I am certainly pleased for this opportunity to address the issue of the impact of the new speech-language pathology standards on undergraduate education. As the Director of an undergraduate-only program, I have always felt that undergraduate education should be considered as a vital part of the overall academic continuum and not as an insignificant precursor to graduate school (the “real educational experience” as some would say). Until recently, I have had the impression that the entire educational process has been receiving more attention and that all constituents were being considered as “players” in the educational preparation of our future professionals.

Unfortunately, the termination of the ASHA Academic Affairs Board has eliminated the only ASHA entity made up of representatives of each of the constituent groups, especially those concentrating on undergraduate education. As a result, undergraduate-only programs no longer have a connection to the ASHA academic agenda. We are no longer on the mailing list to receive the information on the new standards mailed to program chairs by the Council on Academic Accreditation. During repeated calls to ASHA, I have been assured that this was an oversight that would be corrected, but we have yet to receive any information on the new standards, including the mailing which most of you received within the last few days. As a result, I must admit that the material I used in the preparation of this presentation has been downloaded from the ASHA home page or borrowed from CAA accredited programs. With that said, I will address the new standards from the perspective of an undergraduate program preparing students to continue their professional preparation at a CAA accredited program.
The crucial factor that must be considered is that the academic programs for most of our undergraduate students must already be determined by the new standards, which take effect on January 1, 2005. As you look at this chart, you can see that any undergraduate program changes must already be in place to avoid significant disruption.

<table>
<thead>
<tr>
<th>2001-2002</th>
<th>Juniors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2003</td>
<td>Seniors</td>
</tr>
<tr>
<td>2003-2004</td>
<td>Graduate (1st)</td>
</tr>
<tr>
<td>2004-2005</td>
<td>Graduate (2nd)</td>
</tr>
</tbody>
</table>

For example, many of your programs require either biology or physical science courses but the new standards require both (Standard III-B). If both biology and physical science courses are not already on the transcript, this additional course will need to be added to the requirements for completing the graduate degree. A “heads up” to undergraduate program directors would have made this aspect of transition much easier.

From this point on, I will address the new standards that either must or may be addressed at the undergraduate level. Undergraduate programs, especially undergraduate-only programs which must be sensitive to the expectations of many different graduate programs, must be vigilant about meeting and documenting how their students are meeting the new standards. The final decision lies with the graduate programs. The references to the new standards and implementation throughout are taken from the material available on the ASHA homepage as of April 1, 2002.

The new standards emphasize both process and outcome. Process standards address those course work or practicum experiences that are intended to result in learning. Our documentation of these process standards will be similar to our past documentation. Outcome standards, on the other hand,
require a demonstration of specific knowledge and skills as evidence of learning. These will involve new and innovative methods of documentation.

Of the salient features of the standards mentioned, several are well within the educational domain of all undergraduate training. “Oral and written communication skills” are expected outcomes of a college degree. Undergraduate introductory courses also emphasize “ethical standards, research principles, and current professional and regulatory issues.” Our challenge is in documenting that the skills and knowledge are present. Introductory undergraduate courses are also the ideal opportunity for observation of and introduction to clinical practicum. This observation and initial practicum experience may serve to separate those students who are genuinely interested from those which need to be assisted in finding some other career for which they are better suited. The second or third semester of graduate school is often too late to make such career choices.

**STANDARD III: PROGRAM OF STUDY—KNOWLEDGE OUTCOMES**

*The applicant for certification must complete a program of study (a minimum of 75 credit hours overall, including at least 36 at the graduate level) that includes academic course work sufficient in depth and breadth to achieve the following knowledge outcomes:*

**Standard III-A: The applicant must possess skill in oral and written communication sufficient for entry into professional practice.**

In addition to the oral skills taught throughout general undergraduate coursework, students should be introduced to speaking and listening skills necessary for continued practicum experiences. Professors and supervisors model clinical and professional interaction with patients and colleagues. Students begin to appreciate and learn professional interaction skills as they are introduced to the professions.

Written communication skills are also a fundamental part of general undergraduate curriculum, but professional demands, including technical reports,
diagnostic and treatment reports, treatment plans, and professional correspondence should also be introduced from the very beginning. Students who are unable (or unwilling) to develop appropriate written communication should not progress on to graduate education. Unfortunately, we often approach professional writing at the end of professional education. All aspects of oral and written communication should be introduced at the undergraduate level and expanded at the graduate level.

