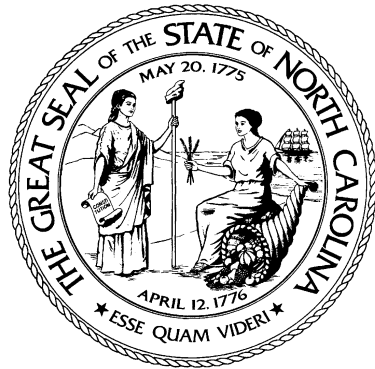


**JOINT LEGISLATIVE COMMITTEE
ON
NEW LICENSING BOARDS**

Final Report

**MEDICAL IMAGING AND RADIATION
THERAPY BOARD OF EXAMINERS
LICENSURE/FEES**

House Bill 753



JOINT LEGISLATIVE COMMITTEE ON NEW LICENSING BOARDS

July 1, 2011

The Joint Legislative Committee on New Licensing Boards is pleased to release this final assessment report regarding the licensure and establishment of the Medical Imaging and Radiation Therapy Board of Examiners.

Senator Tommy Tucker
Chair

JOINT LEGISLATIVE COMMITTEE ON NEW LICENSING BOARDS
(2011-2012)

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PREFACE

The Legislative Committee on New Licensing Boards is a 9-member joint committee of the House and Senate created and governed by statute (Article 18A of Chapter 120 of the General Statutes). The primary purpose of the Committee is to evaluate the need for a new licensing board or the proposed licensing of previously unregulated practitioners by an existing board. The Committee has been in existence since 1985.

The Committee solicits written and oral testimony on each licensing proposal in carrying out its duty to determine whether the proposal meets the following criteria:

- 1) Whether the unregulated practice of the profession can substantially endanger the public health, safety, or welfare, and whether the potential for such harm is recognizable and not remote or dependent upon tenuous argument.
- 2) Whether the profession possesses qualities that distinguish it from ordinary labor.
- 3) Whether practice of the profession requires specialized skill or training.
- 4) Whether a substantial majority of the public has the knowledge or experience to evaluate the practitioner's competence.
- 5) Whether the public can effectively be protected by other means.
- 6) Whether licensure would have a substantial adverse economic impact upon consumers of the practitioner's good or services.

The Committee issues a final assessment report on its findings and recommendations. The recommendation in the report is not binding upon other committees considering the proposal.

HOUSE BILL 753
MEDICAL IMAGING AND RADIATION THERAPY
LICENSURE/FEES

BACKGROUND¹

Current Standards

Medical Imaging has become a necessity in diagnosing and treating many illnesses; patients with broken bones to patients with cancer. While radiations allows physicians to diagnosis and treat a variety of illnesses, it comes with some risk. Accuracy and safety are equally important in this process.

The NCSRT believes the best way to ensure the safety, quality and accuracy of medical radiation imaging is by establishing educational and certification standards for technical personnel performing these images. CT scanners, gamma cameras and linear accelerators are some of the most complex medical equipment in the world. However, this technology is ineffective, and potentially dangerous in the wrong hands. That's because the quality of any medical radiation procedure is directly linked to the skill and competence of the person performing it. These individuals should have education and training to perform these procedures accurately.

Patient safety is in the hands of these individuals, yet they remain unregulated. North Carolina is one of only 6 states that have no regulation of personnel performing medical radiation procedures. In the state of North Carolina we find it necessary to regulate the hair stylist, nail stylist, and sign language interpreters but not the personnel administering radiation.

Unqualified personnel are a danger to patients. An underexposed x-ray cannot reveal a malignant tumor, and an inaccurate radiation therapy treatment cannot stop its spread. Even worse, when medical radiation is used improperly it can harm the very patient it was meant to help.

¹ **Source:** *Response to Questionnaire for the Legislative Committee for New Licensing Boards.* A copy of the questionnaire is attached to this report.

Only qualified personnel should be allowed to perform medical imaging and radiation therapy. House Bill 753 will ensure a minimum of education, knowledge and skill for those who are responsible for medical radiation procedures. For the citizens of North Carolina safety, the NCSRT encourages you to establish a medical board to regulate minimum safety and educational standards.

Thanks to medical imaging and radiation therapy, thousands of North Carolinians are cancer survivors. The majority of radiation procedures are administered safely and successfully, however any mistake is unacceptable.

LICENSING REQUIREMENTS

90-737. Definitions.

The following definitions apply in this Article:

