

Audiology Education Summit Update

**Presented at the 2005 Meeting of the
Council of Academic Programs in Communication Sciences and Disorders**

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A forum was held at the 2005 meeting of the Council of Academic Programs in Communication Sciences and Disorders presenting an update on the Audiology Education Summit held in Fort Lauderdale, Florida in January, 2005. Below are excerpts of the final report from that conference that was cosponsored by the American Speech-Language-Hearing Association, the Council on Academic Accreditation, and the Council of Academic Programs in Communication Sciences and Disorders. The final report was written by members of the Summit Advisory Committee -- Dennis Burrows, Stephanie Davidson, Vic Gladstone, and Neil DiSarno. Included below are the purposes and goals of the Summit, background information and the Summit planning process, the format and design of the conference, the topics and questions discussed at the meeting, and a summary of the discussions that followed.

Executive Summary

Through a joint initiative of the American Speech-Language-Hearing Association (ASHA), the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA), and the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD), the conference "Audiology Education Summit: A Collaborative Approach" was held on January 13–15, 2005, at the Westin Hotel in Fort Lauderdale, Florida.

This 2½-day Summit assembled academic and clinical educators from clinical doctoral programs in audiology and representatives from clinical facilities and related professional organizations. The purpose of the Summit was to identify and describe indicators of quality that could be used to assist programs in developing, evaluating, and enhancing clinical doctoral education in audiology and to provide data, information, and direction sufficient to assist the CAA in drafting revised standards for accreditation. The Summit was designed to allow participants to reach general levels of agreement on the characteristics of clinical doctoral programs in audiology that would optimally prepare students to become desirable, employable professionals. Although the *process* used to reach agreement was structured in advance, there was no attempt to predetermine specific conference *outcomes*.

The Summit focused on four major topic areas: (a) Academic Curriculum: Breadth and Depth, and Students; (b) Clinical Curriculum: Breadth and Depth; (c) Faculty, Resources, and Assessment; and (d) Interactions: Academic and Clinical Relationships. Individual speakers made brief presentations on each of the four topic areas to provide an overview of the issue and to pose questions to the conference participants. Following each presentation, the participants divided into small breakout groups, which were predetermined to achieve a balance of academic faculty, clinical faculty, clinical practitioners, small and large institutions, and various work settings. The groups were asked to identify characteristics or indicators of a quality clinical doctoral program and to categorize these characteristics as Essential (or required), Above Essential (desirable), or Below Essential for a quality program.

Conference participants were able to agree upon many Essential elements of quality doctoral education; these Essential elements are described within the full conference report along with the salient discussion that occurred during the decision making process. On many issues related to quality doctoral education in audiology, the general level of agreement among conference participants was notable. Participants also identified a number of topics related to doctoral education in audiology that warrant additional consideration at future meetings or conferences. These topics are identified and discussed in the full conference report.

At the conclusion of the Summit, participants indicated a desire for a second Audiology Education Summit specifically designed to explore and address issues related to the clinical education of audiology doctoral students. Issues such as qualifications of sites, qualifications of supervisors/mentors/preceptors, credentialing, reimbursement, and stipends were specifically targeted as warranting further discussion. At the time of the writing of this report, the three sponsoring organizations (ASHA, CAA, and CAPCSD) and the American Academy of Audiology have agreed to conduct an Audiology Education Summit II in early 2006 with a specific focus on these clinical education issues.

Introduction

In light of the expanding scope of practice for the profession of audiology, the increasing need for hearing health care services, and changes in the requirements for entry into professional practice in audiology, it is critical that the audiology community examine all components of the academic and clinical education and preparation of audiologists at the doctoral level. Thus, through a joint initiative of the American Speech-Language-Hearing Association (ASHA), the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA), and the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD), the conference "Audiology Education Summit: A Collaborative Approach" (Summit) was held on January 13–15, 2005, at the Westin Hotel in Fort Lauderdale, Florida.

This 2½ day conference was designed to assemble academic and clinical educators from university clinical doctoral programs in audiology and representatives from clinical facilities and related professional organizations to identify and describe indicators of quality for clinical doctoral education programs. It was hoped that a reasonably high level of agreement could be reached on the quality indicators.

The conference participants (see Appendix H) included 90 individuals representing approximately 47 education programs, eight clinical sites, and the Summit co-sponsors. Invitations to the Summit were extended to the following groups, organizations, and facilities:

- All audiology program academic and clinical directors
- Educational audiologists in large school systems
- Major hospitals and student clinical sites
- National Council of State Boards of Examiners
- ASHA Special Interest Divisions 6 (Hearing and Hearing Disorders: Research and Diagnostics); 8 (Hearing Conservation and Occupational Audiology); 9 (Hearing and Hearing Disorders in Childhood); 10 (Issues in Higher Education); and 11 (Administration and Supervision)
- Academy of Dispensing Audiologists
- Academy of Rehabilitative Audiology
- Accreditation Commission for Audiology Education
- American Academy of Audiology
- Educational Audiology Association

Summit Purposes and Goals

The purpose of this Summit was to identify and describe indicators of quality that could be used to assist programs in developing, evaluating, and enhancing clinical doctoral education in audiology. The goals of the Summit were to provide a general summary of the issues discussed; to provide data, information, and direction sufficient to assist CAA in drafting revised standards for accreditation; and to serve as a guide for education programs in developing, evaluating, and enhancing clinical doctoral education in audiology.

Background and Summit Planning

At its January 2004 meeting, the ASHA Executive Board (EB) appointed an Ad Hoc Subcommittee on Audiology Education to develop a strategic initiative related to the training of students in doctoral audiology programs. The subcommittee included Neil Shepard and Stephanie Davidson from the EB, and ASHA staff members Vic Gladstone, Pam Mason, Loretta Nunez, and Patti Tice. After discussion and collaboration with the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA), the group prepared a report to the EB and presented a resolution for ASHA to co-sponsor (with CAA) a conference on the education of audiologists. The EB passed the resolution in April 2004 to support the planning for the conference, the topics of discussion, and the outcomes for the conference, which were to be further developed by an advisory committee.

An advisory committee (Committee) was established to include three representatives each from ASHA, the CAA, and the Council of Academic Programs in Communications Sciences and Disorders (CAPCSD). The American Academy of Audiology (AAA) also was invited to participate in the planning for the conference but did not accept the invitation. Each of the named organizations identified representatives to be members of the Committee and included the following (see Appendix B):

Dennis Burrows, Committee Chair (CAA)
Stephanie Davidson (ASHA)
Neil DiSarno (CAPCSD)
Vic S. Gladstone (ASHA)
Larry Higdon (ASHA)
James Mahshie (CAPCSD)

Lisa Lucks Mendel (CAPCSD)
Loretta Nunez (ASHA staff ex officio)
George Purvis (CAA)
Neil Shepard (ASHA)
Richard Talbott (CAA)
Patti Tice (ASHA staff ex officio)

The development of the Committee and the leadership of the group during the planning meetings were the responsibility of the CAA and ASHA EB appointees. The final topics of discussion at the conference and the definition of the final outcomes of the conference were the responsibility of the Committee itself. The advisory committee had three face-to-face planning meetings and a series of conference calls in 2004 to plan the format and design of the Summit and to identify specific topics and questions to be addressed at the conference. The ASHA National Office staff assisted in the logistics for the meetings of the advisory committee and the conference, and ASHA supported the activities by providing partial funding to cover expenses for the members of the Committee and by providing a meeting location for each of the three planning meetings. ASHA also provided support for the conference to include advertising and registration organization, record keeping, and the production of the conference report with the assistance of the advisory committee.