Because oral and written communication are such fundamental aspects of undergraduate education, outcome measures should be in place before the students continue on to graduate studies. We have oral and written evaluation scales are in place at Harding University to document this standard.

**Standard III-B: The applicant must demonstrate knowledge of the principles of biological and physical sciences, mathematics, and the social/behavioral sciences.**

All aspects of this standard are available and expected at the undergraduate level. The important aspect of this standard involves the indication that “transcript credit is required in each of the four areas.” Some undergraduate programs have always required courses in each of these areas as a degree requirement; however, under the current standards, many undergraduate programs have allowed an additional course in biology to replace the physical science component. The new standard prohibits this approach.

This requirement will result in many students who are currently seniors needing to immediately take an additional course as an elective, if they can fit it in, or to take the additional physical science course after they enter graduate school. We are all aware of the process and time necessary to change degree requirements so this could continue be a problem for several years. The CAAs lack of communication with undergraduate programs may result in the necessity of an additional class at the graduate level, at least temporarily.
As a process standard, successful completion of this standard will be obvious and can easily be documented by transcript credit. However, whether or not a student has taken courses in each of the four areas must be carefully noted for all entering graduate students.

Standard III-C: The applicant must demonstrate knowledge of basic human communication and swallowing processes, including their biological, neurological, acoustic, psychological developmental, and linguistic and cultural bases.

The implementation language indicates that “the applicant must demonstrate the ability to analyze, synthesize, and evaluate information in the areas of basic human communication processes.” Training necessary to accomplish this should certainly begin at the earliest stages of the educational process. If an undergraduate student is exhibiting difficulty developing these skills, then this should be targeted. If a student is unable to “analyze, synthesize, or evaluate,” then he/she certainly should not move on into a graduate level program.

As an outcome standard, undergraduate programs can only emphasize the critical thinking aspect of the basic communication processes. The actual demonstration of knowledge would need to be documented at the graduate level.

Standard III-D: The applicant must demonstrate knowledge of the nature of speech, language, hearing and communication disorders and differences and swallowing disorders, including the etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates. Specific knowledge must be demonstrated in the following areas:
- articulation
- fluency
- voice and resonance, including respiration and phonation, receptive and expressive language (phonology, morphology, syntax, semantics, and pragmatics) in speaking, listening, reading, writing, and manual modalities
- hearing, including the impact on speech and language
- swallowing (oral, pharyngeal, esophageal, and related functions including oral function for feeding, orofacial myofunction)
- cognitive aspects of communication (attention, memory, sequencing, problem-solving, executive functioning)
- social aspects of communication (including challenging behavior, ineffective social skills, lack of communication opportunities)
- communication modalities (including oral, manual, augmentative, and alternative communication techniques and assistive technologies)

The implementation language suggests that this standard applies mostly to graduate education; however, there is no reason why many of these skills should not be introduced at the undergraduate level. The analysis, synthesis, and evaluation of information “about communication differences and disorders and swallowing disorders” should be considered in the initial introductory and basic science classes. For example, the anatomy and physiology class should address why specific anatomy is significant and what would happen if a particular structure was not functioning adequately. This changes the process from memorization of “random” anatomical structures, to an overall synthesis approach of anatomical functioning. If introduced initially, this material becomes easier to learn and students may then use the graduate courses to develop sophisticated analytical and evaluation skills for clinical practice.

Demonstration of this knowledge would certainly be part of the graduate process. However, without sufficient introduction and practice beginning at the undergraduate level, it seems unreasonable to assume that students can acquire these skills in the four or five graduate semesters.

**Standard III-E: The applicant must possess knowledge of the principles and methods of prevention and assessment, and intervention for people with communication and swallowing disorders, including consideration of anatomical/physiological, psychological, developmental, and linguistic and cultural correlates of the disorders.**

As previously mentioned, my experience suggests that the ability to “analyze, synthesize, and evaluate information about prevention, assessment,
and intervention” develops best when introduced from the very beginning. The skills necessary for professional practice would continue to develop as a part of the graduate level education. However, students should profit more from four or five graduate semesters if they were prepared to “analyze, synthesize, and evaluate information” before beginning. This should certainly be initiated at the undergraduate level.