- ❖ **Board.** – The Medical Imaging and Radiation Therapy Board of Examiners.
- ❖ **Cardiovascular invasive specialist.** – A person other than a licensed practitioner who performs fluoroscopy to visualize cardiac or vascular anatomy. Individuals licensed as a cardiovascular invasive specialist may not perform computed tomography, magnetic resonance imaging, mammography, radiation therapy, or radiography.
- ❖ **License.** – A certificate issued by the Board authorizing the licensee to use radioactive materials or medical imaging or radiation therapy equipment on humans for diagnostic or therapeutic purposes in accordance with the provisions of this Article.
- ❖ **Licensed practitioner.** – A person licensed to practice medicine, dentistry, podiatry, or chiropractic in this State.
- ❖ **Limited X-ray machine operator.** – A person other than a licensed practitioner who performs limited diagnostic radiographic imaging procedures on specific parts of the human anatomy, including chest, spine, skull/sinus, podiatric, or extremity radiography. Individuals licensed as a limited X-ray machine operator may not perform computed tomography, fluoroscopy, magnetic resonance imaging, mammography, procedures involving contrast media, radiation therapy, or mobile imaging.
- ❖ **Magnetic resonance technologist.** – A person, other than a licensed practitioner, who performs magnetic resonance imaging for diagnostic purposes.
- ❖ **Medical imaging.** – Any procedures or article intended for use in the diagnosis or visualization of disease or other medical conditions including, but not limited to, diagnostic X-rays, nuclear medicine, fluoroscopy, magnetic resonance, sonography, and other procedures.
- ❖ **Medical physicist.** – A person who is certified by the American Board of Radiology, American Board of Medical Physics, American Board of Health Physics, American Board of Science in Nuclear Medicine, or Canadian College of Physics in Medicine in radiological physics or one of the subspecialties of radiological physics.
- ❖ **Nuclear medicine technologist.** – A person, other than a licensed practitioner, who uses radiopharmaceutical agents on humans for diagnostic or therapeutic purposes.

- ❖ **Persons who administer medical imaging or radiation therapy procedures.** – Any person, other than a licensed practitioner, who administers medical imaging or radiation therapy procedures to other persons for medical purposes, and includes radiographers, radiation therapists, nuclear medicine technologists, sonographers, magnetic resonance technologists, cardiovascular-invasive specialists, and limited X-ray machine operators.
- ❖ **Radiation therapist.** – A person, other than a licensed practitioner, who administers radiation to humans for therapeutic purposes.
- ❖ **Radiographer.** – A person, other than a licensed practitioner, who administers radiation to humans for diagnostic or interventional purposes.
- ❖ **Radiologist.** – A physician certified by or board-eligible to be certified for the American Board of Radiology, the American Osteopathic Board of Radiology, the British Royal College of Radiology, or the Canadian College of Physicians and Surgeons in that medical specialty.
- ❖ **Sonographer.** – A person, other than a licensed practitioner, who performs sonography, ultrasound, or echocardiography for diagnostic or therapeutic purposes.

90-738. License required; exemptions.

On or after October 1, 2012, no person shall administer or offer to administer medical imaging or radiation therapy procedures on humans for diagnostic or therapeutic purposes as defined in this Article or otherwise indicate or imply that the person is licensed to administer medical imaging or radiation therapy procedures unless that person is currently licensed as provided under this Article.

The provisions of this Article shall not apply to the following:

- ❖ A licensed practitioner administering medical imaging or radiation therapy procedures.
- ❖ A licensed dental assistant or dental hygienist performing dental radiography procedures.
- ❖ A resident physician licensed under Article 1 of this Chapter.
- ❖ A student enrolled in and attending a school or college of medicine, osteopathy, chiropractic, podiatry, dentistry, or medical imaging or radiation therapy who performs medical imaging or radiation therapy procedures on humans while under the supervision of a licensed practitioner, radiographer, radiation therapist, nuclear medicine technologist, sonographer, magnetic resonance technologist, or cardiovascular invasive specialist holding a license under this Article.
- ❖ A person administering medical imaging or radiation procedures who is employed by the United States government when performing duties associated with that employment.

90-739. Scope of practice; limitations.

The Board shall establish licensure standards for a radiographer, radiation therapist, nuclear medicine technologist, cardiovascular invasive specialist, magnetic resonance technologist, sonographer, and limited X-ray machine operator.

A person holding a license under this Article may use radioactive substances or equipment emitting ionizing or nonionizing radiation for medical imaging and radiation therapy procedures on humans for diagnostic or therapeutic purposes by prescription of a licensed practitioner only, provided the application of a substance or the use of equipment is limited in a manner specified under this Article.

As related specifically to performance of computed tomography, the following limitations shall apply:

- ❖ Individuals licensed to perform radiography may perform computed tomography medical imaging.
- ❖ Individuals licensed to perform radiation therapy may only perform computed tomography for treatment simulation.
- ❖ Individuals licensed to perform nuclear medicine may only perform computed tomography for attenuation correction.
- ❖ Individuals licensed to perform radiation therapy, nuclear medicine technology, magnetic resonance technology, or sonography who are certified in computed tomography by the American Registry of Radiologic Technologists may perform computed tomography medical imaging.

90-740. Medical Imaging and Radiation Therapy Board of Examiners.

Creation. – The North Carolina Medical Imaging and Radiation Therapy Board of Examiners is created.

Composition and Terms. – The Board shall consist of 11 members who shall serve staggered terms. The Board members shall be appointed by the Governor and the initial Board members shall be appointed on or before October 1, 2011, as follows:

- ❖ One member who is a radiographer who shall serve for a three-year term.
- ❖ One member who is a nuclear medicine technologist who shall serve for a two-year term.
- ❖ One member who is a radiation therapist who shall serve for a one-year term.
- ❖ One member who is a sonographer who shall serve for a three-year term.
- ❖ One member who is a magnetic resonance technologist who shall serve for a two-year term.
- ❖ One member who is a cardiovascular invasive specialist who shall serve for a one-year term.