Summit Format and Design

The Committee developed an agenda for the 2½ day Summit (see Appendix A) that included invited presentations, small breakout sessions, and large group discussions. A professional facilitator was engaged to provide overall direction and facilitation during the entire meeting. The length of the conference allowed time for discussing designated topics and reaching general levels of agreement within small groups and plenary sessions. ASHA continuing education credits also were offered to attendees who were present for the entire conference.

The Summit opened with a session to present a broad overview of the purpose of the conference and the expected outcomes for the meeting, and to review the historical information about the various activities, discussions, and conferences that have been held since 1987 regarding the development of clinical doctoral education in audiology.

The conference also included an opportunity for attendees to participate in a poster session at the close of the first day of the meeting. This session was intended for participants from academic programs and clinical sites to share innovative, unique, and creative ways in which they engage audiology students during the clinical doctoral program. Posters were required to include content that supported the main themes or topic categories of the conference. A total of 13 individuals and organizations presented posters (see Appendix G), which were well received by the attendees.

The advisory committee had determined to limit the content of the conference to four major topic areas: Academic Curriculum: Breadth and Depth, and Students; Clinical Curriculum: Breadth and Depth; Faculty, Resources, and Assessment; and Interactions: Academic and Clinical Relationships. The committee had invited individual speakers to make brief presentations on each of the four major topic areas to provide an overview of the issue and to pose questions to the group to stimulate their thinking and “whet their appetite” for the subsequent small group breakout sessions. Following each presentation, the participants then divided into small breakout groups, which were predetermined to achieve a balance of academic faculty, clinical faculty, clinical practitioners, small and large institutions, and various work settings. The groups discussed specific questions developed by the advisory committee for each topic area, which were randomly assigned to each group, related to the preceding invited presentation (see Appendix D for a list of the breakout group assignments). Each group was assigned a facilitator and a recorder who had received specific training the evening before the conference on the process to be followed during the breakout sessions. The decision-making process followed during the breakouts and the large group sessions is described in the following section of this report.

On the last half-day of the Summit, the advisory committee provided to each of the participants an unedited preliminary written summary of the conference, which the committee had prepared following the last session on Saturday. The summary included characteristics proposed as “below essential,” “essential,” and “above essential” by each of the breakout groups, as well as any comments from the plenary sessions. After reading the preliminary summary, the full group had an opportunity to offer comments on any of the information provided to clarify intent and to aid the writers of the final conference proceedings. Several note-takers recorded the specific comments and

general themes of the discussion. At the conclusion of the conference, participants were cautioned regarding the use of the draft summary because it would be difficult to interpret and apply some of the statements made in the summary apart from the context of the small and large group discussions.

Decision-Making Process

The conference was designed to achieve general levels of agreement on optimal characteristics of quality clinical doctoral programs in audiology that prepare students to become desirable, employable professionals. Although the process used was structured in advance, there was no attempt to predetermine specific outcomes. The process was designed to promote and encourage general levels of agreement within defined breakout sessions and plenary sessions.

The steps followed during each of the breakout sessions are described below. Approximately 1¼ hours were allowed for each of the breakout discussions. The groups were asked to identify characteristics or indicators of a quality clinical doctoral program and to categorize these characteristics as Essential (or required), Above Essential (desirable), or Below Essential for a quality program. Participants were invited to “take off their hat” as a program director or academic or clinical faculty member, and to envision the characteristics a quality doctoral program would need in order to produce the “ideal audiologist,” rather than identify only the characteristics that their individual program, or one in which the participant may be affiliated, might have.

Step 1: Brainstorm

- Under the direction of a facilitator, small breakout groups (7–8 members each) brainstormed to list characteristics or indicators that addressed the specific predetermined questions. Each group named a scribe to list the characteristics on a flip-chart and a time-keeper to keep the group on schedule and complete the assignment. Facilitators were instructed to encourage participants to share *any* elements (i.e., characteristics that may be deemed as too low or too high at first glance), to indicate that there was no single correct answer to the questions posed, to encourage a range of attributes, and to keep the discussion moving.

Step 2: Vote

- The group then categorized the identified characteristics or indicators into three “bins” (Essential, Above Essential, Below Essential). The group voted by a show of hands which indicators fit into which bin. If all were in general or “reasonable agreement” (defined as at least a simple majority) about the indicator, the group proceeded to the next item.

Step 3: Discuss

- The group discussed any issues that needed further clarification or a specific rationale provided for its decisions. If necessary, groups could then re-vote on those issues to place the characteristic in a different category.

Recorders for each group then listed the characteristics or indicators on a standard reporting template (see Appendix C) and captured, to the best of their ability, any rationale for the indicators listed and recorded the bin designation for each characteristic as well as the vote, if it was not unanimous.

Compilation

Following the completion of each breakout session, the facilitators and recorders reviewed the notes and finalized the report for the group on that specific topic. If more than one group discussed the same question, members of the advisory committee then compiled the responses from each group and consolidated items in the categories of Essential, Above Essential, and Below Essential. If an element was identified by different groups but categorized in a different bin, this issue was highlighted and used as a point of discussion during the summary in the large group.

Group Summary Reports

Following each of the breakout sessions, the Summit participants reconvened as a whole. One of the facilitators for each breakout group reported the results of his or her individual group's discussion. The facilitator highlighted any areas where there was not agreement. The meeting facilitator and a member of the advisory committee moderated the large group discussion after each summary report to determine if any items needed further clarification or discussion on any of the characteristics/indicators or on any of the bin designations.

Conference Documentation

As noted above, at the conclusion of the meeting all participants were provided an unedited preliminary summary of the Summit discussions. This document listed the various Essential indicators of quality identified by the breakout groups on which there was general agreement, issues identified as needing further discussion, and a listing of additional issues identified by the large group in open forum for possible future discussion.

An ad hoc report writing group was identified from among the members of the advisory committee to prepare this report and included one representative from each of the three sponsoring organizations (ASHA, CAA, and CAPCSD). This group, which included Dennis Burrows (CAA), Stephanie Davidson (ASHA), and Neil DiSarno (CAPCSD), drafted the Summit report to ensure that the resultant documentation accurately and concisely represents the outcomes of the conference and provided it to the full advisory committee for final approval. A preliminary report was provided by two of the members on the Committee who represented CAPCSD at the CAPCSD conference in April 2005 in

Scottsdale, Arizona. This final report is being disseminated to all Summit participants and to the three sponsoring organizations for use and distribution as they deem appropriate for their constituents.