**Standard III-F: The applicant must demonstrate knowledge of standards of ethical conduct.**

This standard emphasizes a thorough knowledge of our Code of Ethics which should be introduced in initial aspects of training and emphasized throughout the educational continuum. From the very beginning, students must consider each decision based on “standards of ethical conduct.” They must be prepared to evaluate specific clinical procedures and policies in light of the Code of Ethics. This approach will prepare them for situations they will encounter when they are no longer under the direct influence of undergraduate and graduate clinical supervisors. Again, this should not be delayed until the final two years of a student's educational experience.

Due to the nature of many undergraduate-only programs, ethical standards are included throughout the general curriculum. The private, religious nature of many of these programs provides an excellent opportunity to add ethics into all aspects of student behavior. Other undergraduate programs are also thoroughly presenting standards for ethical behavior, but have less opportunity to infuse this information into the general curriculum.

Although this is an outcome standard, an undergraduate program should document where the Code of Ethics are presented and reinforced throughout the student's involvement in the program. This information would then be supplied to graduate programs to document exposure and suggest a working knowledge.
Demonstration of the use of ethical standards would need to be evaluated at the graduate level.

**Standard III-G: The applicant must demonstrate knowledge of processes used in research and the integration of research principles into evidence-based clinical practice.**

The “sources of research information and how to gain access to them” should be systematically introduced from the introduction to the professions in the first Communication Sciences and Disorders class. A systematic approach to the analysis of “research” must be present from the beginning to assure that our students and future professionals become life-long learners, especially now that so much questionable information is available on the Internet.

We often assume that our students are introduced to and acquire basic research analysis skills in general education composition courses. Unfortunately, this is often not the case. Research analysis should be built into the CSD curriculum from the very beginning. Although this is also an outcome standard, undergraduate programs should document research analysis requirements. This information may then be passed on to graduate programs. At that point, a determination can be made regarding additional course work necessary to prepare a student to "demonstrate" through the graduate research experience.

**Standard III-H: The applicant must demonstrate knowledge of contemporary professional issues.**

I am not sure we do this very well. In our academic programs, we talk about “professional issues,” but the specific issues presented to our students are directly related to the interests of the instructor. Therefore, if an instructor is interested in (and involved with the process of) Speech-Language Pathology Assistants (SLPAs), students enrolled in her class will be conversant with this issue. Students who do not take this instructor’s class will remain uninformed about SLPAs. Of course, this is the nature of the educational process, but there
needs to be a better way of introducing students to contemporary professional
issues.

The late ASHA Academic Affairs Board introduced a “Professional Issues
Forum” but it received little ASHA support and it quickly disappeared from view.
The idea behind the internet based forum was to periodically have a noted
professional summarize a specific issue and two additional professionals
comment on the summary. Students could then be directed to that location, read
about the issue and then contribute questions and comments. I required my
students to read the two or three issues that appeared on the site and we
reserved a period to discuss the topic. Unfortunately, the forum is no longer
accessible. Professional issues texts could be used, but such texts are usually
outdated before they are published. It is difficult for faculty to keep abreast of all
issues and even more difficult to find time in the packed curriculum to present
them.

Presentation of “professional issues” should be included in all academic
programs. It is probably not possible to include a professional issues class in the
undergraduate curriculum, but these issues can be introduced by participation in
NSSLHA and state professional associations. However, documenting the
demonstration of knowledge of contemporary professional issues will prove
difficult.

**Standard III-I: The applicant must demonstrate knowledge about
certification, specialty recognition, licensure, and other relevant
professional credentials.**

Certification and licensure issues should be presented from the very
beginning. The requirements should be presented in the “So You’re Interested in
a Career in Audiology or Speech-Language Pathology” brochures distributed to
freshmen and undecided majors as well as a part of every faculty/student
advising encounter and class. Students should never begin a CSD
undergraduate major without understanding the long-range educational requirements.

As an outcome standard, this may be difficult to document. As an undergraduate "outcome," the student must select appropriate classes and achieve grades that will allow them to progress on to graduate school. I am unsure of a method to adequately demonstrate knowledge in this area.