- ❖ One member who is a limited X-ray machine operator who shall serve for a three-year term.
- ❖ One member who is a radiologist who shall serve for a two-year term.
- ❖ One member who is a radiation oncologist who shall serve for a one-year term.
- ❖ One member who is a medical physicist who shall serve for a three-year term.
- ❖ One public member who shall serve for a two-year term.

Upon the expiration of the terms of the initial Board members, members shall be appointed for terms of three years and shall serve until their successors are appointed. No member may serve more than two consecutive terms.

Qualifications. – Except for the public member of the Board, every member of the Board shall hold a valid license issued by the Board in the category of license for that member's specialty, shall reside or be employed in North Carolina, and shall remain in active practice and in good standing with the Board as a licensee during their terms. The public member shall be a resident of this State and shall not be (i) a currently or actively licensed practitioner or (ii) a person who administers medical imaging or radiation therapy procedures under this Article.

Vacancies. – A vacancy shall be filled in the same manner as the original appointment and shall be filled within 45 days after the vacancy occurs. Appointees to fill vacancies shall serve the remainder of the unexpired term and until their successors have been duly appointed and qualified.

Removal. – The Board may remove any of its members for neglect of duty, incompetence, or unprofessional conduct. A member subject to disciplinary proceedings as a licensee shall be disqualified from participating in the official business of the Board until the charges have been resolved.

Compensation. – Each member of the Board shall receive per diem and reimbursement for travel and subsistence as provided in G.S. 93B-5.

Officers. – The officers of the Board shall be a chair, who shall be licensed under this Article, a vice-chair, and other officers deemed necessary by the Board to carry out the purposes of this Article. All officers shall be elected annually by the Board for one-year terms and shall serve until their successors are elected and qualified.

Meetings. – The Board shall hold at least two meetings each year to conduct business and to review the standards and rules for improving the administration of medical imaging or radiation therapy procedures. The Board shall establish the procedures for calling, holding, and conducting regular and special meetings. A majority of Board members constitutes a quorum.

90-741. Powers of the Board.

The Board shall have the following powers and duties:

- ❖ Administer this Article.
- ❖ Issue interpretations of this Article.

- ❖ Adopt, amend, or repeal rules as may be necessary to carry out the provisions of this Article.
- ❖ Employ and fix the compensation of personnel that the Board determines is necessary to carry into effect the provisions of this Article and incur other expenses necessary to effectuate this Article.
- ❖ Examine and determine the qualifications and fitness of applicants for licensure, renewal of licensure, and reciprocal licensure.
- ❖ Issue, renew, deny, suspend, or revoke licenses and carry out any disciplinary actions authorized by this Article.
- ❖ Set fees for licensure, license renewal, and other services deemed necessary to carry out the purposes of this Article.
- ❖ Conduct investigations for the purpose of determining whether violations of this Article or grounds for disciplining licensees exist.
- ❖ Conduct administrative hearings in accordance with Chapter 150B of the General Statutes when a contested case, as defined in G.S. 150B-2(2), arises under this Article.
- ❖ Maintain a record of all proceedings and make available to licensees and other concerned parties an annual report of all Board action.
- ❖ Develop standards and adopt rules for the improvement of the administration of medical imaging or radiation therapy procedures in this State.
- ❖ Adopt a seal containing the name of the Board for use on all licenses and official reports issued by it.

90-742. Requirements for licensure.

The Board shall admit to examination for licensure any applicant who shall pay a nonrefundable fee established by the rule of the Board and submit satisfactory evidence, verified by oath or affirmation, that the applicant meets the following criteria:

- ❖ At the time of the application is at least 18 years of age.
- ❖ Has successfully completed a four-year course of study in a secondary school approved by the State Board of Education, or passed an approved equivalency test.

In addition to the requirements of subsection (a) of this section, any person seeking to obtain a license in a specific area of medical imaging or radiation therapy shall comply with the following requirements:

- ❖ Each applicant for a license as a radiographer, radiation therapist, magnetic resonance technologist, cardiovascular invasive specialist, sonographer, or nuclear medicine technologist shall have satisfactorily completed a course of study in radiography, radiation therapy, magnetic resonance technology, cardiovascular invasive specialist, sonography, or nuclear medicine, respectively, or its equivalent to be determined by the Board.

- ❖ The curriculum for each course of study shall be no less stringent than the standards approved by the Joint Review Committee on Education in Radiologic Technology, Joint Review Committee on Nuclear Medicine Technology, Commission on Accreditation of Allied Health Education Programs, or any other appropriate accreditation agency approved by the Board, provided the standards are not in conflict with Board policy.

In addition to the requirements of subsection (a) of this section, any person seeking a license as a limited X-ray machine operator shall comply with the following requirements:

- ❖ Have completed a course of study in limited X-ray machine operation incorporating the American Society of Radiologic Technologists (ASRT) Limited Scope Radiography Educational Curriculum approved by the Board.
- ❖ The scope of each permit is limited as follows:
 - ✓ Chest radiography permit: radiography of the thorax, heart, and lungs.
 - ✓ Extremities radiography permit: radiography of the upper and lower extremities, including the pectoral girdle.
 - ✓ Spine radiography permit: radiography of the vertebral column.
 - ✓ Skull/Sinus permit: radiography of the skull and facial structures.
 - ✓ Podiatric permit: radiography of the foot, ankle, and lower leg below the knee.

