Measurement guidelines are needed to provide consistency in identification of practice level.
- *Convene experiential education stakeholders at local and regional levels to determine experiential program outcomes and measures.*
- *Appoint a national, impartial consortium of key stakeholders (associations, employers, schools, students) to determine global targets for knowledge and skills needed by students entering their APPEs.* Once these have been determined, then schools can work with preceptors and academicians locally to determine what should be tested given school resources and practice level at progressive practice sites.

Assessment of pre-APPE student skills
Some schools do not have a formal assessment process to determine whether students are ready to begin practicing patient-centered, interdisciplinary, evidence-based care prior to entering APPEs.

Recommendation 2: ***Students should enter the final professional year adequately trained to begin providing patient-centered care as outlined in the JCPP "Pharmacy Practice in 2015" vision.***

Ideally, students will arrive at their first APPE with basic patient care knowledge and skills in place. They will then use the experience obtained at the practice site to increase the efficiency in which they apply those skills. Students should also arrive at the first APPE with a knowledge base enabling them to recognize and explain common conditions and treatments, and the skills to build their knowledge base quickly and independently when encountering unfamiliar conditions and treatments. Students need to clearly define not only the role of other health care professionals, but to comprehend and actively demonstrate the unique role of the pharmacist in the patient care process.

Ensuring that students enter their final professional year ready to interact with patients is a process that in some ways begins with the admissions process. Selection of students with effective communication, problem-solving, and critical-thinking skills is important, as these traits are highly important for practicing pharmacists, yet hard to develop in the education process if initially absent.

One way of ensuring that students arrive at their APPEs ready to practice pharmacy in a way that meets the JCPP Pharmacy Practice in 2015 vision is to require that students pass comprehensive knowledge and skill assessment(s) prior to beginning their APPEs. Two things need to occur before high-stakes assessments such as these can be administered. First, schools need to determine clearly what patient care knowledge and skills are most useful during APPEs, a process requiring input by both preceptors and academicians. Second, assessments need to be designed at a level that ensures identification of students who truly aren't ready for APPE, yet is not so rigorous that only the highest performing students can pass.

Potential strategies for achieving Recommendation 2 include:

- *Improve the recruitment of pharmacy students by educating pre-pharmacy advisors, counselors, and laypersons about the types of individuals needed in pharmacy as well as*

the various functions pharmacists perform. Developing a profile of traits common to successful APPE students would facilitate schools in this educational process.
- *Appoint a national taskforce of key stakeholders to develop a systematic assessment plan with associated tools that uses multiple strategies to assess knowledge, skills, and attitudes prior to admission, prior to clerkships, and prior to licensure*. Schools could then use this as a starting template to design their own assessment strategies.

Preceptor training
Recruiting, training, and retaining qualified preceptors is the area most concerning to experiential educational directors. It would be useful if a universal blueprint for preceptor training existed, including both the basic skills needed for precepting and specialized topics.

Recommendation 3: ***Recruit and train qualified experiential faculty members and preceptors.***

It would be worthwhile to first develop a plan for identifying the components of a preceptor training program. A survey of preceptors at pharmacy sites would yield information about some components of such a program. It would be useful if desired components were developed and advocated by a national group such as AACP, so that training programs developed in different areas of the country would present consistent information.

It would be useful for all new preceptors to complete a program which introduces them to good educational practices and differentiates the unique aspects of experiential education. Creation of such an initial program for all first-time preceptors would facilitate consistency in material presented. Such a program could be administered during residency training (since many pharmacists completing residencies also serve as preceptors) or could be advocated by licensing boards, schools and state pharmacy associations that require training for new preceptors.

It would be useful for experiential educational directors to have access to a comprehensive, pre-prepared preceptor training program not only for first-time preceptors, but for updating of preceptor skills.