Summit Presentations

As noted above, the advisory committee invited individual speakers to make brief presentations on each of the four major topic areas to provide an overview of the issue and to pose questions to the group to stimulate their thinking for the subsequent small group breakout sessions. In addition, advisory committee Chair, Dennis Burrows, made an opening presentation and provided background and historical information about the various activities, discussions, and conferences that have been held since 1987 regarding the development of audiology education and described the outcomes expected of the Summit.

Speakers for the four major topics areas were as follows:

- Academic Curriculum and Students—Dianne H. Meyer, PhD, Rush University
- Clinical Curriculum—Gary P. Jacobson, PhD, Vanderbilt University Bill Wilkerson Center
- Faculty, Resources, and Assessment—Robert E. Novak, PhD, Purdue University
- Interactions: Academic and Clinical Relationships—Neil J. DiSarno, Missouri State University (substituting for Lisa Lucks Mendel, who had prepared the presentation but was ill)

Conference Topics and Questions

The participants discussed the following questions during the Summit, which had been developed by the advisory committee during its face-to-face and conference call meetings.

I. ACADEMIC CURRICULUM: BREADTH AND DEPTH AND STUDENTS

Breadth and Depth

1. What are the characteristics of an optimal academic curriculum that addresses the full breadth and depth of the scope of practice?
 2. What are the research competencies expected of graduates of an optimal clinical doctoral program?
 3. Within the academic curriculum, how does the optimal clinical doctoral program ensure that cultural competence is attained by graduates of its program?
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Students

4. What are the desirable characteristics that students entering clinical doctoral audiology programs should possess?
5. What is the optimal size of the student cohort?

II. CLINICAL CURRICULUM: BREADTH AND DEPTH

1. What are the characteristics of optimal clinical experiences (e.g., clinical practicum, grand rounds, externships) that address the full breadth and depth of the scope of practice?
2. What are the qualifications of the off-campus clinical supervisors/preceptors in a quality clinical doctoral program in audiology?
3. What are the optimal methods used for clinical supervisors to communicate appropriate feedback?
4. What are clinical supervisors' expectations of students when placed in off-site clinical experiences?

III. FACULTY, RESOURCES, AND ASSESSMENT

Faculty

1. What is the optimal number (critical mass) of on-campus faculty for a quality clinical doctoral program in audiology?
 2. What is the optimal balance and use of on-campus research faculty and on-campus clinical faculty in a quality clinical doctoral program in audiology?
 3. What are the qualifications of the on-campus academic (teaching/research) and clinical (supervising) faculty in a quality clinical doctoral program in audiology? (Faculty members could serve in both academic and clinical roles.)
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Resources

4. What are the optimal resources, including budget elements, that contribute to a quality clinical doctoral program in audiology?
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Assessment

5. What are the elements of assessment of student acquisition of knowledge and skills in a quality clinical doctoral program in audiology?
6. What are the elements of program assessment for quality clinical doctoral programs in audiology?

IV. INTERACTIONS: ACADEMIC AND CLINICAL RELATIONSHIPS

1. What are the characteristics of optimal interactions and relationships between the academic and clinical curricula?
2. What are the characteristics of optimal interactions and relationships between the clinical doctoral program and off-site clinical experiences?
3. What are the characteristics of optimal interactions and relationships between the research and clinical training?
4. What are the characteristics of optimal interactions and relationships between the university and the community?

DISCUSSION SUMMARIES

The following summary of the discussions regarding each of the questions considered during the Summit includes the specific characteristics or elements that the groups identified, and on which they had at least general agreement, as **Essential** for a quality clinical doctoral program in audiology. Following the characteristics is an explanation of the salient points made during the discussion related to that particular Essential element. If the groups identified any characteristics as being **Above Essential** for a quality doctoral program, that information also is included.

There were some instances, when multiple breakout groups considered the same question, in which there were variations among the groups in the level of agreement or the specific categorization of characteristics as Essential or Above Essential. In some of these cases, the full group was not able to reach resolution on these apparent inconsistencies. Any such variations are addressed in the Salient Discussion section.

Further, if a particular topic or question was so complex or a discussion so diverse that the breakout groups or full group could not reach general levels of agreement, the issue was targeted for further consideration at future meetings. All of these topics are noted in the following section as Issues for Future Discussion.

I. ACADEMIC CURRICULUM: BREADTH AND DEPTH AND STUDENTS

Breadth and Depth

- 1. What are the characteristics of an optimal academic curriculum that addresses the full breadth and depth of the scope of practice?*

Summit participants agreed that the following characteristics are Essential and Above Essential elements of the academic curriculum in a quality doctoral program:

Essential

- The academic curriculum covers the breadth of the scope of practice, but not all aspects of the scope of practice need to be covered to the same depth.
- The academic curriculum fully integrates science, research, and practice.
- Laboratory experiences are part of the curriculum, where appropriate.
- The curriculum is regularly reviewed to ensure currency and relevance to program goals.

Above Essential

- Program specialization is available, but not at the expense of the breadth of the student experience.

Salient Discussion

Essential

- Clinical doctoral programs in audiology ordinarily require a period of 4 years to adequately prepare students to cover the breadth and depth of the Scope of Practice in Audiology.

Salient Discussion

The vast majority of summit participants believed that a 4 year clinical doctoral program is needed to prepare students for professional practice in audiology. Participants did acknowledge that data do not exist to indicate that students trained in 3 year programs are less competent than students trained in 4 year programs. They also acknowledged that program length alone does not ensure adequate student outcomes. However, summit participants felt that there are a number of compelling reasons for requiring a 4 year program, including the following:

- Four years is necessary to educate students to meet the full breadth and depth of the scope of practice.
- Students gain confidence and maturity when integrating knowledge and skills over 4 years.
- Clinical doctoral programs must look significantly different than master's programs with a clinical fellowship.
- A 4 year doctoral program is required to put the profession on an equal footing with other "doctoring" professions.

Participants spent a significant amount of time discussing how best to define a year (e.g., calendar year [12 months], academic year [9 months], semesters, weeks), but no final definition was determined. Although it was not part of the question posed, two small groups specifically indicated that the 4th year should be devoted to a full-time externship.

3. What are the research competencies expected of graduates of an optimal clinical doctoral program?

Summit participants agreed that the following research requirements are considered Essential and Above Essential in clinical doctoral programs:

Essential

- Student research experiences should vary depending on the specific clinical doctoral degree obtained (e.g., AuD or PhD).
- Research should be integrated into courses and experiences throughout the curriculum.
- Students must have the knowledge and skills needed to be critical consumers of research.

- Students must have the knowledge and skills needed to use evidence-based practice.
- All students should participate in a “research-focused” project.

Above Essential

- Programs should provide opportunities for AuD students to complete independent research projects.