The Board shall establish criteria and standards within the State for educational programs in medical imaging and in radiation therapy and approve these programs upon finding that the criteria and standards have been met.

90-743. Examinations.

Applicants for licensure as a radiographer, radiation therapist, nuclear medicine technologist, magnetic resonance technologist, cardiovascular invasive specialist, sonographer, or limited permit X-ray operator shall be required to pass an examination approved by the Board.

The Board shall accept current registration by the American Registry of Radiologic Technologists, Nuclear Medicine Technologist Certification Board, Cardiovascular Credentialing International, American Registry of Diagnostic Medical Sonography, or other recognized national voluntary credentialing bodies, provided that the standards of that body are at least as stringent as those established by the Board.

The Board shall use a limited X-ray machine operator examination administered by the American Registry of Radiologic Technologists for persons applying for a limited permit in chest, extremity, skull/sinus, podiatric, or spine radiography provided that the standards of that body are at least as stringent as those established by the Board.

90-744. Issuance of license; temporary license; display of license.

Upon payment of the appropriate fee, the Board may issue a license to each applicant who meets the requirements for licensure specified in this Article.

The Board may issue a temporary license to any person whose licensure or license renewal may be pending or when issuance may be justified by special circumstances. A temporary license shall be issued only if the Board finds that it will not violate the purpose of this Article or endanger the public health and safety. A temporary license shall expire 90 days after the date of the next examination if the applicant is required to take the examination. If the applicant does not take the examination on the scheduled date, the temporary license shall expire. In all cases, a temporary license shall expire when the determination is made either to issue or deny the applicant a regular license and in no event shall a temporary license be issued for a period longer than 180 days.

Any person issued a license under this Article shall display the official license document or a verified copy in each place of regular employment.

90-745. Program approval.

A program approved by the Board in radiography, radiation therapy, nuclear medicine technology, magnetic resonance technology, cardiovascular invasive specialist, sonography, or limited X-ray machine operation may be offered by a medical facility or educational institution. The program shall be affiliated with one or more hospitals or clinics that, in the opinion of the Board, shall provide the requisite clinical education.

Pursuant to rules adopted by the Board, the Board shall do the following:

- ❖ Adopt procedures for an educational program to follow in making application for approval by the Board.
- ❖ Provide a process for review of approval by a recognized national voluntary accrediting organization.

90-746. License renewal.

Every license issued under this Article shall be renewed on or before January 1 every two years. The license shall be renewed upon the payment of a renewal fee if, at the time of application for renewal, the applicant is not in violation of this Article, and has complied with any continuing education requirements pursuant to rules adopted by the Board.

As a condition of license renewal, each individual licensed as a radiographer, radiation therapist, sonographer, magnetic resonance technologist, cardiovascular invasive specialist, or nuclear medicine technologist shall be required to complete 24 hours of continuing education as approved by the Board. Individuals licensed as limited X-ray machine operators shall complete 12 hours of continuing education approved by the Board. A licensee is not required to duplicate the continuing education hours submitted to the American Registry of Radiologic Technologists (ARRT) for renewal.

The Board shall notify a licensee at least 30 days in advance of the expiration of his or her license. The licensee shall inform the Board of any change of the licensee's

address. Each licensee is responsible for renewing his or her license before the expiration date. Licenses that are not renewed automatically lapse.

The Board may provide for the late renewal of an automatically lapsed license upon the payment of a reinstatement fee. No reinstatement renewal may be granted more than five years after a license expires.

90-747. Reciprocity.

The Board may, upon application and payment of proper fees, grant a license to a person who resides in this State and has been licensed, certified, or registered to perform or administer medical imaging or radiation therapy procedures in another jurisdiction if that jurisdiction's standards of competency are substantially equivalent to those provided in this Article in accordance with rules adopted by the Board.

90-748. Fees.

All fees shall be set by the Board pursuant to rules adopted under this Article. All fees payable to the Board shall be deposited in the name of the Board in financial institutions designated by the Board as official depositories and shall be used to pay all expenses incurred in carrying out the purposes of this Article.

All salaries, compensation, and expenses incurred or allowed to carry out the purposes of this Article shall be paid by the Board exclusively out of the fees received by the Board as authorized by this Article or funds received from other sources. In no case shall any salary, expense, or other obligation of the Board be charged against the State treasury.

90-749. Disciplinary authority.

The Board may deny, suspend, revoke, or refuse to renew a license or impose probationary conditions on a license if the licensee or applicant for licensure has engaged in any of the following conduct:

- ❖ Obtaining a license by means of fraud, misrepresentation, or concealment of material facts.
- ❖ Engaging in unprofessional conduct pursuant to rules established by the Board.
- ❖ Having been convicted of or pleaded guilty or nolo contendere to a crime involving moral turpitude or any crime which indicates that the licensee or applicant is unfit or incompetent to administer medical imaging or radiation therapy procedures or that the licensee or applicant has deceived or defrauded the public.
- ❖ Engaging in any act or practice in violation of any of the provisions of this Article or any rule adopted by the Board or aiding, abetting, or assisting any person in such a violation.
- ❖ Committing an act or acts of malpractice, gross negligence, or incompetence in administering medical imaging or radiation therapy procedures.
- ❖ Practicing as a person licensed to administer medical imaging or radiation therapy procedures without a current license.

