White Paper on Occupational Regulation

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by

Mickie S. Rops, CAE

Mickie S. Rops & Associates, Inc.

http://www.msrops.com
Executive Summary

Occupational regulation of allied health personnel is a topic of great importance to regulatory agencies, professional associations and the members they represent, and the public who rely on the services provided by professionals. It is also a topic of great complexity. The purpose of this white paper is to guide the American Society of Electroneurodiagnostic Technologists, Inc. (ASET) in understanding the occupational regulatory arena and the Society’s options in a complex and turbulent environment.

ASET currently faces many issues that could impact its future role in occupational regulation, including the lack of formal educational or training programs to prepare individuals for entry into the field, fractionalization of the field, that no scope of practice protection or title protection regulations exist for the END technologist, that other professions are assuming the role of the END technologist in practice, and these same professions are advocating for and successfully securing the END technology function within their legally protected scopes of practice.

ASET currently maintains a neutral position on the issue of licensure in the field of electroneurodiagnostic (END) technology. At the same time, at least one state is actively pursing licensure in the field, and numerous states have enacted legislation that in some way impacts practice as an END technologist. In addition to maintaining its neutral position, ASET has three additional options: advocate for statutory regulation of END technology, advocate for no statutory regulation of END technology, and advocate for voluntary certification. There are many advantages and disadvantages and other issues that ASET must consider for each option.

ASET has taken steps to strengthen and advance the field. It should be applauded for its efforts, and be encouraged to press forward with even more zeal. ASET must be decisive and establish clear positions about their ideal future for the field, and then develop and implement strong action plans for how to create that future. It is the goal of this paper to provide the foundation upon which ASET can make those decisions and action plans critical to the success of the field.
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Terminology

“Credentialing”, “occupational credentialing”, or “occupational regulation” are umbrella terms often used to describe the full spectrum of programs that confer a recognition to individuals, organizations, programs, products or processes based on meeting some predefined standards.

There are various forms of credentials and important distinctions among them. The most common distinguishing characteristics include:

- To whom or what is the credential awarded?
- Who confers the credential?
- Is the credential voluntary or mandatory?

**To whom or what is the credential awarded?** Licensure, certification, registration, and curriculum-based certificates are granted to individuals. Accreditation is granted to organizations.

**Who confers the credential?** Associations, other non-profits, corporations, and educational institutions grant professional certification, curriculum-based certificates, and accreditation. State governmental agencies grant licensure, statutory certification, and statutory registration.

**Is the credential voluntary or mandatory?** Licensure (and sometimes statutory registration) is required in order to lawfully practice a given occupation and statutory certification is mandatory in order to use a specified occupational title. All credentials offered by non-governmental entities are voluntary.

The following section takes a more in-depth look at each of the credential types.

**Governmental Regulation**

Often, licensure is thought of as THE method of governmental regulation, and sometimes licensure is used as an umbrella term, but it is not the only type of governmental regulation. Because the terms are often used inconsistently (see sidebar), it is best to understand the intent behind occupational regulation legislative acts and the terms usually associated. There are three main types: practice acts, title protection acts, and registration acts.

**Practice Acts** (usually called licensure) Practice acts grant to individuals the authority to engage in defined tasks and prevent persons not so licensed from engaging in those tasks (e.g., licensure grants authority to a physician to prescribe medication and prevents other health care personnel from doing so). The term “practice acts” evolved because the law usually sets forth a “scope of practice”
covered by the act. Scope of practice refers to the specific tasks that constitute the practice of the given occupation.

Before a license is granted, the applicant must meet certain requirements set forth in the law. Minimum requirements are usually established regarding training and experience, age, formal education, and state residence. Applicants meeting these eligibility requirements then take a licensing examination.

Licensure provides that a specified scope of practice may only be performed legally by licensed individuals and provides title protection for those roles. It also provides authority to take disciplinary action should the licensee violate provision of the law or rules in order to assure that the public health, safety and welfare will be reasonably well protected.

Licensing is the most restrictive form of occupational regulation because it prohibits anyone from engaging in the activities covered by a “scope of practice” without permission from a government agency.

Licensure is most often used when there is significant risk of harm to the public if the activities are performed by someone lacking the requisite competencies acquired through defined training and experience.

**Title Acts** (usually called statutory certification; sometimes called voluntary licensure)

Title acts grant to individuals the authority to use a protected occupational title but do not include a legal scope of practice. Accordingly, individuals not certified may still practice, but they may not use the protected title.

Before statutory certification is granted, the applicant must meet certain requirements set forth in the law. Minimum requirements sometimes often include training and experience, age, formal education, and state residence. Applicants meeting eligibility requirements often must also take a certification examination.

Title acts are most often used when the public needs assistance in identifying competent practitioners, but where the risks to health and safety are not severe enough to justify licensure.

**Registration Acts** (usually called registration)

Registration requires individuals who perform certain tasks to list their names (i.e., register) with a designated government agency. As a general rule, the law does not require the individual to show that he or she has met any predetermined standards or to pass an examination. Given the relative ease with which it takes to become registered, one may wonder what the benefit of registration is. The answer is simple: it is equally easy for the governmental agency to revoke registration in response to complaints from the public, which then prevents individuals from practicing.

Registration is often used when the threat to public health, safety, or welfare exists, but is relatively minimal.
While the distinctions among the acts may seem clear, there are many ways that individual states can add restrictions, exemptions, or other special rules to the acts or use legislative actions other than credentialing. Examples include:

- **Practice standards in facility licensure regulations**
  Practice standards for certain occupational practices can be added to facility licensure regulations. These standards do not define a legal professional scope of practice; however, they establish standards with which healthcare facilities must be in compliance to gain or maintain facility licensure.

  An example of the use of practice standards is a section of Arkansas’ Rules and Regulations for Hospitals and Related Institutions that states that an RN shall be present in the OR for the duration of the surgical procedure, additional auxiliary personnel shall be available as necessary, and only qualified RNs may perform circulating duties in the OR (Habgood, 2000).

- **Registration with practice standards**
  It is also possible to have registration in combination with enforced minimum practice standards. Although registration still would not be exclusionary, it would subject registrants to minimum standards and thereby provide more protection to the public than registration alone. Registration with standards is not intended to provide a legally protected scope of practice for the profession; rather, it provides limits as to what practitioners can or cannot do in particular settings.

- **Statutory certification with practice standards**
  A state may establish certification for an occupation and request legislation that establishes practice standards for that occupation. This combination establishes a system of title control for those meeting certain required standards of competency, as well as standards of practice for anyone who practices the occupation.

  The standards of practice are usually applied for any provider of the same services. Since this approach combines title control with practice standards, it essentially is licensure and is not widely used.

- **Regulation through mandated supervision by an already licensed practitioner.**
  This can be accomplished through certification with standards or through standards of practice alone. In certification with standards, an occupation can be certified with a special restriction that occupation members be required to work under the supervision of an already licensed occupation. Standards for practice also can be established.

  Certification with standards is how physician assistants are regulated in many states. It uses a combination of title protection and standards of practice, which mainly includes physician-delegated duties.

  Through standards of practice without certification, the occupation is required to be performed under the supervision of a licensed professional with certain set-forth standards, but individuals practicing in it are not required to be certified. This can be accomplished with the use of delegation rules and is fundamentally
how assistive personnel are regulated when they work under the supervision of an existing licensed professional. State boards of nursing determine the proper delegation to assistive personnel.

An example of these standards through delegation is the California Assembly Bill 394, which prohibits a general acute care hospital, an acute psychiatric hospital, and a special hospital, as defined, from assigning an unlicensed person in lieu of an RN to perform nursing functions. The bill also prevents health care facilities from allowing unlicensed personnel to perform functions under the direct clinical supervision of an RN that require a substantial amount of scientific knowledge and technical skills (Habgood, 2000).

**Voluntary (non-governmental) Regulation**

Professional and trade groups frequently establish their own programs to grant recognition to individuals for having met predetermined professional qualifications. Unlike statutory programs which are usually mandatory, credentialing programs offered by non-governmental agencies are always voluntary.

The primary non-governmental credentials include professional certification (often referred to as simply “certification”), curriculum-based certificate, and accreditation.

**Professional Certification**

To become certified, one usually has to meet eligibility requirements (such as formal education and work experience) and pass an assessment. The certification assessment usually covers a broad area of knowledge and skills – at entry or advanced levels.

Again, certification is voluntary. An individual does not need to be certified to engage in a given occupation. However, sometimes the certification becomes so important to job attainment that it can be considered quasi-mandatory. This occurs when the certification is written in as a requirement in job descriptions, career laddering systems, or project specifications, as examples.

Certificants usually have ongoing requirements (such as continuing education or retesting and renewal fees) that need to be met to maintain the certification.

*Examples:*
  - Certificate in Neurophysiologic Intraoperative Monitoring (CNIM),
  - Registered in Electrodiagnostic Technology (R.EDT),
  - Registered in EEG or EP Technology (R.EEG/EP T),
  - Registered in Polysomnography Technology (RPSGT),
  - Board Certified Physician,
  - Certified Occupational Therapist,
  - Registered Dietitian
**Curriculum-based Certificate**
A curriculum-based certificate is a comprehensive training program on a focused topic for which participants receive a certificate after completion of the coursework and successful demonstration of attaining the course learning objectives. Certificate programs are larger in magnitude and longer in duration than typical continuing education programs, but are smaller in magnitude and shorter in duration than university degree programs.

The primary distinction between certification and certificates is in their focus: in certification, the focus is on assessing current knowledge and skills. In a certificate, the focus is on training individuals to achieve a certain knowledge and skill base and then assessing attainment of it. Also, unlike certification, curriculum-based certificates usually do not have ongoing requirements, do not result in an initial designation, and cannot be revoked.

The training and assessment usually cover a focused area of knowledge and skills.

*Examples:* Certificate of Training in Adult Weight Management (Commission on Dietetic Registration) and Certificate Training Program in Pharmacy-based Immunization Delivery (American Pharmacist Association).

**Accreditation**
Accreditation is a voluntary process through which a nongovernmental entity grants a time-limited recognition to an organization after verifying that it has met predetermined and standardized criteria.

Accreditation is voluntary. However, sometimes the accreditation becomes so important that it can be considered quasi-mandatory. As an example, many healthcare professions accredit educational degree programs. A university may offer a program that is not accredited; however, the ramification is great: graduates of the program may not meet the eligibility requirements for statutory or voluntary regulation in the field.

To become accredited, organizations usually have to measure compliance with and meet standards of acceptable operations and/or performance. Initial accreditation usually involves some form of self-study application and peer review of the application and through a site visit. Accreditation usually has ongoing requirements that need to be met to maintain the accreditation.

*Examples:* Accredited healthcare facility (Joint Commission on Accreditation of Healthcare Organizations), continuing education provider accreditation (Commission on Dietetic Registration, American Nursing Credentialing Center, American Speech-Language-Hearing Association)
Governmental Occupational Regulation: From the Beginning

How it all Began

The first attempts to regulate occupations and professions in America were medical practice acts in the colonial states in the early to mid 17th century (Gross, 1984). The earliest licensing-related law of the American colonies was a Virginia statute of 1639 which regulated the fees charged by physicians. Ten years later the Massachusetts legislature passed the first law controlling the quality of medical services provided by surgeons, midwives, physicians and others. A number of other laws were enacted to require state licensing of physicians and surgeons in the late 1700s and early 1800s (Hollings, 1997).

However, in the second quarter of the 19th century, there was deregulation of the legal and medical professions, and at the time of the civil war, no effective state licensing system was in place. This period of deregulation has been viewed as both positive, resulting in more medical schools thus increasing the number of physicians, and negative, a time of rampant quackery and deterioration in the quality of medical care (Gross, 1984).

By the end of the 19th century, states were again beginning to pass medical practice acts which were implemented by state regulatory agencies. The first modern medical practice act was passed in Texas in 1873 and by 1905, thirty-nine states licensed physicians. The first nursing practice act was passed in 1903 and by 1926 forty states licensed nurses (Gross, 1984). During the 1990s, regulation was quite popular, and numerous additional professions became regulated. During the latter part of the 1990s, however, there began a movement to slow the proliferation of regulation and some occupations were even deregulated. Still today, states carefully scrutinize proposed new occupational regulations.