Potential strategies for achieving Recommendation 3 include:

- *Appoint a national, impartial consortium of key stakeholders (associations, employers, schools, students) to conduct market research with preceptors and sites to determine needs for training*. These needs would act as a guide for development of preceptor training programs by individual schools.
- *Develop a basic training program for new preceptors*. The contents of this program would be consistent between schools and organizations.
- *AACP should facilitate the development of a universal preceptor-training program.* This program would contain educational and presentation materials that could be easily adapted to a traditional didactic educational presentation, computer-adapted training, and to distance learning.

Optimizing number of available APPE sites
Many schools have an acute need for more sites. Although site development in general takes time and effort, there are some strategies that may be employed immediately to help ease acute the need for new site development.

Recommendation 4: ***Modulate number of APPE sites needed by increasing the quantity of exemplary experiential learning sites across the US or decreasing the number of APPEs during the last professional curricular year.***

In most existing experiential programs, some sites are in high demand and short supply and other sites are underutilized. Many underutilized sites are in rural locations or in urban public health clinics and other similar locations. If sites that are chronically underused by one school could be made available to students from another school, that might help that school with site placements.

Many students work during their school years as pharmacy interns. ACPE currently does not allow students to receive monetary remuneration for school-mediated experiential learning, but the need for this requirement should be studied. Valuable learning can occur at work sites under the close supervision of pharmacist preceptors whose qualifications have been verified by the college or school. Experiential education program directors can provide guidance for the structure of internship projects, and could ensure that students learning at a work site had a quality learning experience. Some projects, such as setting up a new immunization service in a community pharmacy, or designing and carrying out a drug use evaluation, can be easier when a student is at a site longitudinally and is familiar with organizational infrastructure, as occurs at an internship site.

One model that could be explored for reducing the demand for sites is increasing the length of each experience (e.g., from 4 or 5 weeks to 6 weeks or longer.) While there are obvious disadvantages as well (e.g., fewer rotations mean less opportunity for students to choose and experience different types of practice), such a change could increase capacity for schools that have traditionally offered greater numbers of shorter rotations. This would decrease the total number of site placements needed, although it would increase the difficulty in ensuring adequate numbers of required APPEs, such as inpatient general internal medicine experiences. This would require full assessment of the advantages and disadvantages.

Finally, it would be helpful for schools to develop a marketing plan for site development. Such a plan could involve input by current preceptors on how to recruit other preceptors in the area or actively seek out school alumni who are working in the area but not precepting students. Development and enaction of such a plan would enable schools to have a structured approach to site recruitment. Further, a business plan might identify options for monetary and non-monetary preceptor reimbursement.

Potential strategies for achieving Recommendation 4 include:

- *Develop a national database of sites to ensure that training locations are used to their full potential*. This database would not contain sites that are filled regularly by the nearby school and would only include sites where a preceptor had agreed to be on the list. This list could be administered centrally by AACP via the Professional Experience Program (PEP) special interest group (SIG).
- *Explore development of quality experiential education at work sites*. Some programs currently used by non-traditional Doctor of Pharmacy programs allow student learning to occur at the work site. If a learning plan were overseen by the school, and completed under the close supervision of a pharmacist preceptor whose qualifications had been verified by the school, it might be possible for quality experiential education to occur at the work site.
- *Increase individual APPE length to decrease overall total number of sites needed*. If schools in one area chose a consistent APPE block model, it would also facilitate synchronization of students at sites that take students from multiple schools.
- *Schools should actively market to attract new preceptors and sites to the experiential education program.* This would occur through enaction of a structured "marketing plan" for site and preceptor development.

- *Business and marketing plans should be developed to generate new funds to support experiential education and recruit new sites and preceptors.*

Administrative framework of experiential education programs
Most experiential education programs have similar components, but have evolved different models for administering those components. It would be useful to administer some components of an experiential education program in a consistent manner among schools in the area.

Recommendation 5: ***Create a common administrative framework for experiential education administration.***

Most sites serving students from different schools have difficulty accommodating the different start and stop dates of students from different schools. Creation of a regional, or even national, calendar of start and stop dates would ease site scheduling difficulties.