- ❖ Engaging in conduct that could result in harm or injury to the public.
- ❖ Having a license issued under this Article revoked or suspended or other disciplinary action taken whether in this State or another jurisdiction.
- ❖ Being unfit or incompetent to administer medical imaging or radiation therapy services by reason of deliberate or negligent acts or omissions regardless of whether actual injury to a patient is established.

The denial, refusal to renew, suspension, revocation, or imposition of probationary conditions upon a license may be ordered by the Board after a hearing held in accordance with Chapter 150B of the General Statutes and rules adopted by the Board. An application may be made to the Board for reinstatement of a revoked license if the revocation has been in effect for at least two years after the date of the Board's order revoking the license.

90-750. Violation a misdemeanor.

Any person who violates any provision of this Article shall be guilty of a Class 1 misdemeanor. Each act of such unlawful practice shall constitute a distinct and separate offense.

90-751. Injunctive relief.

The Board may make application to any appropriate court for an order enjoining violations of this Article, and upon a showing by the Board that any person has violated or is about to violate this Article, the court may grant an injunction, restraining order, or take other appropriate action.

90-752. Civil penalties.

Authority to Assess Civil Penalties. – The Board may assess a civil penalty not in excess of one thousand dollars (\$1,000) for the violation of any section of this Article or the violation of any rules adopted by the Board. The clear proceeds of any civil penalty assessed under this section shall be remitted to the Civil Penalty and Forfeiture Fund in accordance with G.S. 115C-457.2.

Consideration Factors. – Before imposing and assessing a civil penalty, the Board shall consider the following factors:

- ❖ The nature, gravity, and persistence of the particular violation.
- ❖ The appropriateness of the imposition of a civil penalty when considered alone or in combination with other punishment.
- ❖ Whether the violation was willful and malicious.
- ❖ Any other factors that would tend to mitigate or aggravate the violations found to exist.

Schedule of Civil Penalties. – The Board shall establish a schedule of civil penalties for violations of this Article and rules adopted by the Board.

Costs. – The Board may assess the costs of disciplinary actions against any person found to be in violation of this Article or rules adopted by the Board.

SECTION 2. For a period not to exceed two years after this act becomes effective upon payment of the proper fee as established by the Board, an individual providing documentation of employment for two of the preceding three years as a radiographer, radiation therapist, nuclear medicine technologist, magnetic resonance technologist, cardiovascular invasive specialist, sonographer, or limited X-ray machine operator may be issued a license by the Medical Imaging and Radiation Therapy Board of Examiners (Board) created under G.S. 90-740, as enacted by Section 1 of this act, without having to pass an examination as required by G.S. 90-743, enacted by Section 1 of this act. Individuals applying for licensure pursuant to this section shall provide to the Board a statement of responsibility for the actions of the individual in the performance of medical imaging or radiation therapy procedures, a certificate of competence, and a list of medical imaging or radiation therapy procedures the individual is authorized to perform signed by the physician supervising the individual in the performance of medical imaging and radiation therapy procedures. Individuals registered with the American Registry of Radiologic Technologists (ARRT) do not need a certificate of competence.

SECTION 3. This act is effective when it becomes law.

FINDINGS AND RECOMMENDATIONS

MEDICAL IMAGING AND RADIATION THERAPY BOARD OF EXAMINERS LICENSURE/FEES

Findings

The Joint Legislative Committee on New Licensing Boards finds that the sponsors have met the six criteria by which the committee judges licensure proposals.

Specifically, the Committee finds that:

- ❖ The unregulated practice of medical imaging and radiation therapy can substantially harm or endanger the citizens of North Carolina.
- ❖ Currently, there is not a regulatory body in North Carolina authorized by statute to license or monitor the profession or investigate complaints.
- ❖ Medical imaging and radiation therapy possesses qualities that distinguish it from ordinary labor as it requires knowledge of proper basic and cross-sectional anatomy, equipment manipulation and radiation dispensing, understanding of electromagnetic physics, and establishing proper patient care skills, to develop successful anatomical images with proper radiation and anatomy skill sets.
- ❖ Thus, the profession requires an educated and certified workforce to dispense safe radiation dosages, render correct adjustments to display images of the anatomical features requested by the physician, and prevents a higher cost of medical care due to miss-diagnosis.
- ❖ A substantial majority of the public does not have the knowledge or experience to measure or evaluate the credentials or competence of medical imaging and

radiation therapists. The public cannot be successfully or effectively protected by other means less licensure to protect their health and safety.

- ❖ Licensure would not have a substantial adverse economic impact on the patients affected.

Recommendation

The Joint Legislative Committee on New Licensing Boards recommends that the practice of medical imaging and radiation therapy be performed by a licensed professional. This report constitutes the final assessment report for the licensure of the profession. The report is based on the proposed licensing as set out in Senate Bill 467 and House Bill 847, the response to the committee's questionnaire, and remarks and testimony from interested parties before the committee in the course of meetings held during the 2011 Session of the North Carolina General Assembly.