The right of the states to regulate the various aspects of professional practice stems from their inherent police power conferred upon them by the 10th Amendment of the U.S. Constitution. The U.S. Supreme Court firmly established the legitimacy of the state’s use of the police power to regulate occupations in its 1889 landmark decision in Dent vs. West Virginia (Hollings, 1997).

One of the residual effects of physicians becoming the first health care group licensed by the state is that there is still the continuation of a legislative scheme which grants physicians an exclusive and all-encompassing scope of practice for all things medical or health-related (Safriet, 1993).
Why it all Began

The four primary reasons for regulation cited in the literature are: 1) information asymmetry, 2) bundling of services 3) secondary harm, and 4) forum for complaints.

Information Asymmetry
A frequently articulated reason reflects the asymmetric access to information about the nature and quality of services between practitioner and consumer (Graddy, 1991). It is almost impossible for the average consumer to collect and evaluate information about health care because it is technically complicated and the consumer’s use of the services may be infrequent. Although access to information is rapidly changing through the explosion of information available from sources like the Internet, the time it takes to search may be costly and the consumer may have difficulty evaluating the information. The fact remains that there is need for timeliness and expediency when dealing with illness and injury. Even consumers who would be willing to evaluate a number of potential resources before making critical decisions may be prevented from doing so if they are in shock, grieving, or otherwise unable.

Bundling of Services
The majority of healthcare professionals are employees of hospitals and other types of health care agencies. As such, the agency and the employees are "bundled". When you choose a hospital, you are restricted to those providers affiliated with it. Or, if you choose a provider, you are restricted to care at his or her affiliated hospital. Regulation of health care providers provides some assurance that providers in all settings have met government set requirements before entering practice.

Secondary Harm
Health care regulation attempts to provide safeguards when there can be potential risk to multiple persons affected indirectly by services provided to others (Cox & Foster, 1990). As an example, an incompetent healthcare provider who fails to identify an infectious disorder may not only affect the client at hand, but also contributes to the unknowing spread of the disease.

Forum for Complaints
The fourth need for regulation reflects the core American democratic principles of checks and balances in government to protect the rights of citizens. Regulatory boards serve as an objective third party when dealing with citizen complaints regarding services. When consumers take complaints to the employers of health care providers, employers have a vested interest that can affect the perception of behavior and events. Regulatory boards provide a more objective system of checks and balances for the public and provide a forum to hear citizen concerns.
Current State of Governmental Occupational Regulation

“Regulation is one of the most important activities that governments perform, because it constrains and shapes the important decisions that economic actors make. Whether regulation is prominent...or behind the scenes..., its political-economic affects are important and pervasive throughout the economy” (Brinegar 2004 quoting P. Teske).

All experts agree that occupational regulation has a tremendous political and economic impact on our society; yet, for the most part it remains out of public view.

Current estimates provide for over 1100 categories of regulated professions and occupations. However, fewer than 60, or less than 6%, of these are regulated by all 50 states (Brinegar, 2004). Kleiner (2000) estimated that 18% of the workforce requires a license to legally do certain types of work. That means that a higher percentage of the workforce is licensed than belong to a union or are directly impacted by the federal minimum wage.

While there is a lot of literature written on occupational regulation, there are few comprehensive resources encapsulating the state of occupational regulation overall, healthcare profession regulation, or regulation of specific occupations. Instead, the information must be gleaned from numerous sources. And, unfortunately, the most accessible data sources often have slight inconsistencies since the data is always changing.

Gale Research Inc. previously published a comprehensive sourcebook on professional and occupational regulation; however, its last publication was the 1993 version of Professional and Occupational Licensing Directory: A Descriptive Guide to State and Federal Licensing Registration and Certification Requirements. The primary current sources are the online Occupational Outlook Handbook of the Bureau of Labor Statistics (http://www.bls.gov/ooh/ and the Book of the States published by the Council on State Governments (Volume 36, 2004). Beyond these two sources, information must be gathered from the individual health care professional associations, federations of state boards, individual state boards, and/or specific healthcare boards of the state boards.

What follows below is a summary of the entry requirements of major health professions. More detailed narratives are included in Appendix A.
## Summary of Healthcare Occupation Entry Requirements

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Statutory Regulation</th>
<th>Voluntary Certification</th>
<th>Minimum Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audiologist</td>
<td>Licensure in 46 states</td>
<td>Yes</td>
<td>Masters (Doctorate by 2012)</td>
</tr>
<tr>
<td>Cardiovascular Technician</td>
<td>None</td>
<td>Yes</td>
<td>Associates</td>
</tr>
<tr>
<td>Clinical Laboratory Technician</td>
<td>Licensure in some states*</td>
<td>Yes</td>
<td>Associates</td>
</tr>
<tr>
<td>Professional Counselor</td>
<td>Licensure in 41 states plus DC, Certification in 5</td>
<td>Yes</td>
<td>Masters</td>
</tr>
<tr>
<td>Dietitian</td>
<td>Licensure in 35 states plus DC, Certification in 8, and Registration in 1</td>
<td>Yes</td>
<td>Bachelors</td>
</tr>
<tr>
<td>Music Therapist</td>
<td>None</td>
<td>Yes</td>
<td>Bachelors</td>
</tr>
<tr>
<td>Nuclear Medicine Technologist</td>
<td>Licensure in some states*</td>
<td>Yes</td>
<td>Certificate or Associates</td>
</tr>
<tr>
<td>Nurse</td>
<td>Licensure in 50 states plus DC</td>
<td>No</td>
<td>Associates – LPN</td>
</tr>
<tr>
<td>Occupational Therapist</td>
<td>Licensure in 50 states plus DC</td>
<td>Yes</td>
<td>Bachelors (Masters in 2007)</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>Licensure in 50 states plus DC</td>
<td>No</td>
<td>Doctorate</td>
</tr>
<tr>
<td>Physical Therapist</td>
<td>Licensure in 50 states plus DC</td>
<td>No</td>
<td>Bachelors</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>Licensure in 45 states plus DC; Certification in 5</td>
<td>Yes</td>
<td>Certificate or Masters</td>
</tr>
<tr>
<td>Radiologic Technologists</td>
<td>Licensure in 24 states; Certification in 6; Registration in 2</td>
<td>Yes</td>
<td>Certificate or Associates</td>
</tr>
<tr>
<td>Respiratory Therapist</td>
<td>Licensure in 38 states plus DC; Certification in 2; Registration in 2</td>
<td>Yes</td>
<td>Associates</td>
</tr>
<tr>
<td>Surgical Technologist</td>
<td>Registration in some states*</td>
<td>Yes</td>
<td>Certificate or Associates</td>
</tr>
</tbody>
</table>

**Sources:** Bureau of Labor Statistics' Occupational Outlook Handbook Online, Council on State Governments' Book of the States, 2004, federations of state boards, and individual professional societies. Note that some sources have conflicting data so the numbers may not be exact.

*Data unobtainable from secondary research.*
Some observations from the data:

- Most of the professions regulated in all states have national standards and a national examination (occupational therapy, physician assistants, physical therapy, nursing, pharmacy). Of course, it is impossible to glean whether the existence of national standards/examination was a contributing factor to success or an artifact of licensing in the profession.

- As a general rule, the professions with an associate degree as the entry have had less success in achieving regulation than those with higher entry degrees. Of course, there is no way to know if the level of degree is indicative of success or just coincidental.

**Regulatory Trends**

Following are regulatory trends cited in the literature that ASET should keep in mind when navigating the occupational regulation arena.

**Regulatory Board Reform**

In response to consumer advocacy group demands, regulatory boards have been increasingly making changes to their structures. In response to the criticism that self-regulated are self-centered, many states have increased the number of public members on their regulatory boards. Another major reform has been the centralization or coordination of regulatory activities under umbrella agencies rather than independent agencies. Advocates of this reform suggest that centralization provides administrative efficiency, reduces the influence of professional organizations, and simplifies the legislative oversight of occupational regulation (Schmidt and Shimberg, 1996).

**Telepractice and Occupational Regulation**

Telepractice (the use of technology to provide professional services where the consumer is in one location and the professional is in another) has the potential to improve the quality of care provided by healthcare and other professions by providing ongoing education and global access to services. The use of more interactive technologies such as the Internet are part of the growing global infrastructure are forcing change in a state regulatory system that traditionally imposes barriers on practice across state boundaries (CLEAR 2000).

**Technology and Occupational Regulation**

*The Internet*

The immergence of the Internet has brought the potential for consumers to purchase quality products at lower costs than through traditional sources since 1) conducting business on the Internet reduces transaction costs and 2) consumers are more easily able to gather information on prices and quality.
However, current state licensing systems may be restricting the potential benefits to commerce provided by the Internet. As an example, obtaining contact lenses in Connecticut requires the supervision of a “licensed optician and in a registered optical establishment…” This limits the ability of consumers to take advantage of the economic benefits of Internet transactions (Kleiner, 2002).

**Use of Technology by Regulatory Boards**
While computer-based testing can afford candidates greater access to exams and the Internet can afford consumers greater access to information on licensees, traditionally resource-poor regulatory boards continue to grapple with the benefits of technology versus funding associated with implementation of technology-based systems.

In addition, computer-based testing brings with it new concerns about security and consumer access to information raises questions about practitioner rights to privacy (Brinegar, 2004).

**Continuing Competence**
While the initial licensing process is designed to ensure practitioners meet certain standards qualifying them to enter practice, the current challenge to regulatory boards is how to ensure licensees remain competent throughout their careers. Traditionally, it has been only through the disciplinary process that deficiencies in practice are addressed – and that affects very few licensees. Some boards enforce continuing education requirements, but critics cite that they are too general to have much impact on any individual’s specific learning needs. Some boards are considering the use of self-assessment instruments to target educational needs (Brinegar, 2004).

**Proliferation of Voluntary Credentials**
In response to new concerns about the rising costs of regulation, in the 1990’s, states began to more thoroughly evaluate new regulatory bills, and the result is that regulatory bills are much harder to achieve. In addition, it takes a lot of time and resources for a professional group to advocate for state-by-state licensure (Schmidt and Shimberg, 1996).

In response, emerging professions increasingly began to develop their own credentialing systems, usually in the form of certification. Sometimes, certification is initiated as an alternate to statutory regulation; however, sometimes it is an intentional step towards gaining licensure since having national standards and a testing program in place benefits the licensing initiative. Occupational therapy did just that: they developed a voluntary certification through the National Board for Certification of Occupational Therapists (NBCOT), then advocated for licensure. Now, all 50 states regulate the practice of occupational therapy and all utilize the NBCOT’s examination.
Potential and Realized Impacts of Regulation

The potential and realized impacts of regulation, as cited in the literature, are described in this section. Advantages and disadvantages are not distinguished, as often the same impact can be viewed by one population as an advantage and another as a disadvantage. As an example, studies have shown that licensure has resulted in higher incomes for the licensed professionals; that could be viewed as an advantage by the professionals, but certainly a disadvantage to consumers since it often translates into higher costs for services.

While this white paper attempts to present all perspectives on occupational regulation, it is important to point out that the bulk of the printed research and opinion from economists, sociologists, psychologists, historians, political scientists, and lawyers is clearly critical of licensing. Says Stanley Gross in *Of Foxes and Hens*, a book devoted to occupational licensing:

“The consensus of research reviewed in this book is that licensing fails to assure its legitimate purpose of furthering competence and honesty in service. There is no convincing evidence from the research on occupational licensure of a tie between licensure and the quality of service. Instead, the evidence, which is commonplace in the literatures of economics and sociology, indicates the purposes realized by such regulation have been to maintain and increase the incomes of those who are licensed and to provide them with career security. It does so by creating monopolies in particular services and by giving licensed profession as the power of self-regulation. The result has been to validate occupations, through legislation, to increase the cost of services by controlling the entry of practitioners, and to reinforce the public inclination to depend on experts by misleading them into believing they are being protected. The self-regulators have also been indifferent to the quacks and incompetents in their own ranks and have ignored legitimate demands for public accountability (Gross, 1984).