Salient Discussion

An important area of small group discussion focused on the fact that student research competencies are likely to vary from program to program for the following reasons: (a) different degrees may be offered (AuD vs. PhD), (b) the role of research will vary according to a particular university’s mission, and (c) degree programs may be defined differently across universities (professional degrees vs. graduate degrees). However, the small and large groups agreed that all clinical doctoral students in audiology must be prepared to be “critical consumers” of research (i.e., students must understand the scientific method, study design, research ethics, and statistics) and must have the knowledge and skills needed to use evidence-based practice (i.e., students must be able to ask clinical questions and then must be able to evaluate the literature related to those questions). It was also generally agreed that all students should participate in research at some level (e.g., case study, literature review and synthesis, participation in faculty research, etc.), and that students in clinical PhD programs must engage in independent research.

Given the complexities of the issue, Summit participants specifically targeted the area of expected research competencies of AuD students as one for further discussion.

4. Within the academic curriculum, how does the optimal clinical doctoral program ensure that cultural competence is attained by graduates of its program?

Summit participants agreed that the following mechanisms are Essential or Above Essential for ensuring that cultural competence is attained by the graduates of a quality clinical doctoral program:

Essential

- Issues related to cultural competence are infused throughout the curriculum.
- Instruction in cultural competence should comprise both social and professional issues.
- The program takes measures to recruit a diverse student body.

Above Essential

- The program offers a course specific to cultural issues in communication sciences and disorders.

Salient Discussion

The small group discussing this question originally suggested that the term *cultural competence* be changed to *cultural awareness*. This recommended change sparked an intense response during the large group discussion period. Several participants expressed serious reservations concerning the change, stating that the discipline had moved well beyond cultural awareness and that cultural competence should be the goal. Because most large group participants tended to agree, the question remains in its original form in this report.

Individuals in both the small and large groups indicated the need to consider the demographics of the area in which the program is located. Programs in regions of the country with limited diversity will be less likely to have a diverse student body or to see diverse patient populations in their on-campus clinics. Participants cautioned that this, in and of itself, should not be considered inappropriate as long as additional mechanisms are in place to ensure cultural competence in program graduates.

Students

5. What are the desirable characteristics that students entering clinical doctoral audiology programs should possess?

Summit participants agreed that the following characteristics are Essential or Above Essential for students entering clinical doctoral programs:

Essential

- prerequisite preparation in math and the basic sciences
- personal characteristics (e.g., maturity, professionalism, flexibility, cultural sensitivity, responsibility for learning, respect for others) to ensure success in the classroom and clinic
- skills (e.g., oral and written communication, critical thinking, problem solving) to ensure success in the classroom and clinic
- ability to meet the essential functions of an audiologist (i.e., possess the requisite physical and sensory abilities) as defined by the program
- awareness of the expectations and demands (financial, emotional, commitment) of a clinical doctoral program

Above Essential

- facility with more than one language

Salient Discussion

The small group discussion focused on the characteristics that are necessary for students to be successful in their clinical doctoral programs and later as practicing professionals. As noted above, summit participants articulated a number of personal characteristics and skills that students should possess. Although participants spent a considerable amount of time discussing how each of these characteristics and skills might best be measured, no consensus was reached on the optimal measurement methods.

Participants indicated that students in clinical doctoral programs must be able to meet the essential functions of an audiologist (i.e., possess requisite physical and sensory abilities), but caution was expressed by those in the large group because essential functions have not been well defined by the profession. Participants also briefly discussed educating students with disabilities (particularly those with hearing loss), but this topic was determined to be beyond the scope of this Summit.

Small and large group participants generally agreed on the need for students to possess a strong basic science background to include courses in math and statistics as well as the physical, behavioral, biological, and social sciences. There was general agreement that it was not Essential for students to possess a background in communication sciences and disorders, provided the graduate program had mechanisms for dealing with students who enroll without this background.

Even though summit participants agreed on some basic aspects of undergraduate preparation (e.g., more math and science needed), participants expressed the need to explore the area of undergraduate preparation in more detail, particularly related to the specific prerequisite coursework needed from inside and outside of the discipline.

6. What is the optimal size of the student cohort?

Summit participants could not come to agreement on the optimal size of the student cohort in a quality clinical doctoral program.

Salient Discussion

Although the small and large group participants believed that a “critical mass” of students is necessary to create a dynamic learning environment and to allow the program to succeed financially, no agreement on the minimum size of the student cohort could be reached. Participants also were not able to determine a maximum size of the student cohort, as it was believed that the maximum size would be

dependent on a host of variables such as the size of the faculty, the number and variety of practicum sites available to the students, and the overall resources of the program. Small group participants emphasized the need to discuss creative supervision models to increase clinical practicum efficiency, giving due consideration to professional ethics and federal and state guidelines.

Because agreement could not be reached on the optimal size of the student cohort, Summit participants targeted this area for future consideration.

II. CLINICAL CURRICULUM: BREADTH AND DEPTH

1. *What are the characteristics of optimal clinical experiences (e.g., clinical practicum, grand rounds, externships) that address the full breadth and depth of the scope of practice?*

Summit participants agreed that the following items were Essential to providing an optimal clinical experience for clinical doctoral students in audiology. Above Essential items were viewed as worth pursuing, but not absolutely necessary.

Essential

- The clinical practicum should promote a progression of student skills and didactic instruction leading to independence. Supervision should reflect this progression and be commensurate with the clinical skills of the student.
- Clinical practicum sites should be adequately diverse to cover the full breadth and depth of the scope of practice.
- Students should begin obtaining clinical experience during their first semester commensurate with their background and knowledge.
- Student skill development should be regularly monitored, with regular feedback provided to students, to promote clinical skills. Clinical skill expectations should be explicit at every clinical training phase.
- Clinical practicum opportunities should be provided that allow sufficient practice and repetition to ensure skill mastery.
- Clinical experiences should include instruction in ethical practice and provide guidance regarding practitioner limitations and obligations.
- Evidence-based practice should be integral to clinical practicum experiences.
- Opportunities beyond clinical practicum (grand rounds, case studies, staffing, etc.) should augment the experience.

Salient Discussion

There was overwhelming agreement that it was important that the clinical practicum and didactic instruction reflect the distribution of activities in a contemporary audiology practice. Further, students should advance through clinical practicum not on the basis of accumulated clinical *hours* but on the acquisition of the necessary clinical *skills*. The acquisition of these skills should be monitored closely and documented, and feedback should be provided to the student. Initial supervision should be intense (i.e., 100% face-to-face), with a gradual progression to less face-to-face supervision and eventual independence.

The group agreed that identification of quality external practicum sites is critical to the training of audiologists. To this end, some discussion ensued regarding the recognition and "accreditation" of clinical sites. The group did not reach agreement on whether there should be an "accrediting" process for practicum sites. This topic was targeted as one for further consideration at future meetings.

Above Essential

- didactic and clinical opportunities for specialized skills and knowledge (intraoperative monitoring etc.)