ATTACHMENT

*Response to Questionnaire for the
Joint Legislative Committee on
New Licensing Boards*

QUESTIONS FOR THE JOINT LEGISLATIVE COMMITTEE ON NEW LICENSING BOARDS

In what ways has the marketplace failed to regulate adequately the profession or occupation?

While most hospitals do regulate the profession, there are still individuals performing imaging procedures in physicians' offices who are neither educated nor licensed in our field. These individuals are dispensing radiation to the public and making anatomical images without proper radiation or anatomy skill sets. It takes an educated individual to calculate safe dosages and be able to make the proper adjustments to the images in order to display anatomical features, leading the physician to a proper diagnosis.

Have there been any complaints about the unregulated profession or occupation? Please give specific examples including (unless confidentiality must be maintained) complainants' names and addresses.

The complaints by patients cannot be disclosed due to HIPPA. The consequences of suboptimal images are found in malpractice laws suits and physician dictations while interpreting such images. Another complaint about the lack of regulation of the profession comes from the 10,000+ educated and professionally trained, ARRT registered technologists. Knowing what it takes to practice safely and efficiently without unnecessary harm to the public is what makes the lack of regulations unacceptable. The hair stylist, the nail stylist, cosmetologists, sign language interpreters are all required to be licensed by the State of NC. Professionals administering medical radiation are not required minimal standards regulated by licensure in the state of North Carolina. It makes absolutely no sense that that state finds it very important that our hair and nails are done by a standard, but our safety and health does not need it.

In what ways has the public health, safety, or welfare sustained harm or is in imminent danger of harm because of the lack of state regulation?

Harm may not be seen for years as to the unsafe radiation exposure, and given that dose effects are stochastic may not be traced back to a specific procedure. This does not indicate that harm has not occurred. However, harm due to a misdiagnosis does result in time lost in the treatment of an illness which can be traced to increased health care costs, lost work and wages from illness, and possible loss of life. Any disease is best treated in the onset when intervention is more easily treated and outcome is more favorable.

If left untreated and a disease progresses, the cost of treatment is much higher and the outcome may not be a favorable.

Is there potential for substantial harm or danger by the profession or occupation to the public health, safety, or welfare? How can this potential for substantial harm or danger be recognized?

“Someone with no background in anatomy, radiation safety or patient care too often is hired to do procedures that help doctors detect cancer and other life-threatening illnesses. The reason public outcry is not louder is that most patients have no idea they may be getting substandard care.” **Birmingham News, Birmingham, Al.**

“Adoption of the Consumer-Patient Radiation Health and Safety Act of 1981 was made discretionary for each state. As a result, only 39 states voluntarily license, regulate or register radiographers; 34 states license radiation therapists, and 28 states license nuclear medicine technologists. Laws vary from state to state, and some are so weak that they are ineffective in ensuring the competency of personnel who perform medical imaging and radiation therapy procedures. The situation is even worse in the six states that do not have any licensure law at all. In those states and Washington, D.C., individuals may be permitted to perform complex diagnostic procedures after only a few hours of coursework or a couple weeks of on-the-job training Health care workers with as little as one week training by an equipment vendor— and completely untrained in the basics of human anatomy and radiation safety— may, and do, lawfully administer x-rays in New Hampshire. The situation reflects a glaring deficiency in ... consumer protection laws that demands immediate public attention”. **New Hampshire Business Review**

Three years ago, on July 15, 2008, the Medicare Improvements for Patients and Providers Act (MIPPA) was passed by Congress. Part of the CARE bill was put into the MIPPA bill, covering computed tomography, magnetic resonance, positron emission tomography and nuclear medicine. These modalities now have mandatory quality standards established by the Secretary of Health and Human Services that will be tied to Medicare reimbursement. The procedures done in these modalities make up only 30 percent of medical imaging provided to Medicare patients in the United States. That leaves the other 70 percent of diagnostic imaging (x-ray, ultrasound, fluoroscopy and radiation therapy) provided to Medicare patients not covered by MIPPA.

So, you can see that by getting the CARE bill passed, we can be assured that any medical imaging and radiation therapy procedure will be done by properly trained, qualified and certified professionals. Oh, don't forget the cost savings!

Has this potential harm or danger to the public been recognized by other states or the federal government through the licensing or certification process? *Please list the other states and any applicable federal law (including citations).*

ASRT Tally of State Licensure, Certification or Recognition Standards by Discipline

Radiography (39 States)

Arizona	Iowa	Nebraska	Tennessee
Arkansas	Kansas	New Jersey	Texas
California	Kentucky	New Mexico	Utah
Colorado	Louisiana	New York	Vermont
Connecticut	Maine	North Dakota	Virginia
Delaware	Maryland	Ohio	Washington
Florida	Massachusetts	Oregon	West Virginia
Hawaii	Minnesota	Pennsylvania	Wisconsin
Illinois	Mississippi	Rhode Island	Wyoming
Indiana	Montana	South Carolina	

Radiation Therapy (35 States)