The cited impacts of licensure are described below. Supporting data is included, when available. It is important to note that these are impacts cited in the literature that ASET should consider. Readers should consider the following as potential impacts/outcomes of licensure as identified by the literature, not as absolutes.

Enhances public safety / improves patient care

The primary function of licensure is to protect the health, safety, and welfare of the public. However, the U.S. Bureau of Economics has stated: "While a few studies indicate that higher quality levels may result from such licensing restrictions, a majority of the work to date finds quality to be unaffected by licensing or business practice restrictions associated with licensing. In some cases quality actually decreases" (Cox and Foster, 1990).
And, in fact, a study in 1981 showed that in each of seven licensed professions observed, the restrictions on the profession were ultimately detrimental to consumers in all cases (Young, 1987 referring to Carrol and Gaston, 1981).

**Ensures minimum standards for professionals**

It is espoused that licensure protects practitioners and the public by requiring that all practitioners in a given profession meet the same set of minimum standards.

This is true, but only to a certain extent: in many cases there are exemptions to the laws – so that certain classes of workers, such as those in the armed services or veterans administration, teachers, students/interns, etc. are not subject to the requirements of the law. And, it can contain provisions for trainees to continue practicing for a specified amount of time to enable them to meet the requirements of the law to become licensed.

In addition, there is the risk that the quality standards become lower than desirable due to the lobbying efforts of other professional groups.

**Decreases availability of professionals and restricts consumer choice**

By raising the standards that all practitioners have to meet, licensure may deny some practitioners entry to the field until they meet those standards, or perhaps never. This may restrict the supply of practitioners in a given field. Because the supply of practitioners is diminished, consumer choice may also be restricted (Young, 1987).

One could see how acts such as the Wyoming Respiratory Care Act, HBO175, could accomplish this. If all sleep diagnostic procedures and neurodiagnostics were required by law to be accomplished by respiratory therapists (RTs), facilities without RTs on staff might be prevented from offering those services.

In the field of vision care, three types of practitioners provide goods and services: ophthalmologists, optometrists, and opticians. Historically, licensure scopes of practice specify that ophthalmologists diagnose and treat eye disease; ophthalmologists and optometrists perform eye examinations and prescribe and dispense eyeglasses and contact lenses; and opticians only dispense eyeglasses and contact lenses.

As of February 1992, thirty states authorized optometrists to use drugs for diagnostic and therapeutic purposes. However, in the states without therapeutic pharmaceutical agent laws for optometrists, optometrists must still refer patients to ophthalmologists for treatment when evidence of eye disease is present.

In twenty-two states, laws prohibit the fitting of contact lenses by opticians practicing independently from optometrists or ophthalmologists. The laws in four of those states prohibit any optician from fitting contact lenses. In sixteen states the laws permit opticians to fit contact lenses, but only under the supervision of ophthalmologists and
optometrists. In two states, opticians may dispense contact lenses, but only with a prescription that meets specific criteria (Haas-Wilson D 1992 and Hollings 1997).

The claim is made that licensure has not kept up with advances in technology and practitioner competencies, and that the laws are limiting what professionals can reasonably do and restricting public’s access to services.

**Results in higher salaries to licensed professionals and higher costs to consumers of services**

The link between occupational licensing, decreased supply of practitioners, and the increased professional salaries and cost of goods and services to consumers has been clearly documented. Following are a few studies supporting this finding.

A study of clinical laboratory personnel found that stringent licensing laws increased the relative wages of licensees by 16% (White, 1978).

A study of fees for dental services found that the price of dental services and the average incomes of dentists were 12 to 15% higher in states that did not have reciprocity agreements with other states (Shepard, 1978).

A study of the relationship between professional control of an eye care occupation and the price of eyeglasses compared the prices between restrictive and unrestrictive states. They found prices to be from 25 to 40% higher where there was greater professional control (Benham and Benham, 1975).

A study on physician and alternative medicine practitioner licensure found that physicians in states with stricter regulations on alternative medicine earn significantly higher incomes (Anderson, Halcoussis, Johnston, and Lowenberg, 2000).

**Increased professional prestige for the profession being licensed**

While this author was unable to find any research data to support the concept that licensure attainment actually does increase the prestige of the profession in question, it certainly is the case that this is one of a multitude of reasons licensure is sought.

**Increases potential for third-party payment of services**

Many allied health professions have advocated for licensure believing that licensing increases the potential for third-party payment for professional services. And, regulation expert Benjamin Shimberg wrote in 1996 that insurance companies usually refuse to pay for services unless the provider is licensed (Schmitt and Shimberg). Now, in 2004, insurers do rely upon statutory regulation as a criterion for granting direct reimbursement; however, they also rely upon nationally administered certification programs (especially in those professions that are not licensed in any or all states).
As an example, the American College of Nurse Practitioners indicates on its Website that Federal law mandates direct reimbursement to pediatric and family nurse practitioners providing services to children, and that individual states may also opt to reimburse other health care services provided by other nurse practitioner specialties (ANPA Website 2004).

The following passage, excerpted from the American Academy of Audiology (AAA 2004) illustrates the confusion and complexity surrounding the requirement of licensure and/or certification for Medicare reimbursement.

“Audiologists should know that they are not required to have any professional association credential, including the American Speech Language Hearing Association's Certificate of Clinical Competence - Audiology (CCC-A), in order to receive reimbursement from Medicare.

The Medicare statute was amended in 1994 to define "qualified audiologist" in terms of state licensure. Thus, an individual with a master's or doctoral degree in audiology who is licensed as an audiologist by the state in which he or she provides services is a "qualified audiologist" for purposes of Medicare. In states that do not have licensure laws, the statute defines a "qualified audiologist" as an individual with a master's or doctoral degree in audiology who has successfully completed 350 clock hours of supervised clinical practicum, performed not less than nine months of supervised full-time audiology services after obtaining their degree, and successfully completed a national examination in audiology.

Thus, a Medicare carrier may not refuse to issue a Medicare provider number and may not deny a claim for reimbursement because an audiologist does not maintain the CCC-A or is not listed in the ASHA directory. If your Medicare carrier does this, please notify the Academy.”

Private insurers often follow the Medicare guidelines; however, they alone decide who they reimburse, how much, how often, and for what services. Each company sets their own standards concerning which professionals they choose to reimburse and under what conditions. They have the right and the power to review and change any of their current policies.

**Incites Turf Issues among the Professions**

That statutory regulation incites turf “wars” among the professions is not surprising. Licensure by its very nature identifies who is and is not legally able to perform certain duties, and the various health professions often have differing opinions on that.

Several recent articles highlight the ongoing turf struggles among respiratory therapists, electrononeurodiagnostic technologists, and polysomnography technologists. The issue of most contention is who is qualified and legally able to perform sleep diagnostic procedures and neurodiagnostic procedures.
Another current example is that surgical technologists and perioperative nurses are in disagreement about who should be able to function in the operating room circulating role.

**Final law can differ greatly from initial bill**

Because of the turf issues that are naturally incited by licensure, often there are several parties at the table negotiating the bill and if it becomes law, negotiating the administrative rules. The risk to the initiator of the bill is that a law can be passed that is very different from the one initiated. Some of the possible ways in which it can differ include:

- Categories of professionals can be included or excluded.
- The scope of practice can be modified.
- Qualifications can be modified.
- Non-licensed individuals in government, industry, education, and other areas can be exempted.
- It can contain provisions for trainees to continue practicing for a specified amount of time to enable them to meet the requirements of the law to become licensed.

It is possible that the bill/law is so changed that it no longer accomplishes the goal of the initiating professional group.

**Limits practitioner mobility from state to state**

Since licensure is carried out at the state level, each state is free to develop its own divergent standards and requirements. This can limit or even prevent practitioners from practicing in multiple states and/or moving from one state to another. (Siefert, 1999)

On study (of 14 licensed occupations including six healthcare professions) found that in the regulated occupations mobility among the states was significantly reduced in the states with tougher licensure standards (Kleiner, Gay, Greene, 1982).

Boulier found that restrictive licensing limits the mobility and affects the geographic distribution of dentists (1980).

A strategy to counter this potential impact is to advocate for national licensure standards and/or reciprocity clauses.

**Excludes qualified professionals from practice**

Since licensure establishes a scope of practice that can be legally practiced by only those professionals described in the act, other potentially qualified professionals can be restricted from practicing certain tasks.
The case has been made that overly restrictive counselor licensure requirements (requiring a PhD in psychology) were resulting in some categories of counselors – such as school, family, marriage and drug counselors – being denied access to licensure and the practice of the profession. (Carroll M et al, 1977 or Hollings, 1997). The issue appears to have been resolved with most states now issuing separate credentials to “professional counselors” versus counselor or therapists in these areas, but the point remains that licensure requirements can restrict the practice of members of a profession.

Acts currently and potentially proposed by respiratory therapy (such as the Wyoming Respiratory Care Act, HBO175) could effectively prevent polysomnographic technologists and electroneurodiagnostic technologists from practicing in many of the areas for which they are trained.

**Restricts healthcare facilities in optimum use of personnel**

Since licensure establishes a scope of practice that can be legally practiced by only those professionals described in the act, other potentially qualified professionals can be restricted from practicing certain tasks. This can restrict healthcare facilities in determining the optimum use of personnel for their specific environment. This could result in inefficient operations, increased cost of operations, and increased cost to consumers of services. In the worst case, it could prevent a facility from offering a service, to the detriment of the public it serves.

**Restrains innovation / Establishes rigid standards in a fast-changing environment**

Changes in societal needs of professional services and influences of technology on practitioner roles suggest that rigid scopes of practice may be problematic.

Professions which have rapidly grown, and whose uses continue to diversify, could find themselves limited by licensing statutes in some states due to outdated scope of practice descriptions which legislators have been hesitant to change once in place.

The vision care example cited earlier demonstrates this impact too. Several states still require optometrists to refer patients to ophthalmologists for treatment of eye disease despite the fact that thirty states have authorized optometrists to use drugs for diagnostic and therapeutic purposes and have witnessed no indication of quality decline.

**Negative Impact on Association Membership or Certification**

Although not formally cited in the literature, some associations have speculated that membership in the association has decreased. The rationale is that members, faced with bills for licensure, certification, and membership, prioritize licensure which is required to practice and voluntary certification which is often required by their employer.
How Governmental Occupational Regulation Works

Governmental Authority to Regulate

The Tenth Amendment reserves to the states all powers not delegated to the United States by the U.S. Constitution. The power to regulate occupations is based upon the police power of the state to enact reasonable laws necessary to protect its citizens. States may exercise all powers inherent to government except those explicitly reserved to the federal government or pre-empted by federal law. Therefore, all health care professional regulation is performed at the state level – enacted by the state legislature and then administered by the state regulatory agency given authority by the act. That means that a state legislature may enact a practice act and then delegate authority to a state regulatory board to enforce that practice act.

How Governmental Occupational Regulation Occurs

The process of gaining state regulation usually begins with a group (professional society, trade association, or labor union) interested in the legislation drafting a proposed statute that defines the occupation and activities.

The next step is to find a sponsor or sponsors – members of the legislature who support the bill and are willing to campaign for it. The occupational group then puts its resources into support for the bill through:

- Hiring lobbyists
- Letter writing campaigns
- Testifying before legislative committees
- Meeting with individual legislators

Ordinarily “protection of the public” is the primary rationale used in support of the bill.

The bill typically:

- Defines the authority of the board, its composition and powers
- Defines the occupation and (if a practice act) the boundaries of the scope of practice
- Identifies types of credentials and titles
- States the requirements for the credentials
- Protects titles
- Identifies the grounds for disciplinary action
While a bill is under consideration, public comment periods are provided to allow the members of occupation of concern, students and the public to submit written comments or participate in hearings.