Different programs use differing terms to describe a single type of experience. It would be useful for pharmacy schools to have a national nomenclature for experiential education description. For example, some schools differentiate "community pharmacy" experiences from "ambulatory care," while other schools consider community pharmacy experiences to be a type of ambulatory care. It would be useful for AACP or ACPE to standardize terminology and definitions of the various categories of experiences.

One element of experiential education administration that is very time-consuming is development of affiliation agreements with sites. A universal template would facilitate completion and implementation of these documents and ensure some standardization among schools and sites.

One way for new experiential educational directors to better understand how to administer an experiential education program is for them to spend time with or be mentored by an experienced experiential educational director in a structured learning program.

Potential strategies for achieving Recommendation 5 include:

- *Develop a regional APPE calendar*. Common start and stop dates for rotations would be best decided by a committee of experiential educational directors from pharmacy schools that share sites with each other.
- *AACP and ACPE should develop a standard nomenclature for describing various experiential education options*. Publication of such a nomenclature would allow standardization of language used to describe educational experiences.
- *Involve national organizations and all schools and colleges of pharmacy to develop a standard affiliation agreement format with "interchangeable clauses" that provide consistency with some required flexibility.*
- *The PEP SIG should become the primary developer, facilitator, and implementer of a PEP director development program.* Such a program would basically be experiential education in experiential education administration.

Efficiency of experiential education program administration
Some aspects of experiential education administration can be automated, which can decrease time taken to perform repetitive tasks and increase access to experiential education information.

Recommendation 6: ***Identify tools that increase efficiency of experiential education program administration.***

Administration of many experiential education programs includes visits to practice sites. These visits could serve multiple purposes. In addition to fostering good will, they could function as a curricular outcome measurement tool (via preceptor feedback), facilitate performance assessment of student skills at the practice site, measure site quality, and provide a structured process for data collection for educational quality improvement. These visits might be best accomplished through the use of a team approach, similar to how residency and pharmacy school accreditation is currently conducted.

Technology has made possible a number of efficiencies, such as on-line evaluations, access to drug and disease state databases and treatment guidelines, and electronic messaging to students and preceptors. Innovative uses of technology in the administration of experiential education could be highlighted at the AACP Annual Meeting through the PEPSIG or other forums.

Data that might be useful for new experiential educational directors would include at least minimal information about the structure used to organize student training and evaluation, preceptor training and evaluation, student and preceptor feedback as a measure of program success, and overall communication among all members of the experiential education process.

Potential strategies for achieving Recommendation 6 include:

- *Develop a global process for conducting site visits that uses teams (similar to the residency accreditation model) to assess performance and provide recommendations for site improvement*. Team members could include, in addition to experiential educational directors, faculty administering the admissions process, pharmacy practice faculty doing educational research, development directors, other preceptors, and perhaps students?
- *Schools and colleges should continue to archive and share ideas for applying technology to experiential education as "best practices" and in other forums*. Although this occurs informally, it would be desirable to have a methodical approach to sharing innovations.
- *Conduct a benchmark survey of schools and colleges to determine and define a minimum level of infrastructure needed to adequately manage the experiential learning program.* This could be done formally by the PEPSIG.
- *Streamline processes for preceptor communication, feedback, and input*. Technology can enhance this process, but only if a structured format for communication exists, the feedback is used, and the way in which the feedback is used is communicated back to the preceptors.

Effect of practice quality on experiential education quality

The quality of experiential education will be directly affected by the quality of practice at any site. It will be important for schools to develop projects that may result in increased quality of care provided. Schools should not work alone in this process, but should partner with professional and regulatory organizations to develop the environmental structure needed to implement practice quality improvements.

Recommendation 7: ***Work with professional and regulatory organizations to improve quality of practice and experiential education.***

Educational programs that foster improvement in quality of patient care are more likely to be successful when a school collaborates with state professional organizations in the design and implementation of the program. Professional and regulatory organizations may also play an important role in preceptor training, with professional organizations providing a venue for educational endeavors, and regulatory boards requiring preceptor training.