Arizona	Indiana	New Hampshire	Tennessee
Arkansas	Iowa	New Jersey	Texas
California	Kansas	New Mexico	Utah
Colorado	Kentucky	New York	Vermont
Connecticut	Louisiana	Ohio	Washington
Delaware	Maine	Oregon	West Virginia
Florida	Maryland	Pennsylvania	Wisconsin
Hawaii	Massachusetts	Rhode Island	Wyoming
Illinois	Mississippi	South Carolina	

Limited X-ray Machine Operators (32 States) – Not Permitted to perform fluoroscopy

Arizona	Iowa (<i>must pass</i>	New Mexico	Utah
Arkansas	<i>hospital fluoro exam</i>)	North Dakota	Vermont
California	Kentucky	Ohio	Virginia
Colorado	Maine	Oregon	Washington
Delaware	Minnesota	Pennsylvania	West Virginia
Florida (<i>fluoro under</i>	Mississippi	Rhode Island	<i>podiatry only</i>)
<i>direct MD</i>	Montana	South Carolina	Wisconsin
<i>supervision</i>)	Nebraska	Tennessee	Wyoming
Illinois	New Jersey	Texas	
Indiana			

Nuclear Medicine Technology (31 States)

Arizona	Indiana	Mississippi	South Carolina
Arkansas	Iowa	New Jersey	Texas
California	Kansas	New Mexico	Utah
Colorado	Kentucky	New York	Vermont
Delaware	Louisiana	Ohio	Washington
Florida	Maine	Oregon	West Virginia
Hawaii	Maryland	Pennsylvania	Wyoming
Illinois	Massachusetts	Rhode Island	

Fusion Imaging (12 States)

Arizona	Iowa	Minnesota	Ohio
California	Louisiana	Nebraska	Oregon
Florida	Maryland	New Mexico	Vermont

Radiologist Assistant (28 States)

Arizona	Iowa	New Jersey	Rhode Island
Arkansas	Kentucky	New Mexico	Tennessee
Colorado	Maryland	New York	Vermont
Connecticut	Massachusetts	Ohio	Virginia
Florida	Minnesota	Oklahoma	Washington
Georgia	Mississippi	Oregon	West Virginia
Illinois	Montana	Pennsylvania	Wyoming

No Standards (6 States)

Alabama	District of Columbia	Missouri	South Dakota
Alaska	Idaho	North Carolina	

Magnetic Resonance (3 states)

New Mexico	Oregon	West Virginia
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Mammography (distinct from Radiography) (5 States)

Arizona	Colorado	Michigan	Nevada
California			

Sonography (2 states)

New Mexico	Oregon
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Computed Tomography (distinct from radiography) (3 States)

Colorado	Oregon	Wisconsin
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Cardiovascular Technologists (RCIS)

Arkansas
Delaware

Ohio
South Carolina

Texas
Washington

Fluoroscopy Only (1 state)

Alaska

Data: <https://www.asrt.org/Content/GovernmentRelations/TallyofStateLicensure.aspx>

What will be the economic advantage of licensing to the public?

Economic advantage to the public: The economic advantage to the public as previously stated is that the licensed professional has the training necessary to perform quality images with the lowest possible dose which in turn does increase the health benefits to the public when using imaging services through a reduction in radiation dose and a decrease in misdiagnosis through poor images caused by untrained individuals. As stated earlier--it is far more cost effective to treat an illness in the early stages than the progresses stage.g

What will be the economic disadvantage of licensing to the public?

The public will only be helped by implementing licensing of radiologic technologist. It will not increase cost to the public, but will better guarantee that they receive optimal imaging resulting in less radiation and a more timely diagnosis.

The ASRT studied radiologic technologists' salaries in Arkansas and South Carolina (recent states to pass radiologic technologist licensure laws). Following the implementation of state licensure, salary levels did not increase above the national norm.

What will be the economic advantages of licensing to the practitioners?

Economic advantage to the practitioner: The economic advantage to the imaging practitioner is in the satisfaction that our profession is taken serious by the public and that we know that only quality work should be the outcome from the profession. The vast majorities of imaging professionals do take pride in our work and feel that our images are key in the quality of healthcare our patients receive. We are an important component of the healthcare team and would love to have our profession embraced as such by our fellow healthcare professionals. The imaging community for years has vowed to be viewed as professional, and licensure is a step in that direction.

What will be the economic disadvantages of licensing to the practitioners?

Economic disadvantage to the practitioner: The economic disadvantage to licensure to the practitioner would be the additional fee we would submit to the state for the privilege of practicing our profession. However, this fee is far overshadowed by the benefit to both the practitioner on the professional level and the benefit gained by the public through reduced dose and quality of care.

Please give other potential benefits to the public of licensing that outweigh the potential harmful effects of licensure such as a decrease in the availability of practitioners and higher cost to the public.

Cost of licensure to the public: Licensure has not historically caused a higher cost to the public. The cost of our services is not set by the imaging professional nor do we receive pay through piecemeal practices. Also, there is a misconception that licensure will cause a decrease in availability of services--North Carolina has educated technologists in the ready to fill any vacancies that may appear. This state is blessed in the fact that there are great educational programs that are willing and able to develop our future imaging professionals, and ensure that these individuals practice and are elevated to the highest standards of the profession.