If the bill is passed into law, policy making moves to an administrative stage. Boards are authorized to develop administrative rules and regulations that are used to clarify or make the statutes more specific. Rules and regulations must be consistent with the Act, cannot go beyond the law, and, once enacted, have the force and effect of law. Public comment periods are provided here also to allow all interested parties to participate in the rule-making process by submitting written comments or participating in rule-making hearings.

This authorization should not be overlooked as there is the opportunity for major changes to occur at this stage – affecting not only the profession being regulated, but others as well. As an example, in 1991 the Virginia Board of Nursing, in response to a letter to the board asking who had circulating responsibilities in the OR, responded that the registered nurse may not delegate circulating duties to a certified surgical technician, certified nursing assistant, or to any unlicensed person. While the proposal had not yet received final approval at the time the article had been written, the main point to be made is that even though the proposed legislation was not a law and had not gone through the legislative process, it would have the force of law if approved (Franko, 2003). Bottom line, getting the bill passed is just the first step. Professions must work closely with the Board to develop the regulations implementing the bill and then closely monitor the law for any proposed modifications / opportunities to comment.

Two processes that have been important in their contributions producing a well-managed regulatory system are sunrise and sunset legislation:

**Sunrise Legislation**
Sunrise is a process under which an occupation wishing to receive statutory recognition must propose the components of the legislation, along with the cost and benefit estimates of the proposed regulation. The professional must then convince the legislators that consumers will be unduly harmed if the proposed legislation is not adopted. It is estimated that at least 19 states have adopted sunrise legislation (Brinegar, 2004).

**Sunset Legislation**
Sunset laws require that licensure boards, as regulatory agencies, be abolished according to a specified timetable, unless they demonstrate the continued need for regulation and effective functioning (Shimberg, 1982). It is estimated that 36 states have adopted sunset legislation (Brinegar, 2004). While it has been a rare occurrence that sunset reviews result in elimination of boards, they have been responsible for a number of improvements to the regulatory system.

The sunrise and sunset periods are critical junctures since they both present opportunities to eliminate or modify proposed and existing regulations.
Role of a Professional Association in Statutory Regulation

The primary roles of a professional association in occupational regulation are those of advocating, organizing, financing, and communicating. Not surprisingly, a study of 35 licensed occupations in Illinois found that professional organizations with political influence and financial resources are more likely to become licensed (Kleiner, 2003).

Professional associations are often involved in the following activities related to statutory regulation:

- Monitoring and tracking legislative activities of the states
- Communicating with members regarding legislative issues
- Educating members on the legislation process
- Mobilizing grassroots volunteers to engage in the legislative process
- Organizing efforts to initiate or influence legislation
- Developing model acts and other legislative tools members can use to influence legislative issues

Following are descriptions of professional associations and the roles they play in occupational regulation of their respective fields.

Monitoring Regulations and Informing Legislature of New Data
In 1994, the Joint Commission on Accreditation of Healthcare Facilities deleted their previous requirements that a registered nurse be assigned to circulating duties, instead letting individual hospitals decide who is competent to be assigned the circulating duties.

The Association of Surgical Technologists (AST) updated a state-by-state examination of state statutes pertaining to surgical technologists and their ability to act as the circulating role within the operating room and sent out letters to each state's board of nursing, boards of medical examiners, and departments of health requesting information on their regulations of the scrub and circulating roles in the operating room (http://www.ast.org/ Accessed July 2004). Then, they initiated a campaign to educate legislature on the new data.

This example models the important role associations play in monitoring regulations and providing relevant information to decision-makers.

The Power of Organization
According to the AORN, surgical technologists (STs) began exploring legislation to credential technologists in 1995 and AORN simultaneously developed strategies to influence any final legislation. They describe an ST bill in Washington state that would have identified a scope of practice for STs that included circulating and assisting activities. AORN actively met with legislators and representatives of the Association of
Surgical Technologists to effect change. Ultimately, STs were registered (given title protection, but no scope of practice were granted). As of the writing of the article, the issue still being debated was in the implementation of the legislation. STs were advocating that they should report to the board of medicine while perioperative nurses were advocating they should report to the board of nursing (Seifert, 1999).

An important point illustrated here is how an organized effort to change or halt proposed legislation can make a significant impact.

Model Practice Acts
Many associations generate model practice acts with the goal of standardizing legislation across states. ASET does have a practice act; other examples of associations that provide model acts include:

- American Association of Physician Assistants’ model act is available at http://www.aapa.org/gandp/statelaw.html
- American Dietetic Association provides links to sample practice acts on its Web site at http://www.eatright.org/Public/83_12599.cfm

It Takes Time
Initial investigations into the study of licensure for dietetics began in the early 1970s, but by January 1983 only two states had actually passed licensure bills. By April 1984, three states had passed licensure bills and three others had passed entitlement acts; altogether, 22 of the states had chosen to pursue mandatory licensure.

Up until 1982, the American Dietetic Association maintained a neutral viewpoint towards licensure. In that year, the association allocated funds to provide assistance and to enable the collection and distribution of resource materials. Over the next few years, they developed a model licensure bill and developed clear definitions for various important terms and titles. They also created an office of governmental affairs to monitor licensure efforts and to serve as a communications link among the states.

Despite the associations’ efforts, the 1984 Study Commission on Dietetics indicated that it “has mixed feelings about the licensure movement because it recognizes many potential problems” and that “it objects most to the principle that determination of a dietitian’s qualification to practice will be placed in the public arena.” Further, it cited concerns about scopes of practice in that they “may become restrictive and hamper future attempts to expand the professional activities of the dietitian.” Finally, the commission indicated that they felt “defensive efforts to protect professional turf often have negative, rather than positive impact in the long run.” Ultimately, though, it also indicated that “given the strength of the movement among the membership, however, it is only realistic for ADA to work actively for its success.” (1984 Study Commission on Dietetics, 1985).
The case of dietetics licensure illustrates two points:

1. Enacting regulatory legislation takes time.

2. While the association held a neutral viewpoint on licensure for years, efforts proceeded in the states. Eventually, the association took a stand, provided a model act, and even initiated agreements with states to use its credentialing examination; however, by this time, several states had already enacted regulations with divergent standards. The point: neutrality doesn’t provide direction or leadership to the states, and without national direction, states can all take a different route.

Communicate, Educate, and Organize
The American Dietetic Association now has a strong legislative infrastructure, including:

- Recently published a “Report on State Issues” including recommendations on how the association can strengthen its public policy initiatives that can be accessed at http://www.eatright.org/Member/Files/FinalReport.pdf
- Has a strong grassroots infrastructure to support their public policy mission through member involvement, including:
  - **Grassroots Network**: This consists of ADA members nationwide who represent and act as liaisons to other members in their state and/or congressional district.
  - **Legislative Network Coordinator (LNC)**: The individual from each affiliate, who organizes and mobilizes ADA members at the state level to track and respond to federal public policy issues and is the primary link to ADA government affairs staff.
  - **Grassroots Liaison (GRL)**: The person(s) from the congressional district who works to maintain contact with his or her own congressional representatives.
  - **Legislative Chair and a Legislative Committee**: Individuals appointed in most affiliates to oversee state issues important to their home state.
  - **Licensure Chair for ADA affiliates**: People who track issues that are facing their state regarding licensing. The Licensure Chair monitors all issues relating to the licensing of dietetics professionals in the state and plans activities as needed.
  - **ADAPAC**: ADA's political action committee. ADAPAC collects funds to be donated to political candidates who support ADA's priorities.
  - **The Policy Initiatives and Advocacy Team staff**: This group of ADA staff are dedicated to identifying issues and advocating for the profession, manage ADAPAC, and provide support and training for the grassroots network, LNCs, Dietetic Practice Groups and ADA affiliates nationwide.
• **Communication:** Several resources are provided by ADA for grassroots activist members: (1) a weekly e-newsletter, (2) monthly communications vehicle and (3) the monthly journal. In addition, member alerts, testimony and position statements are regularly posted on the Web site.

The Association of Surgical Technologists has a strong legislative section on its Website, [http://www.ast.org](http://www.ast.org), where it educates members on the legislative process, including guiding members on locating their elected officials and how to find out what their state legislation is. They also provide to their members very clear positions on legislative issues. Following are screen shots of pages from their legislative section of their Web site.

AST also developed the following brochure for legislators – to ensure that their message was clear.
Surgical Technologists: How These Skilled Health Care Professionals Can Reduce Health Care Costs in Your State

Why Should Surgical Technologists Provide Care in Your State?
In today's cost-conscious health care environment, health care facilities must find ways to hold down costs without compromising quality. Surgical technologists are helping health care facilities do this in surgical suites in every state in the country. This brochure describes the benefits of employing surgical technologists and addresses issues regarding their utilization.

Who Are Surgical Technologists?
Surgical technologists (formerly called operating room technicians) perform many different responsibilities in the operating room. They act as the scrub person, as the circulator, and as the first assistant on the surgical team. Surgical technologists' responsibilities involve preparing the operating room and instruments, equipment, and supplies that will be needed; positioning and preparing the patient for surgery; and passing instruments, sponges, and sutures to the surgeon. Surgical technologists are the surgical team's expert in aseptic technique, being constantly vigilant for any break in the technique that could endanger the sterile field so necessary to the successful outcome of the operation. Those not familiar with the profession may assume surgical technologists are nurses or nursing assistants, which they are not. Surgical technologists belong to a separate non-nursing profession of highly skilled, credentialed allied health professionals that possesses specialized education and training to work specifically in the operating room.

How Can You Support Your Constituents Who Are Surgical Technologists?
Carefully scrutinize any purposed regulations that could restrict the use of surgical technologists. There have been efforts made by nursing groups in many states to regulate the role of surgical technologists and restrict their full utilization, particularly in the first assistant and circulating roles. Because hospital accreditation standards do not require an RN to circulate, nursing groups are attempting in some states to make this a legal or regulatory requirement at the state level. These efforts will lead to hospitals having no choice in the provider they employ and could cost CSTs their jobs. If nursing groups are successful in their efforts to restrict this profession, it could result in your constituents who are surgical technologists losing their jobs.

Support state registration of surgical technologists. 
AST and its membership support state registration of surgical technologists in order to protect the public without the high cost of licensure. This would be accomplished by utilizing the established national certification along with a state registration to allow only those practitioners who have proven their level of competency to register with the state under the Board of Medical Examiners. This would ensure the public's safety at a low cost of administering a regulation with the cost financed by the practitioner. This registration would safeguard the patient by utilizing only those CSTs who have been properly educated and trained to assist the surgeon and who has met a recognized competency level.

On behalf of all surgical technologists in your state, we hope that you would be willing to sponsor this legislation. AST and the surgical technologists whom you represent would appreciate any support you can give them.

How Can You Assure the Most Cost-Effective Care in Your State?
The utilization of surgical technologists will help bring down costs and will assure safe, competent care for surgical patients. Your state laws and regulations should allow the full utilization of surgical technologists so that you can realize the benefits of their skills and knowledge.

Because this profession is little known outside of the surgical suite, there have been regulations and legislation proposed at the state level that could restrict the use of these valuable health care professionals. AST asks for your support and would appreciate your efforts on behalf of the surgical technologists in your state.
Similarly, the American Speech-Language-Hearing Association provides legislative issues briefs to its members that they can print out and take with them on visits with legislators. Samples can be accessed at http://www.asha.org/about/legislation-advocacy/issue_briefs.htm.

It also articulates a public policy agenda and communicates it to members annually; it can be accessed at http://www.asha.org/about/legislation-advocacy/federal/agenda/2004ppa.htm.

All of the above examples provide models for ASET to consider, learn from, and mimic in crafting its own legislative agenda and initiatives.

**Setting the Standard and Keeping in Contact**
The National Board for Certification in Occupational Therapy (NBCOT) works in partnership with state regulatory agencies to protect the public interest. All recognize NBCOT's occupational therapy certification examinations. NBCOT's Certification Examination Development Committee (CEDC), has one state regulatory member who serves as a liaison between the CEDC and state regulatory agencies.