2. *What are the qualifications of the off-campus clinical supervisors/preceptors in a quality clinical doctoral program in audiology?*

The topic of supervisor/preceptor qualifications provided the opportunity for a discussion about minimum educational, experiential, and credentialing requirements. Additionally, supervisor/preceptor attitude and/or readiness for clinical teaching were addressed. Methods for compensating and evaluating clinical supervisors/preceptors were discussed.

Summit participants agreed that the following qualifications are Essential and Above Essential for off-campus clinical supervisors/preceptors in a quality clinical doctoral program:

Essential

- Regarding personal characteristics, supervisors/preceptors should:
 - demonstrate a desire to teach and/or mentor a student clinician;
 - have the necessary interpersonal and communication skills for mentoring a student;
 - have the same interpersonal, counseling, and communication skill set required of students; and
 - have a clear understanding of the needs and role of a student clinician.
- Supervisors/preceptors should hold licensure and/or registration when required by state law.
- Non-audiology supervisors/preceptors should have the appropriate licensure, degree, and/or certification necessary for practice in his or her own profession.
- Supervisors/preceptors should provide evidence of continuing professional development.
- Supervisors/preceptors should be active professionally by belonging to professional organizations and participating in professional activities and committees.
- Supervisors/preceptors should have some training in clinical supervision.
- Supervisors/preceptors should be regarded highly in the professional community.
- Supervisors/preceptors should, in the future, have a doctoral degree, when sufficient numbers of practitioners hold the doctoral degree, but allowances for truly outstanding "master" clinicians should be made.
- Supervisors/preceptors must adhere to the professional code of ethics.
- Supervisors/preceptors should be compensated either monetarily or in some other non-monetary form (adjunct faculty status, library/university privileges, workshops, etc.)

Salient Discussion

A significant portion of the discussion regarding supervisor/preceptor qualifications revolved around the interpersonal skills of the individual. It was important to the group

that supervisors/preceptors have well developed interpersonal skills and the maturity necessary to assume the role of a mentor. These individuals should be chosen on the basis of their desire, commitment, and passion for clinical teaching. Professional reputation and ethics should be beyond reproach and, in regard to professional activity, extraordinary. A clear understanding of students and supervision is critical to a successful clinical practicum.

Group participants varied in their perceptions of the qualifications of individual supervisors/preceptors. At a minimum, supervisors/preceptors need to hold the appropriate licenses for the jurisdiction in which they practice. National certification for audiologists, while desirable, was deemed as Above Essential for supervision. There was no clear consensus regarding a minimum number of years of postgraduate experience necessary to be a supervisor/preceptor. However, it was acknowledged that recent graduates would not have the necessary clinical skills and expertise needed to be effective supervisors. The eventual requirement that supervisors/preceptors hold the doctoral degree was overwhelmingly agreed upon. It was noted that there needs to be a delay in implementing this recommendation since there may not be adequate numbers of qualified doctoral level practitioners.

The continuing education of supervisors/preceptors was deemed important. Adequate instruction in the specific university supervision requirements and needs (i.e., paperwork, evaluation tools, etc.) as well as general instruction in supervision was recommended. While it was not agreed that an external body "rating" supervisors was necessary, it was agreed that a method of evaluating supervisor skills should be developed.

Above Essential

- national certification (ASHA and/or American Board of Audiology)
- an external body to evaluate and rate external supervisors/preceptors
- specialty certification or recognition (audiologists and non-audiologists)

3. What are the optimal methods used for clinical supervisors to communicate appropriate feedback?

Summit participants agreed on the following Essential methods for clinical supervisors to communicate feedback in a quality clinical doctoral program:

Essential

- formalized skill assessment tool developed by the program that is consistently applied across all practicum sites
- periodic informal contact during clinical experiences
- regular face-to-face meetings with students
- an individual from the university dedicated to communications with off-site supervisors/preceptors
- a formalized method of assigning clinical grades
- a formalized program-to-practicum site and practicum site-to-program feedback tool

- a formalized assessment system at midterm and end-of-term (used to evaluate both students and the practicum site)

Salient Discussion

Summit participants believed that the process of providing feedback to the student and the practicum site (and vice versa) should begin with clear instructions provided by the program, including a clear delineation of the needs and skills of the student. It was noted with some fervor that feedback to the students is critical. Daily feedback to a student was optimal, but methods such as reflective journaling and chat rooms could serve as valuable tools. It was suggested that while a student is on-campus, daily contact is Essential whereas more formal assessments/discussions of student clinicians should ideally take place monthly.

The use of formalized assessment tools was deemed critical to communication between students and practicum supervisors/sites. The group did not describe precise instruments, but believed that one developed by the program that reflects the different levels of student skills and knowledge is necessary. Additionally, a method of remediation describing the levels of remediation would be helpful to practicum sites, students, and the university.

Finally, it was acknowledged that there would be a need for flexibility on behalf of the program. Practicum sites may differ in their ability to accommodate students as well as provide the level of documentation required.

Above Essential

- program representatives visiting all practicum sites where students are currently placed

4. What are clinical supervisors' expectations of students when placed in off-site clinical experiences?

The Summit participants modified the above question when discussing this issue to include the expectations of all involved (university, students, and practicum site). The expectations, not surprisingly, overlapped among all parties. The revised question was "What are the expectations of students, supervisors/preceptors, and universities for off-site clinical experiences?"

Essential

- Supervisors/preceptors should understand that those assigned for practicum are students and appreciate the tentativeness and peculiarities of a clinician in training.
- The university is responsible for the placement process.
- There is clear, frequent, and documented communication between the university and the supervisor/preceptor.
- There is clear, frequent, and documented communication between the student and the supervisor/preceptor.
- There is clear, frequent, and documented communication between the university and the student.

- The supervisor/preceptor expects the student to arrive on site with solid audiological skills and knowledgeable about procedures.
- Placements are selected to provide exposure to the breadth of the scope of practice, and this is communicated to the students.
- The supervisor/preceptor expects the student to understand the professional and social requirements for the practicum site (e.g., dress code, punctuality, confidentiality requirements, patient priority, workload, protocols, etc.).
- The supervisor/preceptor should expect the student to:
 - demonstrate initiative,
 - accept constructive feedback,
 - be open to learning new methods,
 - be able to self-evaluate,
 - problem solve/troubleshoot,
 - be responsible for learning,
 - make and learn from mistakes,
 - be appreciative of the preceptor's/supervisor's time and expertise,
 - communicate needs,
 - be collegial, and
 - be a program ambassador.
- The supervisor/preceptor communicates expectations to the student via a written job description and through regular formal and informal communication.

Salient Discussion

Much of the discussion of this issue began with a description of the level of student preparation for an off-site clinical placement. The amount of professional modeling provided by the program (in-house) and the level of audiological skills taught were addressed. Whether a program models appropriate professional behavior or expects the practicum site to teach these skills was not answered. Nevertheless, participants agreed that programs should provide good professional role models. It was clear, however, that the program was responsible for the student's acquisition of the necessary audiological skills for the placement.