Please detail the specific specialized skills or training that distinguish the occupation or profession from ordinary labor.

Specific skills within the profession:

- *Basic and Cross-sectional anatomy*
- *Procedural skills and anatomical manipulation*
- *Radiation Biology and Protection*
- *Electromagnetic physics*
- *Computer manipulation*
- *Equipment manipulation*
- *Patient care skills*
- *Drug interaction, dose, and injection skills*
- *Plus basic General Educational skill sets*

See Appendices "ASRT Practice Standards for Medical Imaging and Radiation Therapy"

What are other qualities of the profession or occupation that distinguish it from ordinary labor.

Skill sets that distinguish our profession:

- *Commitment to quality images*
- *Caring and compassion for our patients*
- *ALARA concept of maintain the lowest possible dose for our examinations.*
- *An innate ability to work with and for our physician coworkers*
- *Teamwork skills to work in conjunction with other healthcare departments.*
- *The ability to interpret an order in conjunction with what the patient tells us and then in turn use what we have learned to question to ensure that the proper exam is performed on our patient*
- *The ability to communicate effectively*

See Appendices “ ASRT Practice Standards for Medical Imaging and Radiation Therapy”

Will licensing requirements cover all practicing members of the occupation or profession? If any practitioners will be exempt, what is the rationale for the exemption?

The imaging profession is differentiated by anatomical modalities and imaging technology used. The modalities which involve ionizing radiation are covered by these licensing requirements. The exemptions are made on bases of crossing licensing with other professions, such as licensed dental assistants and hygienists, licensed physicians and physician and radiologists assistants. We are proposing to give the board the ability to evaluate the need for additional licensure as modalities evolve with the new technology.

What is the approximate number of persons who will be regulated and the number of persons who are likely to utilize the services of the occupation or profession?

Number of imaging professionals within North Carolina: North Carolina has some 10,000+ technologists with some 15,000+ certifications. The state also has over 30 educational facilities that produce imaging professionals each year to keep our supply at a viable level.

What kind of knowledge or experience does the public need to evaluate the services offered by the practitioner?

How the public can evaluate our profession: The public can often evaluate the quality of the services given by the professional demeanor of the practitioner. Did they provide radiation protection, did they do excessive repeats of the procedure, did they explain the exam to them, did they ask questions as to verify the procedure and in the case of young females child bearing events, did they introduce themselves as a certified imaging professional, and could an accurate diagnosis or step in a diagnosis be determined by the exam.

Does the occupational group have an established code of ethics, a voluntary certification program, or other measures to ensure a minimum quality of service?

Code of ethics and certification process: There is a code of ethics for each modality within the imaging arena. These can be found on the web sites of our professional organizations, and probably in every imaging school handbook within this state. The educated imaging professional is encouraged to seek certification within a specified time post-graduation. Also most hospitals within the state do insist that the imaging professional become certified at a specified time post-employment. Once certification is acquired, the imaging professional must obtain a number of continuing educational credits within a specified time period to retain certification. The continuing education credits must fall within the scope of practice for that modality and are policed by the national certification centers per each specialty.

Appendices

- 1) ASRT Map of States That Do Not Have Any Licensure or Regulatory Provisions For Radiologic Personnel
- 2) ASRT Radiologist Technologist: Code of Ethics
- 3) ASRT Radiation Therapist: Code of Ethics

Articles of Interest

- History of X-Rays: Mary Washington College, 4/14/2003 created by Amy Miller for Dr. Jeffrey McClurken's History of American Technology & Culture
<http://www.umw.edu/hisa/resources/Student%20Projects/Amy%20Miller%20-%20X-Ray/students.mwc.edu/amill4gn/XRAY/PAGES/cont.htm>
 - The New York Times, X-Rays and Unshielded Infants, 2/27/2011, by Walt Bogdanich and Kristina Rebalo
<http://www.nytimes.com/2011/02/28/health/28radiation.html>
 - NEW YORK TIMES HEALTH FEED : Tuscaloosa News, Radiation Offers New Cures, and Ways to Do Harm, 1/24/2010, Walt Bogdanich
<http://www.tuscaloosaneews.com/article/20100124/ZNYT04/1243010>
 - Unintended Over Exposure of Radiation Plaguing Hospitals and Harming Patients, February 18, 2010, Eisenberg, Rothweiler, Winkler, Eisenberg & Jeck, P.C. (Lawyer Blog)
<http://www.philadelphiapersonalinjurylawyersblog.com/2010/02/unintended-over-exposure-of-ra.html>
 - Fatal Dose: Radiation Deaths Linked to AECL Computer Errors, June 1994. By Barbara Wade Rose
http://www.ccnr.org/fatal_dose.html
 - CT Radiation and Cancer, Parker, Waichman, Alonso LLP,
<http://www.cat-scan-radiation-overexposure.com/radiation-overdose-news/ct-radiation-and-cancer/>
 - Injuries Associated with Over Radiation, Eisenberg, Rothweiler, Winkler, Eisenberg & Jeck, P.C. , March 3, 2010
<http://www.philadelphiapersonalinjurylawyersblog.com/cgi-bin/mt-search.cgi?search=radiation&IncludeBlogs=132&search>
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