NBCOT’s State Regulatory Advisory Committee (SRAC) is a Board of Directors-level committee. Its members include occupational therapy regulators from various states who meet with NBCOT semi-annually to monitor, review and analyze national and state regulatory trends and issues. Committee members also meet with chairs of state regulatory agencies to solicit and share information about current issues and trends in state regulation.

State Regulatory Agencies from across the country interact extensively with NBCOT. The agencies report disciplinary actions to NBCOT; and request that NBCOT publish the actions. From time-to-time, state regulators may review NBCOT certification examinations under secure conditions. Regulators also attend NBCOT's Annual State Regulatory Conference and receive NBCOT publications.

The NBCOT has established itself as the central hub for OT occupational licensing. While not a federation or association of boards, it acts in a similar manner. By being the hub, the NBCOT ensures it is in a position to not only monitor legislative activity, but influence it as well.

**Role of an Association or Federation of State Boards**
For several healthcare professions, there is a federation or association of state boards. Sometimes the purpose of the federation is solely to facilitate communication among its member boards. Often, the federation exists to standardize licensure across the states through establishment of model practice acts or development of licensing examinations to be used by the states, for example.
Following are usual functions of an association or federation of state boards:

- Facilitate the communication among member boards
- Provide a forum for exchange of information and ideas among member boards
- Engage in research on matters related to occupational regulation
- Encourage consistent standards among the member boards
- Develop national standards for the member boards to implement
- Develop a model practice act and encourage its use
- Develop (and possibly administer) an examination program for the member boards to implement
- Compile a disciplinary databank of records related to final adverse actions taken against licensees in all jurisdictions
- Compile all statutes and regulations of its member boards
- Provide training and educational materials to member boards

Following are descriptions of the many federations or associations of healthcare-related state boards, along with a summary of their primary functions or products.

**Medicine** – The Federation of State Medical Boards and the National Board of Medical Examiners (NBME) develop the United States Medical Licensing Examination (USMLE) as a single, uniform examination for medical licensure. The FSMB also has a model practice act at [http://www.fsmb.org](http://www.fsmb.org).

**Nursing** – The purpose of National Council of State Boards of Nursing is to provide an organization through which boards of nursing act and counsel together on matters of common interest and concern affecting the public health, safety and welfare, including the development of licensing examinations in nursing. NCSBN's programs and services include developing the NCLEX-RN® and NCLEX-PN® examinations, performing policy analysis and promoting uniformity in relationship to the regulation of nursing practice, disseminating data related to the licensure of nurses, conducting research pertinent to NCSBN's purpose, and serving as a forum for information exchange for members.


**Pharmacy** – The National Association of Boards of Pharmacy develops the North American Pharmacist Licensure Examination (NAPLEX) for use by the boards of pharmacy as part of their assessment of competence to practice pharmacy. Also available from NABP is the *Pre-NAPLEX which can be used to familiarize students with the NAPLEX testing experience.*

The NABP also develops the Multistate Pharmacy Jurisprudence Examinations (MPJE) which combine federal and state-specific law questions to serve as the state law examination in participating jurisdictions. The MPJE is based on a national blueprint of pharmacy jurisprudence competencies; however, the questions are tailored to the specific law in each state.

The NABP also offers the Foreign Pharmacy Graduation Examination Committee (FPGEC) Certification program which is accepted by more than 48 state boards of pharmacy as a means of documenting the educational equivalency of a candidate’s foreign pharmacy education. Foreign educated pharmacists awarded FPGEC Certification are considered to have partially fulfilled eligibility requirements for licensure in those states that accept the Certification.

NABP’s Disease State Management (DSM) examinations are standardized assessment tools designed to measure the knowledge and skills of pharmacists providing disease state management services to patients with asthma, diabetes, and dyslipidemia, as well as those undergoing anticoagulation treatment (http://www.nabp.net/ Accessed June 2004).

**Social Work** – The Association of Social Work Boards (ASWB) develops and maintains the social work licensing examination used across the country, and is a central resource for information on the legal regulation of social work.

**Counseling** – The American Association of State Counseling Boards (AASCB) is an association of bodies which are legally responsible for the registration, certification, or licensing of counselors within their jurisdictions in the United States of America. Its primary purpose is for communication. It does not provide a model act or licensing examinations.
Approaches and Alternates to Occupational Regulation

In considering approaches and alternates to governmental occupational regulation, four main options exist for ASET. They are:

- Maintain position of neutrality
- Advocate for no statutory regulation of END
- Advocate for statutory regulation of END
- Advocate for voluntary credentialing

This section looks at each of these options, discusses advantages and disadvantages, and the key variations within them.

One thing is apparent. Other professional groups, like respiratory therapy, are enacting legislation that can significantly impact END technologists. Regardless of which approach ASET ultimately chooses, it must consider its role in monitoring legislative activity and taking deliberate action to advocate for the END technologist in any existing or proposed legislation.

**Maintain Position of Neutrality**

ASET could maintain its current position of neutrality towards occupational regulation of END Technologists.

The advantages to ASET and to END technologists of “neutrality” include:

- Preserves END technologists’ freedom to choose whether or not to advocate for licensure at the state level
- ASET expends minimal resources on legislative efforts

The disadvantages of “neutrality” include:

- Lack of clear, consistent direction for the future of the profession
- Risk of divergent standards created by states
- Risk that unqualified providers harm consumer health, safety, or welfare
- Risk that END technology is subsumed within other occupational scopes of practice, thereby preventing practice by END technologists
- END technologists do not gain the recognition that state regulation can sometimes afford
Advocate for No Statutory Regulation of END

The "no regulation" option is most viable when the practice of a given profession is not likely to harm consumers even in its most dangerous and unethical extremes.

The advantages to ASET and to END technologists of "no regulation" include:

- Preserves END technologists’ freedom to choose whether or not to acquire credentials since none existing are mandatory to practice
- END technologists incur no additional costs for regulation requirements (training, testing, license fees)
- Preserves healthcare facilities’ freedom of choice in hiring and cross-training
- ASET expends minimal resources on legislative efforts

The disadvantages of “no regulation” include:

- Risk that unqualified providers harm consumer health, safety, or welfare
- Risk that END technology is subsumed within other occupational scopes of practice, thereby preventing practice by END technologists
  
  In fact, this has occurred, especially in the area of polysomnography. While RPSGTs are exempted in several state acts, END technologists are not.
- END technologists do not gain the recognition that state regulation can sometimes afford

Some of these disadvantages could be countered by other efforts. Even if ASET determines to advocate against direct regulation of END technologists, it may still actively attempt to influence the regulation attempts of other groups, such as respiratory therapists, physical therapists, and audiologists. The following actions could be taken:

- Attempt to defeat acts that include END tasks into other profession’s scopes of practice.
- Attempt to exclude relevant END tasks from existing or proposed acts.
- Attempt exemptions for END technologists to existing or proposed acts.
- Attempt to have END technologists written in as delegatory personnel within existing physician or nursing acts. (Licensed practitioners are permitted by some state laws to delegate some functions and duties, provided they are carried out under the control and supervision of the delegate.)

In addition, a non-regulatory approach might be for ASET to consider the possibilities in advocating for specific credentialing privileges at the hospital level. Credentialing privileges are authorizations granted by the governing body of an institution to provide specific health care services. Granting of privileges is based on a person's license, education, training, experience, and competence. A good place to start this investigation would be to initiate discussion with the Joint Commission on Accreditation
Advocate for Statutory Regulation of END

The "statutory regulation" option is most viable when the practice of a given profession by an unqualified individual is likely to harm consumers. As discussed earlier in this white paper, there are three types of acts that can be enacted: practice acts, title acts, and registration acts.

The potential advantages to ASET and to END technologists of "statutory regulation" include:

- Consumers are protected from harm to their health, safety, or welfare by unqualified providers (to differing extents dependent upon the type of regulation)
- Under licensure, END technologist scope of practice is defined and legally protected
- END technologists gain the recognition that state regulation can sometimes afford
- Resulting higher quality work can improve public perception of the industry and lead to an enhanced market demand
- Increased END technologist salaries

The disadvantages of "statutory regulation" include:

- Under licensure, eliminates END technologists’ freedom to choose whether or not to acquire credentials
- END technologists incur additional costs for regulation requirements (training, testing, license fees)
- Under licensure, healthcare facilities’ loose freedom of choice in hiring and cross-training
- ASET and/or END technologist efforts at the state level must expend resources on legislative efforts
- Risk that efforts fail despite the resources expended
- Risk that final laws enacted further other professions’ causes more than or to the detriment of END technologists
- State regulation is hard to "undo" once enacted
If regulation is carried out on a state-by-state basis, each state usually develops its own divergent standards and requirements, restricting practitioner mobility among the states.

To maintain the benefits of regulation yet eliminate many of the disadvantages of state-by-state regulation, it is possible for states to direct efforts at the national level. This can occur in two ways:

- States to adopt national standards or develop more stringent state requirements.
- State acceptance and adoption of national certification.

In the case of the nursing profession, for example, an effort began in the 1950s to create common national standards to replace confusing, disparate state regulations. The national standards are now overseen by the National Council of State Boards of Nursing and have been accepted by virtually every state. The professions of medicine, pharmacy, counseling, physical therapy, and social work also have national federations of association of state boards that have been adopted by the states.

In the case of occupational therapy, the National Board on Certification of Occupational Therapy works in partnership with state regulatory agencies to protect the public interest. All recognize NBCOT’s occupational therapy certification examinations. Other professions whose national certification exam is accepted by some or all states include dietetics and physician assistants.

Other Regulatory Options
There are other regulatory options ASET could pursue, including:

- **Advocate for practice standards in facility licensure regulations**
  ASET could advocate for practice standards for END technology be added to facility licensure regulations. These standards do not define a legal professional scope of practice; however, they establish standards with which healthcare facilities must be in compliance to gain or maintain facility licensure (such as requiring “qualified personnel” to supervise or conduct specific procedures in certain facilities). As an example, even in some states where there is no licensure for dietitians, state facility regulations require a registered dietitian to supervise certain food and nutrition activities within extended care facilities.

- **Advocate for regulation through supervision by an already licensed practitioner.**
  ASET could advocate that it be established under delegation rules that certain END technology tasks can be delegated to “qualified professionals” by existing licensed professionals, such as physicians. This would not prevent other professionals, such as respiratory therapists, from having END tasks within their legally defined scope, but would legally enable END technologists to perform them too.
Beyond the issue of whether licensure is desirable, of course, a significant question ASET must explore is whether or not licensure is realistically attainable. Some of the challenges it faces include:

- Relatively small size of the field. ASET would need to be able to convince legislature that the END manpower is sufficient to meet the demand for services that a licensure act would create.

- Fractionalization of the field into specialties. That the field of END technology has several distinct specialty areas/techniques (with multiple associations and multiple voluntary certifications) may hinder progress. As suggested by Lynn Mullikin in a paper on major medical reform (Mullikin, 2000), ASET should consider the possibilities of consolidation of the industry – in both associations and certifications – to the extent possible, which could strengthen its position in any regulatory effort and benefit any public recognition campaign.

- Relatively limited resources. Although no figures were cited in the literature, an organized effort to enact legislation takes a lot of human and financial resources. The lack of financial resources to hire lobbyists can be overcome by mobilizing and training volunteers; however, then ASET must ask if it has sufficient manpower.

- Limited number of formal education or training programs for the field and lack of enforced national standards for education or testing (Mullikin, 2000). The professions that appear to be in competition regarding scopes of practice (respiratory therapists, audiologists, and physical therapists) all have nationally established standards for education and testing – either through a federation of state boards or through an existing broad-based national certification – which gives them the advantage since the states look for national standards that can easily be employed at the state level.

- Potential opposition to any proposed bill from other groups who have a stake, such as respiratory therapists, audiologists, and physical therapists.

ASET would need to weigh these obstacles against the opportunities licensure would present, and also identify the extent to which the obstacles could be overcome.