The various legal and logistical issues (i.e., insurance, licensure, transportation, forms, etc.) were considered to be the responsibility of the program. On the other hand, the university should expect the supervisor/preceptor to understand the student's role and their responsibility to that student.

Above Essential

- a portfolio of the student's level of knowledge and skills

III. FACULTY, RESOURCES, AND ASSESSMENT

Faculty

1. *What is the optimal number (critical mass) of on-campus faculty for a quality clinical doctoral program in audiology?*

Summit participants agreed on the following Essential characteristics of a quality clinical doctoral program:

Essential

- 7–10 full-time equivalent (FTE), which includes academic and clinical faculty
- 75% of the faculty must be full-time

Above Essential

- at least one person on the faculty with clinical and research expertise in each area of the scope of practice.

Salient Discussion

For the purposes of this question, *on-campus faculty* was defined as “those who would be invited to participate in faculty meetings.” The small group discussion focused on the need to address the breadth and depth of the scope of practice as well as the full range of responsibilities of faculty (scholarship responsibilities, student advising and mentoring, program development and administration, etc.).

Although the large group generally was comfortable with the small group’s conclusion that 7–10 FTE faculty are essential, cautions were expressed about trying to assign an optimal on-campus FTE without considering other program characteristics (e.g., Carnegie classification of the university, number of students, mission and goals of the program, specializations provided, etc.). It was generally agreed that 75% of the faculty must be full-time in the program, which can ensure consistency and continuity of instruction.

2. *What is the optimal balance and use of on-campus research faculty and on-campus clinical faculty in a quality clinical doctoral program in audiology?*

Summit participants agreed on the following Essential characteristics related to a balance of on-campus research and clinical faculty in a quality clinical doctoral program:

Essential

- Core faculty defined as those responsible for setting the curriculum should possess both clinical expertise and research expertise.
- Core clinical faculty should be provided the same security, rights, and privileges as other department faculty in order to assure program stability and continuity.

- Both clinical audiology expertise and teaching expertise in sciences is the responsibility of the on-campus faculty.

Salient Discussion

The small group discussed the fact that there are educational models in which both clinical doctorates and research doctorates are offered and that this may influence the optimal balance of core faculty. It was determined that in many situations the university mission will dictate the faculty mix. It was agreed that in order to ensure their commitment to the program and the program's commitment to its faculty, all full-time faculty should be provided the same security, rights, and privileges as other department faculty. With regard to the use of off-campus faculty for instruction, it was agreed that the optimal program should provide the clinical and scientific expertise necessary to develop and maintain the curriculum, and off-campus faculty would be used to enhance the program. Although one small group discussion agreed that more than half of the collective on-campus faculty commitment should be clinical, there was not agreement on this issue when presented to the large group. This topic was targeted for further discussion.

3. *What are the qualifications of the on-campus academic (teaching/research) and clinical (supervising) faculty in a quality clinical doctoral program in audiology? (Faculty members could serve in both academic and clinical roles.)*

Summit participants agreed on the following Essential qualifications for faculty in a quality clinical doctoral program:

Essential

- A doctoral degree is essential for all faculty.
- Faculty must have training in classroom, laboratory, and clinical teaching.
- Faculty must have expertise in the areas in which they teach.
- Clinical faculty must have had clinical experience.
- Clinical faculty must hold state licensure.
- PhD faculty should be actively involved in research.
- Clinical and research faculty should be actively engaged in scholarly activities.
- The faculty, as a group, should collectively have diverse backgrounds in audiology.
- The program should have access to non-audiology faculty for related field courses (e.g., genetics, pharmacology).
- There should be an appropriate ratio of faculty to students.

Above Essential

- Non-audiology faculty should be on the Audiology faculty.
- Clinical doctoral programs should have PhD faculty with formal postdoctoral education.

Salient Discussion

Small group discussion from two separate groups determined the Essential and Above Essential characteristics of the academic and clinical faculty in a clinical doctoral program. Although it was agreed that some individuals with master's degrees would be participating in clinical doctoral programs, eventually all faculty would be trained at the doctoral level. The specific ratio of faculty to students was not determined, although this topic was discussed in another breakout session. Participants agreed that although it would be helpful to have faculty in the program whose area of expertise were, for example, genetics or pharmacology, this was considered to be Above Essential. Although a small group discussion determined that all research faculty should be externally funded, there was not general agreement in the larger group. Although an exact ratio of faculty to students was not determined, participants agreed that the ratio should be appropriate for providing quality instruction and possessing thorough familiarity with each student's progress in the program.

Resources

4. *What are the optimal resources, including budget elements, that contribute to a quality clinical doctoral program in audiology?*

Essential

Summit participants agreed that the following resources were Essential for a quality clinical doctoral program:

- resources to support the development of clinical and academic faculty
- sufficient physical space
- funds for student recruitment
- funds for faculty recruitment
- start-up funding for faculty
- adequate budget to maintain accreditation
- an in-house clinic or formalized contractual arrangement of ongoing clinical training
- hearing aid dispensing at the on-site clinic or at the contractual site
- financial assistance provided to students
- 4.5 FTE clinical faculty
- 3 FTE core academic faculty

Salient Discussion

Small group discussion from two separate groups determined the Essential resources necessary for a clinical doctoral program. They indicated that to provide patient follow-up and teach business practices and sales, the clinical experience must provide hearing aid dispensing. The groups also believed that sufficient funds need to be available for recruitment and support of students and faculty. With regard to the number of faculty necessary for a quality clinical doctoral program, one small group determined that a total of 7 FTE would be necessary, while another group indicated that the number should be 10 FTE.

Assessment

5. *What are the elements of assessment of student acquisition of knowledge and skills in a quality clinical doctoral program in audiology?*

Summit participants agreed that the following elements of student assessment were Essential for a quality clinical doctoral program:

Essential

- periodic clinical review conducted on multiple levels by multiple individuals
- written documentation of review shared with student
- a national external summative assessment
- a system or mechanism to validate assessment instruments
- clinical skills evaluated at specified times in the curriculum
- summative assessment prior to students' final clinical placement
- student self-evaluation opportunities
- comprehensive examinations
- posttraining evaluation of students' knowledge and skills

Salient Discussion

Small group discussion emphasized the need to assess students on multiple levels, including skill development, knowledge, application, and appropriate social skills. They noted that these assessments should be conducted periodically and by all individuals actively involved in the student's education. The outcome of the assessments should result in action, such as continuation in the program, the need for remediation, or dismissal from the program. Written documentation of the evaluations should be provided to students. Students should be required to provide self-evaluations of their performance and progress. Comprehensive programmatic examinations that assess the application of academic knowledge (integration, analysis, and synthesis) should be administered periodically.

6. *What are the elements of program assessment for quality clinical doctoral programs in audiology?*

Summit participants agreed that the following elements of program assessment were Essential for a quality clinical doctoral program:

Essential

- Faculty in clinical doctoral programs must undergo assessment.
- Instructors of clinical courses must be engaged in clinical activity.
- Faculty must have scholarly productivity with national dissemination.