*Standard IV Skills Outcomes*

**Academic and clinical training to achieve specific evaluation, intervention, and interaction and personal quality outcomes specified in Standard IV-E.**

**STANDARD IV: PROGRAM OF STUDY—SKILLS OUTCOMES**

The applicant must complete a curriculum of academic and clinical education that follows an appropriate sequence of learning sufficient to achieve the skills outcomes in Standard IV-E.

**Standard IV-A:** The applicant for certification in speech-language pathology must complete a minimum of 400 clock hours of supervised clinical experience in the practice of speech-language pathology. Twenty-five hours must be spent in clinical observation, and 375 hours must be spent in direct client/patient contact.

Although 25 observation hours are no longer expected prior to beginning any therapy, observation should precede direct patient contact. The undergraduate environment is an excellent place to start this observation. When students are first introduced to disordered communication, observation experiences related to these disorders serve several purposes. The initial purpose involves the opportunity to answer questions generated from the observation experience. Students may discuss these questions with faculty and may choose research projects related to these questions as they complete required class activities. A second purpose of observation involves relating specific clinical practice to available research. If this application is stressed at the beginning, it is more likely to continue as the student begins professional practice. A subtle result of observation involves the elimination of students who are interested in the academic aspect of CSD but realize that they are not
interested in or suited for actual practice. This process continues as the undergraduate begins his/her initial practicum experience.

Observation experiences can be problematic. If we require students to observe practicum in our university clinics, we have students observing students. The problems with this are obvious. The alternative also creates difficulties by burdening local professionals, especially those professionals already assisting with clinical experiences for our students.

The late Academic Affairs Board was investigating possible solutions. Under consideration was an online or video observation experience directing the observers to look for certain behaviors and pointing out key elements of the process. Many CAPCSD programs completed the 2000 survey indicating interest. Initial contacts with other professions indicated that medicine, dentistry and education currently use such "canned" observation experiences on a limited basis.

Regardless of how we approach the observation issue, our documentation of observation experiences must be revised to allow students to transition from undergraduate to graduate education. The new standards suggest that observation experiences be broken down into the categories of articulation, fluency, voice, language, hearing, dysphagia and other. This process will be simple to document. The lack of advance warning to the undergraduate programs will result in some immediate confusion as students transition into graduate education. Undergraduate programs must review and reclassify past observation experiences into the appropriate categories. Once this is accomplished, the transition should go smoothly.

Standard IV-B: At least 325 of the 400 dock hours must be completed while the applicant is engaged in graduate study in a program accredited in speech-language pathology by the Council on Academic Accreditation in Audiology and Speech-Language Pathology.
The new standards allow for up to 25 hours of observation and up to 75 hours of practicum at the undergraduate level. As previously mentioned, the undergraduate level is an excellent place to introduce the clinical aspect of CSD. We have all known students that do well academically but are not suited to patient and family interaction. Many students make this decision after their initial practicum experience. If that experience is after the student has begun their graduate education they are hesitant to change course.

Documentation of this process standard must be very specific and easy for the graduate program to interpret. Some undergraduate programs will continue to require more than the number of clinical hours accepted by the graduate program. Documentation should be such that graduate clinical directors can see that the student has been introduced to practicum and determine how to direct that student in an effort to best meet the needs of both the student and clinical program.

Standard IV-C: Supervision must be provided by individuals who hold the Certificate of Clinical Competence in the appropriate area of practice. The amount of supervision must be appropriate to the student’s level of knowledge, experience, and competence. Supervision must be sufficient to ensure the welfare of the client/patient.

High levels of supervision are required at the undergraduate level but seldom more so than for beginning clinicians at the graduate level. Many undergraduate programs, especially undergraduate-only programs can invest the time necessary to initiate the practicum experience with the necessary extensive supervision. Of course, even with the allowable number of clinical hours at the undergraduate level, students would continue to be considered as beginning clinicians. Documentation of the certification of all clinical supervisors must be readily available. It must also be clearly documented on the clinical hour reports forwarded on to graduate programs.
Standard IV-D: Supervised practicum must include experience with client/patient populations across the life span and from culturally/linguistically diverse backgrounds. Practicum must include experience with client/patient populations with various types and severities of communication and/or related disorders, differences, and disabilities.