Several healthcare fields have identified licensure as a priority and have accomplished it. However, the music therapy field concluded that licensure was not attainable for their field. In a background paper on licensure, Oliver contents that widespread state licensure is unrealistic for music therapy. She states,

“\[The initial costs of lobbying for a licensure bill are prohibitive to the music therapy organizations that currently exist. The cost of maintaining a state licensing board once a bill is passed is again unrealistic because of the low numbers of therapists residing in each state. Even those areas with what would be considered high population of music therapists would present as low numbers to legislators in relation to maintaining a licensing board (Oliver, not dated)\].”

Music therapy is not regulated in any state. National certification is offered by the Certification Board for Music Therapy.
Advocate for Voluntary Certification

As indicated earlier, national certifications are currently offered by the American Board of Registration of Electroencephalographic and Evoked Potential Technologists, Inc (ABRET), the Board of Registration of Polysomnographic Technologists (BRPT), the Canadian Board of Registration of Electroencephalograph Technologists, Inc. (C.B.R.E.T.), and a registration examination conducted by the American Association of Electrodiagnostic Technologists (AAET). Each of these certifications focus on specific techniques within the field; there currently does not exist a comprehensive certification covering the full field of END technology.

The potential advantages to ASET and to END technologists of “certification” include:

- Consumers may be protected from harm to their health, safety, or welfare by unqualified providers.
- Maintains END technologists’ freedom to choose whether or not to acquire credentials
- Healthcare facilities’ maintain freedom of choice in hiring and cross-training
- END technologists’ body of knowledge is defined (although currently no comprehensive body of knowledge is defined)
- END technologists gain recognition through use of certification credentials (although the current configuration of multiple specialty credentials doesn’t offer the recognition impact of one comprehensive certification)
- Resulting higher quality work can improve public perception of the industry and lead to an enhanced market demand
- Increased END Technologists salaries
- Mobility across states is not affected
- Research indicates that certification is more likely to be a predictor of quality for practitioners than licensure

The disadvantages of “certification” include:

- Professional certification is voluntary; technologists may choose not to become certified
- Employers often resist certification with the perception it will result in higher labor costs
- Professional certification as a strategy in itself does nothing to solve the problem of other professions’ scopes of practice preventing END technologists from practicing (although it can be a powerful strategy if those certified are exempted from other profession’s licensure bills or used as indicators of qualified professionals in an END technology licensure bill)
END technologists incur additional costs for certification requirements (training, testing, license fees)

Current configuration of several specialized certifications is less attractive to legislators than would be a comprehensive certification of the END field

If it is determined to develop a comprehensive industry certification, ASET and any potential collaborators must expend significant resources on program development and administration

Voluntary certification programs are not subject to any type of government regulation. The possibility exists that a group of practitioners who did not meet the standards of an established certification agency could establish their own organization and grant certificates based on lower standards or no standards at all. The public might not be aware of the difference between the two organizations and might accept the credentials of the group with lower standards as signifying equal competence.

**Making the Decision**

In a key publication, Demystifying Occupational and Professional Regulation: Answers to Questions You Have Been Afraid to Ask, highly respected expert Benjamin Shimberg and co-author Kara Schmitt suggest legislators consider the following questions in considering new legislation:

- Are there existing laws that could be enforced more vigorously? Would making additional resources available for enforcement solve the problem? Would strengthening current legislation help solve the problem?

- Would a system of inspections provide the necessary protection and ensure safety?

- Would regulation of the business establishment, rather than regulation of the individual, solve the problem?

- Does a private certification exist? If so, could that program provide consumers with information to enable them to identify qualified practitioners? (Schmitt and Shimberg, 1996).

Also, in making the decision whether to pass a licensure bill, the Office of the Professions of the New York State Education Department considers the following questions focusing on consumers’ needs and the health and safety of the public.

- What is the problem? Has the public been harmed because the professionals have not been regulated?
○ Who are the users of the professional services and are they able to evaluate the qualifications of those offering the services?

○ Is there a nongovernmental certification program that would assist the public in identifying qualified practitioners, and what are the requirements for the certificate?

○ Could existing laws or standards solve the problem? Would strengthening existing regulations help?

○ How will the public benefit from licensing of these professionals? What standards would be used? Are they job related? Will they ensure competence?

○ What is the cost to the public for regulating the profession, and what is the impact on individuals who perform the services and may not wish to become licensed or would not meet the newly created licensing standards (Office of the Professions, 1991).

A more extensive list is included in the highly regarded publication, “Questions A Legislator Should Ask” available from the Council on Licensure Enforcement and Regulation (Shimberg and Roederer, 1994).

ASET may wish to consider these sets of questions to guide their decision regarding pursuit of occupational regulation.
Professionalizing the Field of END Technology

Simultaneous with any approach ASET takes regarding the pursuit of independent occupational regulation, there are several strategies it may consider to advance the profession of END technology. Assembling lists from the literature, the following criteria are considered essential for a group to be a profession (Curr 1993, Starr 1971, Matazarro 1971)

- name recognition
- unifying purpose and defined and distinct service or practice
- discreet body of knowledge with a theoretical base
- education/training, credentialing, or other entry requirements
- scholarly publications
- code of ethics and/or principles
- responsibility to the public interest or the public good
- organization of members to promote all of the above

Acknowledging the essentials that define a profession can enable ASET to assess the END technology field's progress and potential as a profession and to develop a comprehensive plan for its future. While analyzing ASET's progress within these criteria is well beyond the scope of this paper, there are a few strategies particularly relevant to the issue at hand.

Name Recognition
Regardless of what approach ASET chooses regarding occupational regulation, the field of END technology (like any field) would benefit from efforts to promote the profession to targeted markets, such as potential employers of END technologists, other medical/nursing/healthcare professionals, legislators, and consumers of services.

As an example, the "Medical Nutrition Therapy Works" campaign of the American Dietetic Association can be found at http://www.eatright.org/Public/GovernmentAffairs/98_8723.cfm

Body of Knowledge
Identifying a field's body of knowledge is an important strategy to achieve recognition for the field and/or to distinguish it from others that are similar or overlapping in scope. In addition, many professions have recognized that furthering their field's body of knowledge is integral to advancing their profession in general. Says one nurse author, “The advancement of nursing practice depends on the intensity with which nurses pursue the continued development of a body of knowledge” (Rogers, 1989). ASET should consider the benefits to taking purposeful steps to identify and advance the body of knowledge of the field of END technology.
**Education/Training**

Another important hallmark in professionalizing a field is formalizing the education/training requirements. One source indicated that there are currently approximately 20 END programs across the country and only seven of them are two-year associate degree programs (Fergusen, date unknown). ASET currently recommends an associate degree as the minimum entry degree (Fergusen, date unknown); however, it might consider avenues to institutionalize that recommendation. Towards that end, it might consider:

- encouraging and/or rewarding END technologists for furthering their education by establishing recognition programs such as awards, scholarships, and/or levels or academies of membership,

- influencing employers and other stakeholders of the benefit of formally-educated END technologists,

- encouraging and supporting educational institutions to develop degree programs, and/or

- driving the demand for degree programs by developing a national broad-based certification program with an associate degree as the most-desired entry pathway initially (by requiring less or no work experience with a degree), with the intent to eventually make this the only pathway.
In Closing

END technology is a relatively new field that appears to be in a growth mode. According to the literature, some of the challenges it faces include:

- The demand for qualified personnel exceeds the current supply.
- There is a lack of formal educational or training programs to prepare individuals for entry into the field.
- A great number of individuals currently in the field have no or little formal training.
- No scope of practice protection or title protection regulations exist for the END technologist.
- Traditionally, professions start with a broad scope of practice with specialties emerging over time when new techniques and areas of practice expand. END technology, however, appears to be emerging from individuals being trained in new specialized techniques finding common ground in their END link. The challenge is that these divisions of specialists may not have the critical mass necessary to gain clear public recognition or to effect change in the regulatory area. And, under the current structure of the field, it would be difficult to present a united front in any legislative or public recognition campaigns.
- The field is fractionalized. It has several distinct associations and several distinct certification programs. It has no comprehensive national enforced education and testing standards. This presents a challenge in that legislators seek uniform, national standards. A strategy that ASET may consider is to attempt to consolidate the industry: to perhaps merge the associations and/or to develop a broad-based END certification (either independently or in partnership with existing associations/credentialing agencies) and then utilize that certification as leverage in legislative efforts.
- Other professions, such as respiratory therapy, physical therapy, and audiology are capitalizing on the growth of the field and assuming the role of the END technologist in practice.
- These same professions are advocating for and successfully securing the END technology function within their legally protected scopes of practice, which can prevent END technologists from practicing in those protected functions.

ASET has taken steps to strengthen and advance the field. It has made recommendations on minimal education for entry into the field, established an accreditation program for educational programs in the field, has developed a model practice act, and has mobilized quickly to act on proposed legislation potentially harmful to the field. It should be applauded for its efforts, and be encouraged to press forward with even more zeal.
ASET currently has a position of neutrality regarding licensure; however, it is important to point out that a licensure bill for END technologists was introduced but failed to come out of session in Alabama in 2004, and plans to reintroduce the bill in the next legislative session are underway. Before too many states begin to determine their own legislative agendas, ASET must be decisive and establish clear positions about their ideal future for the field, and then develop and implement strong action plans for how to create that future. The bottom line is simple: if ASET doesn’t take a decisive lead in shaping the future of the END technology field, there are several other organizations that appear willing and eager to take on that role.
References


ADA Website.  http://www.eatright.org/Member/PolicyInitiatives/83_19907.cfm


Fergussen D.  The Pro’s and Con’s of Electroneurdiagnostic Licensure.  Undated paper provided by ASET.


Schmitt K and Schimberg B. Demystifying occupational and professional regulation: Answers to questions you may have been afraid to ask. Lexington, KY: Council on Licensure, Enforcement and Regulation; 1996.


Appendix A: Summary of Entry Requirements of Healthcare Professions
Audiologists

Entry-level practice is regulated through state licensure. The American Speech-Language-Hearing Association offers a voluntary entry-level certification program.

Forty-eight states plus the District of Columbia require a license to practice audiology. Almost all require that individuals have a master’s degree in audiology or the equivalent; however, a clinical doctoral degree is expected to become the new standard. Other requirements are 300 to 375 hours of supervised clinical experience and 9 months of postgraduate professional clinical experience, and a passing score on a national examination. An additional examination may be required in order to dispense hearing aids. Forty states have continuing education requirements for licensure renewal. Medicaid, Medicare, and private health insurers generally require practitioners to be licensed to qualify for reimbursement.

Audiologists can acquire the Certificate of Clinical Competence in Audiology (CCC-A) offered by the American Speech-Language-Hearing Association. To earn a CCC, a person must have a graduate degree and 375 hours of supervised clinical experience, complete a 36-week postgraduate clinical fellowship, and pass the Praxis Series examination in audiology. According to the American Speech-Language-Hearing Association, as of 2007, audiologists will need to have a bachelor’s degree and complete 75 hours of credit toward a doctoral degree in order to seek certification. As of 2012, audiologists will have to earn a doctoral degree in order to be certified.

Audiologists may also be certified through the American Board of Audiology. Applicants must earn a Master’s or Doctoral degree in audiology from a regionally accredited college or university, achieve a passing score on a national examination in audiology, and demonstrate that they have completed a minimum of 2,000 hours of mentored professional practice in a two-year period with a qualified audiologist. Certificants must apply for renewal every three years. They must demonstrate that they have earned 45 hours of approved continuing education within the three-year period. Beginning in the year 2007, all applicants must earn a doctoral degree in audiology.

Sources:


**Cardiovascular Technologists**

Cardiovascular Technologists are not licensed. Voluntary certifications are offered by the Cardiovascular Credentialing International and the American Registry of Diagnostic Medical Sonographers.

Although a few cardiovascular technologists, vascular technologists, and cardiac sonographers are currently trained on the job, most receive training in 2- to 4-year programs. Cardiovascular technologists, vascular technologists, and cardiac sonographers normally complete a 2-year junior or community college program.