- Supervisors should be involved in teaching (guest lecturing, team teaching, teaching courses for which they are qualified).
- Employers of program graduates should be surveyed.
- Graduates of programs should be surveyed 1 and 5 years after program completion.
- Clinical placement experiences must be assessed for quality.
- Programs should seek and utilize input from employers of program graduates.

Above Essential

- Programs should conduct national annual formative assessments of students' clinical and classroom skills.

Salient Discussion

Small group discussion concerned the difficulty of separating the assessment of the quality of the program from the assessment of the student. Participants agreed that faculty instructing clinical application courses should be spending a portion of their professional time engaged in providing clinical services. It was also agreed that all faculty providing instruction in clinical doctoral programs should undergo evaluation of their instructional and clinical skills, although the method of evaluation was not discussed. There was agreement among small group participants that the program must have assessment methods in place to assure clinical placement sites that students being placed have the prerequisite knowledge and skills. It was also agreed that assessment of a quality program must include feedback from employers of program graduates and program graduates themselves and that this feedback be used for ongoing program improvement. All participants agreed that although there are differences in clinical placement experiences, all sites must be assessed for quality of instruction and variety of experiences, although a specific method for site assessment was thought to be a topic for future discussion. Participants agreed that assessment of the program includes assessment of the student and that a great deal of overlap between these areas exists. Participants also agreed that evaluation of graduates should be provided at 1 and 5 years following program completion to gather information that can assist in program review and ongoing curricular development.

IV. INTERACTIONS: ACADEMIC AND CLINICAL RELATIONSHIPS

1. *What are the characteristics of optimal interactions and relationships between the academic and clinical curricula?*

Essential

Summit participants agreed that the following Essential characteristics signify optimal interactions and relationships between the academic and clinical curricula:

- Clinical education (observation, assisting, direct service delivery) should occur throughout the duration of the curriculum (i.e., from the first semester until graduation).
- There is an ongoing bidirectional flow of information between academic and clinical faculty (e.g., through labs, team teaching, grand rounds, case studies, etc.).
- Clinical experiences across the curriculum reflect a progression of students' clinical abilities (i.e., independence, responsibility, and skill development).

Salient Discussion

The small group discussion focused on the importance of programs fostering mutual respect among respective faculty who teach academic and clinical curriculum. Suggested strategies included the following:

- joint activities where academic and clinical faculty can work together, avoiding the "us versus them" approach (e.g., case conferences with students and academic and clinical faculty, keeping the focus on students)
- grand rounds; team-teaching
- academic faculty involvement in clinic
- joint/applied research and capstone projects that are interdisciplinary
- teaming on research committees
- regular meetings (once/twice per month) with an audiology working group or hearing group (both academic and clinical faculty)
- exchange of information and ideas regarding curriculum and clinical experiences
- sensitivity and attention to titles of clinical instructors
- consistent communication between academic and clinical faculty, matching didactic material and clinical experiences/protocols

The group could not come to consensus on a specific number of credit hours within the curriculum for clinical practicum because each university defines the credit hours assigned to practicum differently.

The group believed that a true partnership should exist between teaching faculty and supervisory faculty, with decisions shared equally. Both should be equally responsible and active in students' application of knowledge to the development of clinical skills. There should be joint staffing of students and equal participation in all departmental decisions related to the curriculum. The group also made the point that all faculty teaching clinical courses should be involved in clinical practice, although no agreement was reached as to whether or not this was an Essential characteristic.

The group also raised the question of whether clinical supervisors should be teaching didactic courses. The group believed that it depends on their qualifications, although no agreement was reached as to whether this was an Essential characteristic.

2. What are the characteristics of optimal interactions and relationships between the clinical doctoral program and off-site clinical experiences?

Although this question was intended to focus on the interactions and relationships between the program and the off-site clinical experiences, it became evident that participants discussed a number of the characteristics identified in the discussion above regarding the academic and clinical curricula. As a result, there are similarities in some of the characteristics identified as essential.

Summit participants agreed that the following are Essential characteristics of optimal interactions and relationships between the clinical doctoral program and off-site clinical experiences:

Essential

- There must be open and transparent communication between the site and the program. The program evaluates what students know and need to learn, and the site will work together with the program to develop learning objectives and outcomes with the student. This must be a collaborative approach.
- Programs should know the clinical site faculty (strengths and weaknesses and willingness to handle problems). There needs to be some sort of periodic site visit to evaluate adequacy and quality of the site.
- Optimal length of time for a meaningful rotation should be determined jointly by the supervisor/preceptor and the academic program.
- Off-sites are afforded the opportunity to provide input to curriculum development.
- The off-site supervisor needs to be considered faculty and be included as a colleague (e.g., involved in faculty meetings, curriculum decisions, mutual sharing of information, and participation on advisory committees).
- Students should have clinical experience in-house before engaging in any form of off-site clinical experience.
- There is a known system for determining minimum standards for off-site placement. The program and site need to evaluate and articulate student level of academic preparation and there needs to be clear communication about students' preparation; this information needs to be made available to the clinical sites. That is, academic programs are obligated to evaluate and disclose the academic preparation and clinical skills of students prior to placement at a specific site.
- The academic program should have a sufficient number of contractual agreements with an adequate core number of clinical sites, provide adjunct status to supervisors, and so on.
- Students should have some sort of academic and/or clinical experience in an area (e.g., vestibular) before or concurrent with going to an off-campus site where that area will be a part of the clinical practice.

Salient Discussion

Some participants believed that exposure to didactic information about or experience with a clinical procedure prior to external placement was Essential, whereas others rated this as Above Essential and could be learned on-site.

The participants discussed the value of providing the site with course content and curricular materials and raised some questions:

- Is interaction with on-site different than off-site?
- Is academic course work required before clinical practicum?

Participants also discussed the value of clinical education definitions. Some suggestions included the following:

- Clerkship—clinical training within a university
- Rotation—short-term clinical training outside of a university
- Externship—long-term clinical training outside of a university

There was general agreement that early clinical exposure can be helpful to didactic instruction and that supervisors/preceptors need to know what experience and course work the student has had before placement.

The optimal length of time for a meaningful rotation should be determined jointly by the supervisor/preceptor and university. Some participants believed that students do better with a concentrated rotation (e.g., full-time for 5 weeks vs. 1 day per week for 15 weeks).

Competence versus independence should be defined the same way by the supervisor/preceptor and university. The best way to determine when a student is ready for non-faculty supervision was raised and it was suggested that information from a student's Knowledge and Skills Acquisition (KASA) summary form could help determine readiness. It was also suggested that supervisors could measure the student's ability to administer audiology services within a usual and customary time frame accepted for such service as a way to determine competence and independence.

Above Essential

Some participants believed that didactic course work or exposure to the procedure prior to the clinical placement should occur, whereas others believed that on-site exposure was adequate.