Professional and regulatory organizations can also enhance the practice research capabilities of schools by connecting practitioners and pharmacy faculty who can partner in research design and data collection.

Schools, practice organizations, and regulatory boards should work together to promote enhancement of practitioner skills and so improve quality of patient care.

Potential strategies for achieving Recommendation 7 include:

- *PEP directors and school/college leadership should meet with local/state association leaders to define ways to collaborate.* This might include cross-representation and sharing resources related to experiential education site and preceptor recruitment and capitalize on opportunities for students, faculty, and pharmacists to share educational venues and communication vehicles.
- *Schools and colleges should implement or refine formal communication vehicles to share information about experiential education opportunities and responsibilities between schools/colleges and their respective local/state associations.*
- *Stakeholders (schools, students, pharmacy practitioners, pharmacy organizations, pharmacy administrators) should work to identify and/or create information systems that provide for ready access to patient information among care providers including health systems, primary care, and pharmacists, across varying venues of practice.* This information will thus provide measurable data without breaching patient confidentiality.
- *Stakeholders (schools, students, pharmacy practitioners, pharmacy organizations, pharmacy administrators) should work with legislators and pharmacy boards to remove impediments to the achievement of the "Pharmacy Practice in 2015" vision statement and address preceptor training in their state practice acts.* These efforts should include working with NABP to update model laws and regulations to ensure the scope of pharmacy practice emphasizes quality patient outcomes.

Excellence in precepting

All preceptors in need of skill growth can benefit by dialoguing with and observing practice behaviors of preceptors who are generally recognized for their precepting and practice excellence. Sometimes it is not just one preceptor but a group working together who maintain an excellent practice site.

<u>Recommendation 8</u>: ***Define and recognize exceptional sites and preceptors.***

Preceptors love to be recognized when they do a good job. Other preceptors can learn from excellent preceptors as they work on their own to achieve precepting excellence. Preceptors who do not work to attain excellence may not enjoy teaching. Experiential educational directors can help preceptors recognize whether they enjoy clinical teaching or find it difficult.

Potential strategies for achieving Recommendation 8 include:

- *Define "excellence" in practice. Another part of the APPI is actively involved in this strategy.*
- *Create a system to recognize "best practice" preceptors. Communicate to all preceptors strategies employed by "best practice" preceptors.* This information would ideally be part of a preceptor education program.

Measuring quality in experiential education
Schools can measure quality in experiential education, but can also teach students and preceptors tools that will help them measure and improve quality of practice within their work site.

Recommendation 9: ***Ensure quality assessment and improvement tools are used as a catalyst to drive practice improvements across all facets of pharmacy education.***

Involving preceptors and students in the experiential education quality assessment process is vital. Not only can they provide needed feedback and creativity, but they can also learn the tools of the quality measurement process. Such tools may be useful for initiating practice quality improvement.

Potential strategies for achieving Recommendation 9 include:

- *Convene a summit of stakeholders in experiential education to define common goals and work toward quality assurance on a continuous basis.*
- *Engage groups of representative stakeholders to make decisions about employing quality assurance and assessment strategies in the experiential education program on a continuous basis.*
- *Train all faculty, preceptors, and experiential program staff in the use of assessment tools as a means toward continuous quality improvement in pharmacy education and as part of a supportive network for pharmacy students.*
- *Collaborate with leaders in quality and health professions education to define core elements for continuous quality improvement and promote their integration into schools and colleges of pharmacy planning and assessment activities.*

The Summit provided a process for organizing individuals to achieve consensus and develop explicit action plans. As a result of the small group processes, participants committed to being responsible for working on specific aspects of their group's plans, which have been captured as strategies to achieve the recommendations described above. Consequently, the Summit Implementation Team recommends that AACP follows up with these individuals as soon as possible to fulfill the goals of the Summit and build on the momentum AACP created through the Summit. Furthermore, the team recommends that AACP consider appointing task forces or committees, partnering with pharmacy practice and other organizations as appropriate, and working to strengthen relationships with other health professional organizations and consortia.