Graduates from the 29 programs accredited by the Joint Review Committee on Education in Cardiovascular Technology are eligible to obtain professional certification in cardiac catheterization, echocardiography, vascular ultrasound, and cardiographic techniques from Cardiovascular Credentialing International. Cardiac sonographers and vascular technologists also may obtain certification from the American Registry of diagnostic medical sonographers.

**Sources:**

Clinical Laboratory Technologists

Clinical laboratory technologists are regulated through licensure in some states. Several associations offer voluntary entry level certification.

The usual requirement for an entry-level position as a clinical laboratory technologist is a bachelor’s degree with a major in medical technology or in one of the life sciences; although it is possible to qualify through a combination of education, on-the-job, and specialized training.

The Clinical Laboratory Improvement Act requires technologists who perform highly complex tests to have at least an associate degree.

The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) fully accredits 467 programs for medical and clinical laboratory technologists, medical and clinical laboratory technicians, histotechnologists and histotechnicians, cytogenetic technologists, and diagnostic molecular scientists. NAACLS also approves 57 programs in phlebotomy and clinical assisting. Other nationally recognized accrediting agencies that accredit specific areas for clinical laboratory workers include the Commission on Accreditation of Allied Health Education Programs and the Accrediting Bureau of Health Education Schools.

Some States require laboratory personnel to be licensed or registered. Agencies certifying medical and clinical laboratory technologists and technicians include the Board of Registry of the American Society for Clinical Pathology, the American Medical Technologists, the National Credentialing Agency for Laboratory Personnel, and the Board of Registry of the American Association of Bioanalysts. These agencies have different requirements for certification and different organizational sponsors.

Source:
Counselors

Entry-level practice is regulated through state licensure and certification. The National Board for Certified Counselors, Inc. (NBCC) grants the voluntary general practice credential.

For counselors based outside of schools, 47 States and the District of Columbia have some form of counselor credentialing, licensure, certification, or registration that governed their practice of counseling. Requirements typically include the completion of a master’s degree in counseling, the accumulation of 2 years or 3,000 hours of supervised clinical experience beyond the master’s degree level, the passage of a State-recognized exam, adherence to ethical codes and standards, and the satisfaction of annual continuing education requirements.

A master’s degree is typically required to be licensed or certified as a counselor. A bachelor’s degree often qualifies a person to work as a counseling aide, rehabilitation aide, or social service worker. Some States require counselors in public employment to have a master’s degree; others accept a bachelor’s degree with appropriate counseling courses. In an accredited master’s degree program, 48 to 60 semester hours of graduate study, including a period of supervised clinical experience in counseling, are required for a master’s degree.

Many counselors elect to be nationally certified by NBCC, which grants the general practice credential “National Certified Counselor.” This national certification is voluntary and is distinct from State certification. However, in some States, those who pass the national exam are exempted from taking a State certification exam.

Sources:


**Dietitians**

Entry-level practice is regulated through state licensure and certification. The Commission on Dietetic Registration (CDR) grants the voluntary general practice certification.

Dietitians need at least a bachelor’s degree in dietetics, foods and nutrition, food service systems management, or a related area.

Of the 46 States and jurisdictions with laws governing dietetics, 30 require licensure, 15 require certification, and 1 requires registration. The Commission on Dietetic Registration, the credentialing agency for the American Dietetic Association (ADA), awards the Registered Dietitian credential to those who pass a certification exam after completing their academic coursework and supervised experience.

As of 2003, there were about 230 bachelor’s and master’s degree programs approved by the ADA’s Commission on Accreditation for Dietetics Education (CADE). Supervised practice experience can be acquired in two ways. The first requires the completion of a CADE-accredited coordinated program. As of 2003, there were more than 50 accredited programs, which combined academic and supervised practice experience and generally lasted 4 to 5 years. The second option requires the completion of 900 hours of supervised practice experience in any of the 264 CADE-accredited/approved internships.

**Sources:**

Commission on Dietetic Registration Web site: [http://www.cdrnet.org](http://www.cdrnet.org)
**Music Therapists**

There is no state licensure for music therapists. The American Music Therapy Association (AMTA) offers a voluntary entry-level certification program.

A professional music therapist holds a bachelor's degree or higher in music therapy from one of over 70 AMTA approved college and university programs. The curriculum for the bachelor's degree is designed to impart entry level competencies in three main areas: musical foundations, clinical foundations, and music therapy foundations and principles as specified in the AMTA Professional Competencies. In addition to the academic coursework, the bachelor's degree requires 1200 hours of clinical training, including a supervised internship.

Upon completion of the bachelor's degree, music therapists are eligible to sit for the national board certification exam to obtain the credential MT-BC (Music Therapist - Board Certified)

**Sources:**


Nuclear Medicine Technologists

Entry-level practice is regulated through licensure in some states. Voluntary certification is available from the American Registry of Radiologic Technologists and from the Nuclear Medicine Technology Certification Board.

Nuclear medicine technologists must meet the minimum Federal standards on the administration of radioactive drugs and the operation of radiation detection equipment.

Nuclear medicine technology programs range in length from 1 to 4 years and lead to a certificate, associate degree, or bachelor’s degree. Generally, certificate programs are offered in hospitals, associate degree programs in community colleges, and bachelor’s degree programs in 4-year colleges and universities.

One-year certificate programs are for health professionals—especially radiologic technologists and diagnostic medical sonographers—who wish to specialize in nuclear medicine. They also attract medical technologists, registered nurses, and others who wish to change fields or specialize. Others interested in the nuclear medicine technology field have three options: a 2-year certificate program, a 2-year associate degree program, or a 4-year bachelor’s degree program.

The Joint Review Committee on Education Programs in Nuclear Medicine Technology accredits most formal training programs in nuclear medicine technology. In 2002, there were 92 accredited programs in the continental United States and Puerto Rico.
Nurses

Entry-level nursing practice is regulated through licensure by all 50 states and the District of Columbia. There is no voluntary entry-level certification program.

Individuals can enter into the field of nursing through an associate, bachelors, or masters degree program. In all States and the District of Columbia, students must graduate from an approved nursing program and pass a national licensing examination in order to obtain a nursing license (registered nurse or licensed practical nurse). Nurses may be licensed in more than one State, either by examination, by the endorsement of a license issued by another State, or through a multi-State licensing agreement. All States require periodic renewal of licenses, which may involve continuing education.

Nursing education includes classroom instruction and supervised clinical experience in hospitals and other healthcare facilities.

Sources:

**Occupational Therapists**

Entry-level practice is regulated through state licensure and voluntary certification. The National Board for Certification in Occupational Therapy (NBCOT) administers the occupational therapy voluntary certification exam.

Currently, a bachelor’s degree in occupational therapy is the minimum requirement for entry into the field. Beginning in 2007, however, a master's degree or higher will be the minimum educational requirement. Completion of 6 months of supervised fieldwork is incorporated within the education program.

All States, Puerto Rico, and the District of Columbia regulate the practice of occupational therapy. To obtain a license, applicants must graduate from an accredited educational program and pass a national certification examination. Those who pass the exam are awarded the title "Occupational Therapist Registered (OTR)."

NBCOT develops and administers the occupational therapy certification exam. This exam is generally taken by recent OT graduates. Just about every state that has licensure uses the NBCOT exam as part of its initial licensing process.

Currently students may earn a certificate, bachelor's, master's or doctoral degree in occupational therapy from an accredited school and be eligible to sit for the National Board for Certification in Occupational Therapy (NBCOT). However, after January 2007, the Accreditation Council for Occupational Therapy Education (ACOTE) Standards will no longer accredit certificate or bachelor's programs. In order to be eligible to sit for the NBCOT, students must graduate from a post-bachelor's degree program.

National certification and state licenses require:

- graduation from a program accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA),
- successful completion of the required field work
- successful completion of the Certification examination of the National Board for Certification of Occupational Therapy,

State license have additional requirements available from individual state license boards.

After successful completion of the examination, the graduate is recognized as an Occupational Therapist, Registered (OTR). Most states require licensure in order to practice; however, state licenses are usually issued on the basis of NBCOT certification and verification that all academic and fieldwork requirements have been successfully completed from an accredited occupational therapy program.

**Sources:**
National Certification Board of Occupational Therapists Web site:

Michigan Association of Occupational Therapy Web site:
**Pharmacists**

Entry-level practice is regulated through state licensure. There is no voluntary entry-level certification program.

A license to practice pharmacy is required in all 50 states, the District of Columbia and U.S. territories. In the past, individuals could qualify with a PharmBS degree, but it has been phased out as an entry-level pharmacy degree in favor of the PharmD degree. New students are no longer being accepted into any remaining PharmBS programs.

All state boards of pharmacy require candidates to complete an internship or externship before licensure. Such practice experience usually consists of 1,500 hours of experience that are gained during pharmacy school (beginning after the first year of training). Some states require that internship hours be gained solely after graduation from pharmacy school and before licensure. The internship process is subject to state board of pharmacy regulations. Each intern, internship site, and preceptor must register with the state board of pharmacy to have the hours counted toward licensure. Applicants must also pass both the national (NAPLEX) and state examinations.

**Sources:**

Physical Therapists

Entry-level practice is regulated through state licensure. There is no voluntary entry-level certification program.

Individuals can enter into the field of physical therapy through a bachelors degree program. The average master's degree program will take a student 2.5 years to complete. The first year-and-a-half is usually devoted to completing required coursework in a classroom setting and in the last year, students gain experience in a clinical setting. After graduating from an accredited physical therapy program, individuals must then pass the National Physical Therapist Examination (NPTE). Upon passing the exam, individuals need to meet any additional requirements state licensing boards may have before they can practice.

Physical therapy is regulated by all 50 states and the District of Columbia.

According to the American Physical Therapy Association, there were 203 accredited physical therapist programs in 2003. Of the accredited programs, 113 offered master’s degrees, and 90 offered doctoral degrees. All physical therapist programs seeking accreditation are required to offer degrees at the master’s degree level and above, in accordance with the Commission on Accreditation in Physical Therapy Education.

Sources:
Physician Assistants

Entry-level practice is regulated through state licensure and certification. The National Commission on Certification of Physician Assistants (NCCPA) offers the voluntary certification.

All States and the District of Columbia have legislation governing the qualifications or practice of physician assistants. All jurisdictions require physician assistants to pass the Physician Assistants National Certifying Examination, administered by the National Commission on Certification of Physician Assistants (NCCPA) and open to graduates of accredited PA education programs. Only those successfully completing the examination may use the credential “Physician Assistant-Certified.” In order to remain certified, PAs must complete 100 hours of continuing medical education every 2 years. Every 6 years, they must pass a recertification examination or complete an alternative program combining learning experiences and a take-home examination.

Education consists of classroom and laboratory instruction in the basic medical and behavioral sciences followed by clinical rotations.

The typical PA program is 24-25 months long and requires at least two years of college and some health care experience prior to admission. The majority of students have a BA/BS degree and 45 months of health care experience before admission to a PA program. While all programs recognize the completion of the professional component of PA education with a certificate of completion, more than half of the programs award a master’s degree.

Graduates from physician assistant programs accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) or its predecessors are eligible to seek NCCPA certification by taking the Physician Assistant National Certifying Examination (PANCE).

Sources:


Radiologic Technologists

Entry-level practice is regulated through state licensure and certification. The American Registry of Radiologic Technologists (ARRT) offers the voluntary certification (called registration).

In 2003, about 38 States licensed radiologic technologists. To be eligible for ARRT registration, technologists generally must have graduated from an accredited program and pass an examination. To be recertified, radiographers must complete 24 hours of continuing education every other year.

Formal training programs in radiography range in length from 1 to 4 years and lead to a certificate, associate degree, or bachelor’s degree. Two-year associate degree programs are most prevalent.

Some 1-year certificate programs are available for experienced radiographers or individuals from other health occupations, such as medical technologists and registered nurses, who want to change fields or specialize in CT or MRI. A bachelor’s or master’s degree in one of the radiologic technologies is desirable for supervisory, administrative, or teaching positions.

The Joint Review Committee on Education in Radiologic Technology accredits most formal training programs for the field. The committee accredited 587 radiography programs in 2003. Radiography programs require, at a minimum, a high school diploma or the equivalent.