3. What are the characteristics of optimal interactions and relationships between the research and clinical training?

Summit participants agreed that the following were Essential characteristics of optimal interactions and relationships between the research and clinical training in a quality clinical doctoral program:

Essential

- There is a role for research in AuD clinical training.
- AuD programs do have a responsibility in maintaining and enhancing the profession and discipline.
- There must be some research component in AuD programs (e.g., classes in statistics, research methods, critical review, guided research, research proposals) to ensure the preparation of competent consumers of research and evaluators of evidence-based practice and sensitivity to ethical considerations of research.
- Programs should teach the philosophy that evidence-based practice is a career-long commitment.
- Programs should facilitate an exchange of research on evidence-based practice with sites through a variety of means.

Salient Discussion

Summit participants discussed the realities of the marketplace that attract many students to clinical positions versus seeking a PhD and becoming a teacher-researcher. Professional interests and the size of the profession suggest that AuDs may/will have some role in research and PhDs may/will have some role in providing clinical services, as has been the case historically. For AuDs this role may vary between review and understanding of published research and taking an active role in large-scale data collection and analysis. Thus, if AuD holders are acting as peer-reviewers, these skills need to be taught. Participants articulated that research-related skills need to be included in AuD programs to help ensure that autonomous, critically thinking professionals are graduating.

Research should be considered a typical part of usual clinical inquiry. The participants recognized that there is an opportunity for academic programs and clinical sites to work together to generate clinical research, which could be seen as a possible benefit to sites for taking AuD students. The quality of a practicum site could be determined by incorporation of evidence in service delivery. In light of changes in service delivery with an increasing focus on evidence-based practice and the use of "best practices," AuD students will be required to engage in data collection and analysis in the clinic. "Research skills" will be useful whenever a clinician is asked to answer a question in the workplace (such as to justify a new position or address the diagnostic or treatment needs of a challenging patient). It was also noted by the group that these skills are needed for quality improvement decisions in the workplace.

The Summit participants identified and discussed the following research-related issues:

- Programs should be training students as consumers of research within an evidence-based practice framework. This could be accomplished through a melding of clinic and research experiences.
- Examples of optimal interactions for students to experience research were identified. These experiences may include:
 - “clinical researcher–master clinician” pairings that provide clinical services in university clinics based on evidence-based practice principles,
 - collaboration/modeling provided by clinical researchers to in-house supervisors and students,
 - university faculty providing research expertise to practicum sites, and
 - presentations that express the enjoyment and fulfillment of successful models of researcher–clinician interactions.
- There is often a mismatch between practice and outcomes research.
- There may be a mismatch between didactic classes and off campus clinical experiences related to “best practices” foundations.
- How can research be incorporated into a clinical doctorate program?
 - Course(s) might be in a different department or combined with another department.
 - What is optimal?
 - evidence-based practice is Essential
 - design a clinical research project
- There was discussion regarding the need to inform students of human research ethical issues, Institutional Review Board (IRB) existence and requirements, that research ethics is different from professional ethics, and that the National Institutes of Health (NIH) has a certificate program in research ethics.
- How do off campus supervisors become knowledgeable of evidence-based practice?
 - In-services from faculty at sites or bringing supervisors to campus could be effective.
 - Some clinical sites have ongoing research and could inform the program.
- It was noted that some universities are hiring AuDs in tenure track positions—therefore, AuDs need some research training. Some suggested that doctoral programs include a clinical faculty track (formerly MA/MS clinical supervisor jobs) in addition to the PhD tenure track.

It was noted that programs that do not value research will likely not survive. It also was noted that NIH is moving toward translational research and promoting clinical research and clinical trials. Participants expressed disappointment in the role of research in clinical doctoral programs, particularly given the NIH movement, and that the creation of AuD programs without a solid research component devalues this initiative. There was a sense that this topic needed to be discussed in more detail than time allowed.

4. *What are the characteristics of optimal interactions and relationships between the university and the community?*

Summit participants agreed that the following were Essential characteristics of optimal interactions and relationships between the university and the community:

Essential

- Programs need to have a greater participatory role in the state associations and organizations.
- Programs should get the community more involved in the clinical doctoral program by conducting forums or focus groups to obtain their input regarding necessary clinical skills, ways to assess students, and so on.
- Programs should involve members of the audiology community by including them on advisory committees to the program.
- Programs should foster and build a partnership with the community practitioners.

Salient Discussion

Participants made the following suggestions that may result in a strong relationship between the university and the community:

- Hold annual dinners for community colleagues as a time for informal connections.
- Develop models that make students more attractive to the off campus sites so that off-sites seek out program students.
- Establish a community advisory group that can provide input to the university regarding a variety of issues (e.g., supervisor/student expectations, curriculum, student assessment, clinical opportunities).
- Attempt to place graduates in jobs in their communities to improve the chances of placing future students.
- Offer perks such as continuing education, teleconferences, and faculty visits to off-sites to share expertise or provide free consultation.
- Establish a community journal group that is coordinated by the university and offers free continuing education units.
- Consider providing appointments at the university.
- Establish a "guest lecture list" of community audiologists who would be willing to give guest lectures.

Participants noted the value of service learning projects and the opportunity for students to work within the community (e.g., hearing screening at Head Start programs or for migrant laborers/farmers). Such activities could provide incentives for increased community interaction and visibility within the community of audiologists. Participants also noted the value of acknowledging the importance of consumers providing feedback on how programs and the profession are doing.

Issues for Future Discussion

During the Summit, it became apparent that some discussion topics were so complex that agreement on the issues could not be reached in the time available. Consequently, program participants agreed to set such topics aside for additional consideration at future meetings or conferences. The following topics were determined by Summit participants to warrant further discussion:

- the optimal number of didactic hours of a clinical doctoral program in audiology
- the research competencies expected of graduates from AuD programs and the role of the AuD in the research base of the discipline
- the optimal undergraduate preparation for students entering clinical doctoral programs in audiology
- determination of the size of the student cohort in an optimal clinical doctoral program
- determination of the optimal balance between “research” and “clinical” faculty
- the nature and amount of didactic and clinical preparation necessary before going to external placements

In addition to the topics planned by the Summit advisory committee, Summit participants expressed a need to meet further to discuss other items relevant to the education of audiologists. The following issues were identified by the group for consideration in the future:

- the “4th year” clinical placement, including issues related to state licensure and compensation
- further discussion of compensation of off-campus supervisors
- assessment or “accreditation” of student placement sites
- professional development in supervision for those providing clinical supervision
- methods of evaluating supervisor skills
- educating students with disabilities, particularly those with hearing loss
- reducing student debt/increasing salaries
- the use of matching programs for full-time externships

The Summit advisory committee encourages organizations interested in the education of clinical doctoral students in audiology (e.g., the Council of Academic Programs in Communications Sciences and Disorders, the Council on Academic Accreditation in Audiology and Speech-Language Pathology, the Accreditation Commission for Audiology Education, the American Speech-Language-Hearing Association, the American Academy of Audiology, the Audiology Foundation of America, and others) to incorporate opportunities for in-depth discussion of these topics in future conferences and meetings.