Many undergraduate-only programs are able to offer clinical experiences with a variety of “culturally/linguistically diverse” patients. The very make-up of these programs (such as those in historically African-American institutions) should serve to introduce experiences not easily available in many other settings. The problem comes with documenting these experiences. Graduate programs need to be aware of the clinical experiences obtained at the undergraduate level. Unfortunately, I have yet to determine an appropriate way of documenting “diverse” patients. Some systematic process similar to the documentation of a patient's age needs to be developed.

Standard IV-E: The applicant for certification must complete a program of study that includes supervised clinical experiences sufficient in breadth and depth to achieve the following outcomes:

1. Evaluation:
   a. conduct screening and prevention procedures (including prevention activities)
   b. collect case history information and integrate information from clients/patients, family, caregivers, teachers, relevant others, and other professionals
   c. select and administer appropriate evaluation procedures, such as behavioral observations, nonstandardized and standardized tests, and instrumental procedures
   d. adapt evaluation procedures to meet client/patient needs
   e. interpret, integrate, and synthesize at information to develop diagnoses and make appropriate recommendations for intervention
   f. complete administrative and reporting functions necessary to support evaluation
   g. refer clients/patients for appropriate services

2. Intervention:
   a. develop setting-appropriate intervention plans with measurable and achievable goals that meet
clients’/patients’ needs. Collaborate with clients/patients and relevant others in the planning process

b. implement intervention plans. Involve clients/patients and relevant others in the intervention process

c. select or develop and use appropriate materials and instrumentation for prevention and intervention

d. measure and evaluate clients’/patients’ performance and prowess

e. modify intervention plans, strategies, materials, or instrumentation as appropriate to meet the needs of clients/patients

f. complete administrative and reporting functions necessary to support intervention

g. identify and refer clients/patients for services as appropriate

3. Interaction and Personal Qualities:

a. communicate effectively, recognizing the needs, values, preferred mode of communication, and cultural/linguistic background of the client/patient, family, caregivers and relevant others

b. collaborate with other professionals in case management

c. provide counseling regarding communication and swallowing disorders to clients/patients, family, caregivers, and relevant others

d. adhere to the ASHA Code of Ethics and behave professionally.

All areas of evaluation and intervention could be introduced at the undergraduate level. Any amount of practicum an undergraduate student could obtain would not place them above the very basic beginning level of practicum experiences. This level would require specific direction from and participation of the supervisor. Since these are outcome standards, these practicum experiences would probably not need to be documented as clinical hours, but acquisition of the skill would not be expected at the undergraduate level. However, introduction at the undergraduate level would eliminate the need to acquire all of these skills within the four or five semesters covered by most graduate programs.

**Standard V: Assessment**
The applicant for certification must successfully complete formative and summative assessments of the knowledge and skills delineated in Standard III and Standard IV.

Standard V-A: Formative Assessment
The applicant must meet the educational program’s requirements for demonstrating satisfactory performance through periodic assessment of knowledge and skills.

Formative assessment is ongoing measurement during educational preparation for the purpose of improving student learning. Formative assessment yields critical information for monitoring an individual’s acquisition of knowledge and skills. Therefore, to ensure that the outcomes stipulated in Standard III and Standard IV are effectively pursued in a systematic and orderly manner, the applicant’s developing knowledge and skills must have been assessed by academic and clinical educators throughout the applicant’s program of study. Such assessments must evaluate critical thinking, decision making, and problem-solving skills. Measures should include oral and written components, as well as demonstrations of clinical proficiency. The documentation of formative assessment must be maintained and verified by the program director or official designee and shall be made available to ASHA’s certifying and accrediting bodies upon request. The documentation of formative assessment may take a variety of forms, such as checklists of skills, records of students’ progress in clinical skills development, portfolios, statements of academic course work objectives and content, etc."

The aspects of formative assessment are clearly specified in the implementation language quoted above. Undergraduate programs are required to document the standards initiated while the students are enrolled. This information must be in a format that can easily be provided to the graduate program. The specifics of this documentation are yet to be determined, but must be immediately developed to all for a smooth transition into graduate study.