Federal legislation protects the public from the hazards of unnecessary exposure to medical and dental radiation by ensuring operators of radiologic equipment are properly trained. Under this legislation, the Federal Government sets voluntary standards that the States, in turn, may use for accrediting training programs and certifying individuals who engage in medical or dental radiography.

Source:
Respiratory Therapists

Entry-level practice is regulated through state licensure and certification. The National Board for Respiratory Care (NBRC) offers the voluntary certification

An associate degree has become the general requirement for entry into the field of respiratory therapy. Most programs award associate or bachelor’s degrees and prepare graduates for jobs as advanced respiratory therapists. Other programs award associate degrees or certificates and lead to jobs as entry-level respiratory therapists. According to the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 59 entry-level and 319 advanced respiratory therapy programs are presently accredited in the United States, including Puerto Rico.

46 states plus the District of Columbia and Puerto Rico license respiratory care personnel. Most employers require respiratory therapists to maintain a cardiopulmonary resuscitation (CPR) certification.

NBRC offers voluntary certification and registration to graduates of programs accredited by CAAHEP or the Committee on Accreditation for Respiratory Care (CoARC). Two credentials are awarded to respiratory therapists who satisfy the requirements: Registered Respiratory Therapist (RRT) and Certified Respiratory Therapist (CRT). Graduates from accredited programs in respiratory therapy may take the CRT examination. CRTs who meet education and experience requirements can take two separate examinations leading to the award of the RRT credential. The CRT examination is the standard in the States requiring licensure.

Sources:

Surgical Technologists

There is no state licensure for surgical technologists; however, some states have implemented registration. The Liaison Council on Certification for the Surgical Technologist and National Center for Competency Testing offer voluntary entry-level certification programs.

Surgical technologists receive their training in formal programs offered by community and junior colleges, vocational schools, universities, hospitals, and the military. In 2002, the Commission on Accreditation of Allied Health Education Programs (CAAHEP) recognized 361 accredited programs. High school graduation normally is required for admission. Programs last 9 to 24 months and lead to a certificate, diploma, or associate degree.

Programs provide classroom education and supervised clinical experience. Students take courses in anatomy, physiology, microbiology, pharmacology, professional ethics, and medical terminology. Other studies cover the care and safety of patients during surgery, sterile techniques, and surgical procedures. Students also learn to sterilize instruments; prevent and control infection; and handle special drugs, solutions, supplies, and equipment.

Most employers prefer to hire certified technologists. Technologists may obtain voluntary professional certification from the Liaison Council on Certification for the Surgical Technologist by graduating from a CAAHEP-accredited program and passing a national certification examination. They may then use the Certified Surgical Technologist (CST) designation. Continuing education or reexamination is required to maintain certification, which must be renewed every 4 years.

Certification may also be obtained from the National Center for Competency Testing. To qualify to take the exam, candidates follow one of three paths: complete an accredited training program, undergo a 2-year hospital on-the-job training program, or acquire seven years of experience working in the field. After passing the exam, individuals may use the designation Tech in Surgery-Certified, TS-C (NCCT). This certification may be renewed every 5 years through either continuing education or reexamination.

Source:
Appendix B:
Contact Information for State Boards of Select Professions
## Respiratory Care State Agencies

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<tr>
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<tr>
<td>ARIZONA</td>
<td>Arizona State Board of Respiratory Care Examiners</td>
<td>1400 W. Washington, Ste. 200</td>
<td>(602) 542-5995</td>
<td><a href="http://www.rb.state.az.us">www.rb.state.az.us</a></td>
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<td>ARKANSAS</td>
<td>Arkansas State Medical Board</td>
<td>2100 Riverfront Dr., Ste. 200</td>
<td>(501) 296-1802</td>
<td><a href="http://www.armedicalboard.org">www.armedicalboard.org</a></td>
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<tr>
<td>CALIFORNIA</td>
<td>Respiratory Care Board</td>
<td>444 N. 3rd St., Ste. 270</td>
<td>(866) 375-0386</td>
<td><a href="http://www.rcb.ca.gov">http://www.rcb.ca.gov</a></td>
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<tr>
<td>COLORADO</td>
<td>Department of Regulatory Agencies</td>
<td>1560 Broadway, Ste. 1545</td>
<td>(303) 894-7800</td>
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<tr>
<td>CONNECTICUT</td>
<td>Department of Public Health</td>
<td>410 Capital Avenue - MS #12APP</td>
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<td>DELAWARE</td>
<td>Respiratory Care Practice Advisory Counsel</td>
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<td><a href="http://www.professionallicensing.state.de.us/">www.professionallicensing.state.de.us/</a></td>
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<td>Gayle Franzolino</td>
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<td>(Click on Medical Practice)</td>
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<tr>
<td>DISTRICT OF COLUMBIA</td>
<td>Board of Respiratory Care</td>
<td>323 Tennessee Ave. NE</td>
<td>(800) 999-9442</td>
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<td>FLORIDA</td>
<td>Florida Dept. of Medicine</td>
<td>4052 Bald Cypress Way, BIN#C05</td>
<td>(850) 245-4444</td>
<td><a href="http://www.doh.state.fl.us/mqa">www.doh.state.fl.us/mqa</a></td>
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<td>GEORGIA</td>
<td>Composite State Board of Medical Examiners</td>
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<td>Respiratory Therapy Committee</td>
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<td>2 Peachtree Street, N.W., 36th Floor</td>
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<td>Atlanta, Georgia 30303-3465</td>
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<td>TEL:(404) 656-3913</td>
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<td>FAX:(404) 656-9723</td>
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<td>E-MAIL: <a href="mailto:medbd@dch.state.ga.us">medbd@dch.state.ga.us</a></td>
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<td><a href="http://www.medicalboard.state.ga.us">www.medicalboard.state.ga.us</a></td>
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HAWAII
No Current Agency

IDAHO
Idaho State Board of Medicine
280 N. 8th, Ste. 202
Boise, ID 83720
(208) 334-2822
www.bom.state.id.us/

ILLINOIS
Department of Professional Regulation
320 W. Washington, 3rd Floor
Springfield, IL 62786
(217) 782-5988
www.dpr.state.il.us/

INDIANA
Health Professions Bureau
402 W. Washington St.
Indianapolis, IN 46204
(317) 232-2960
www.state.in.us/hpb

IOWA
Respiratory Advisory Committee
Lucas State Office Building
Des Moines, IA 50319
(515) 281-4422

KANSAS
Kansas State Board of Healing Arts
235 S. Topeka Blvd.
Topeka, KS 66603
(785) 296-7413
www.state.ks.us/public/boha

KENTUCKY
Kentucky Board for Respiratory Care
301 E. Main St., Ste. 900
National City Plaza Bldg.
Lexington, KY 40507
(859) 246-2747
http://www.state.ky.us/boards/kbrc/

LOUISIANA
Board of Medical Examiners
Advisory Committee on Respiratory Care
P.O. Box 30250
New Orleans, LA 70190-0250
(504) 568-6820
www.lsbme.org

MAINE
Div. of Licensing and Enforcement
Board of Respiratory Care Practitioners
State House, Station 35
Augusta, ME 04333
(207) 624-8603

MARYLAND
Dept. of Health/Medical Hygiene
Physicians Board for Quality Assurance
4201 Patterson Ave., 3rd Floor
Baltimore, MD 21215
(800) 492-6836

MASSACHUSETTS
Board of Respiratory Care
239 Causeway St.
Boston, MA 02114
(617) 727-1747
http://www.state.ma.us/reg/boards/rc/default.htm

MICHIGAN
Department of Community Health
Bureau of Health Professions
P.O. Box 30670
611 W. Ottawa, 1st Floor
Lansing, MI 48909

MINNESOTA
Board of Medical Practice
2829 University Avenue, Ste. 400
St. Paul, MN 55114-3246
(612) 679-2130
www.bmp.state.mn.us

MISSISSIPPI
State Department of Health
Prof. Licensure - Respiratory Care
P.O. Box 1700
Jackson, MS 39215
(601) 576-7260

MISSOURI
Missouri Board for Respiratory Care
3605 Missouri Blvd.
P.O. Box 1335
Jefferson City, MO 65102-1335
(573) 522-5864
http://pr.mo.gov/respiratorycare.asp

MONTANA
Professional and Occupational Licensing
Board of Respiratory Care Practitioners
301 S. Park, 4th Floor
NEBRASKA
Board of Examinations in Respiratory Care Practice
P.O. Box 94986
Lincoln, NE 68509
(402) 471-2115
www.hhs.state.ne.us

NEVADA
NV State Board of Medical Examiners
1105 Terminal Way, Suite. 301
Reno, NV 89502
(775) 688-2559
www.state.nv.us/medical

NEW HAMPSHIRE
Board of Regulation and Medicine
2 Industrial Park Dr.
Concord, NH 03301
(603) 271-1203
www.state.nh.us/medicine

NEW JERSEY
Division of Consumer Affairs
P.O. Box 45031
Newark, NJ 07101
(973) 504-6485

NEW MEXICO
Respiratory Care Advisory Board
2055 Pacheco St., Ste. 400
Santa Fe, NM 87504
(505) 476-7121
http://www.rld.state.nm.us/b&c/rcb/index.htm

NEW YORK
New York State Education Department
Division of Professional Licensing Services
Respiratory Therapy Unit
89 Washington Ave.
Albany, NY 12234-1000
(518) 474-3817
http://www.op.nysed.gov/rt.htm

NORTH CAROLINA
North Carolina Respiratory Care Board
1100 Navaho Drive, Suite 242
Raleigh, NC 27609
(919) 878-5595
http://www.nccrb.org

NORTH DAKOTA
North Dakota State Board of Respiratory Care
P.O. Box 2223
Bismarck, ND 58502
(701) 222-1564

OHIO
Ohio Respiratory Care Board
77 S. High St., 18th Floor
Columbus, OH 43266
(614) 752-9218
http://www.state.oh.us/rsp/

OKLAHOMA
Oklahoma State Board of Medical Licensure and Supervision
P.O. Box 18256
Oklahoma City, OK 73154-0256
(405) 848-6841
(800) 381-4519
www.osbmls.state.ok.us

OREGON
Respiratory Therapists Licensing Board
700 Summer St. NE, Ste 320
Salem, OR 97310
(503) 378-8667

PENNSYLVANIA
State Board of Medicine
P.O. Box 2649
Harrisburg, PA 17105
(717) 783-1400
www.dos.state.pa.us

PUERTO RICO
State Examining Board for Respiratory Care Technicians
P.O. Box 10200
Santurce, PR 00908
(809) 725-8161 Ext. 218

RHODE ISLAND
Rhode Island Dept. of Professional Regulation
3 Capitol Hill, Rm. 104
Providence, RI 02908
(401) 222-2827

SOUTH CAROLINA
State Board of Medical Examiners
SOUTH DAKOTA
State Board for Medical and Osteopathic Examiners
1323 S. Minn Ave.
Sioux Falls, SD 57105
(605) 334-8343
www.psb.state.sd.us

TENNESSEE
Council of Respiratory Care
First Floor - Cordell Hall
425 5th Ave N
Nashville, TN 37241-1010
(615) 532-5163
www.tn.gov/health

TEXAS
Texas Dept. of Health
1100 W. 49th St.
Austin, TX 78756-3183
(512) 834-6632
http://www.tdh.state.tx.us/plc/resp.htm

UTAH
Business Regulation
Dept. of Professional Licensing
Box 146741
Salt Lake City, UT 84114
(801) 530-6632
www.commerce.state.ut.us

VERMONT
No Current Agency

VIRGINIA
Department of Health Professions
State Board of Medicine
6606 W. Broad St., 4th Floor
Richmond, VA 23230
(804) 662-9908
www.dhp.state.va.us

WASHINGTON
Department of Health
Respiratory Care Section
P.O. Box 47870
Olympia, WA 98504
(360) 236-4942
http://www.doh.wa.gov/hqsa/hpqad/respirato