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The Honorable Jane Nelson, Chair
The Honorable Four Price, Vice Chair
Texas Sunset Advisory Commission
P.O. Box 13066
Austin, TX 78711

Dear Chair Nelson, Vice Chair Price, and members of Texas Sunset Advisory Commission:

I am contacting you as a licensed medical physicist **(MP10047)** concerning the Texas Sunset Advisory Commission Staff Report published in May 2014. The report on the Texas Department of State Health Services (DSHS) does not accurately reflect the current environment of professional regulations and health care in Texas or the importance of licensure in protecting Texans from unnecessary exposure to radiation.

The overall professional community is growing ever more concerned about medical radiation overexposures (accidental overdoses of radiation), and Medical Physicists help maintain quality and safety programs and thus protect the public from these incidents.

The report suggests that the DSHS regulatory programs are unnecessary because (1) deregulation would have little impact on health and safety, (2) they cover professionals that operate in a highly regulated environment, (3) they have 'regulation' provided by another body or through private sector accreditation, and (4) they generate little regulatory activity.

I would like to address each of the areas to provide you with additional information that we believe may be helpful as you discuss this issue:

1. The report states "deregulation would have little impact on health and safety." Texas is very fortunate to be home to some of the most advanced imaging and treatment facilities in the world. In order for equipment used in these facilities and elsewhere in Texas to operate safely, highly trained individuals are required to ensure the safe use of the equipment. Professional regulations are essential. Worldwide there have been some very serious injuries associated with radiation-emitting equipment.

   Currently, **licensed** medical physicists are required to provide annual performance evaluations on the equipment to ensure that they meet regulatory standards. Without such requirements these annual quality assurance measures might not be performed or might be performed by others with fewer or no qualifications. Licensure in Texas requires Board certification, which assures the public that a minimum qualification has been met. Without licensure, that minimum level of knowledge would no longer be a requirement, and negative future consequences could likely result. Also, with growing public concern about radiation risk, removing safeguards already in place in Texas (through licensure) seems very unwise.

2. The report states the medical physicist licensure program is a "profession that operates in a highly regulated environment." It is true that exposure to radiation in medical applications is regulated for adherence to equipment specification. It is not true that those who practice in radiation imaging, nuclear medicine or therapy are regulated by any other government entity except for those who provide services to support the Mammography Quality Standards Act (MQSA). Less than professional conduct has been a contributor to numerous medical errors. In 2009, reports of medical errors in the Veteran Administration [highlighted a lack of professional responsibility and accountability. Professional licenses hold individuals accountable in providing services that meet regulatory compliance. When the services do not meet this requirement, professional medical physicist license this would not be possible.

3. The third item in the report to be addressed is the view that medical physicists "have 'regulation' provided by another body or through private sector accreditation." I am not aware of any duplication of professional accountability for medical physicists in another regulatory body or accreditation that meets the equivalent standards for a licensed professional with the exception of the MQSA requirements. In fact, accreditation does not cover all the types of medical imaging services or radiation therapy. For some imaging and radiation therapy professionals, accreditation is voluntary and does not require the use of board-certified medical physicists with specific areas of expertise. Without licensure there would be no requirement to use board-certified physicists. It is only through licensure that all medical physicists practicing in Texas must meet continuing education requirements, as some board-certified individuals are not required to meet continuing education requirements

4. The last rationale in the report that medical physicists "generate little regulatory activity" is confusing. Do we only regulate those professions that have activity? Is it possible that because of regulations, medical physicists are meeting the requirement of the regulations, improving health care in Texas, and do not require extensive support from agency staff? The Texas licensure law was written and enforced to protect citizens from individuals with little or no knowledge of radiation equipment from providing services that could in fact harm them. Licensed medical physicists must meet minimum educational and board certification requirements to obtain a license. To maintain their Texas license, medical physicists must meet continuing education requirements each renewal cycle (which is quite consistent with other medical professionals).

On a more personal note, I would like to recap a perspective given to me by one of my medical physics professors as I was entering the field. He explained that when a physician makes a mistake, it could potentially lead to grave injury to an individual patient, but that when a medical physicist makes a mistake, it could lead to grave injury to every patient treated on the equipment for the lifetime of the equipment. To put this into perspective, in radiation therapy, a linear accelerator is used to treat approximately 30 cancer patients per day, five days per week, and is in service for approximately 10 years. If an improperly trained person commissions that linear accelerator and makes an error, this could result in upwards of 78,000 mistreatments. Now, considering that there are more than 500 linear accelerators operating in the state of Texas, there is the potential for 39 million mistreatments over a 10-year period. Now consider that my example only took into account one single type of radiation equipment. If we now extrapolate the numbers to include all radiation producing equipment, e.g., CT scanners, PET, MRI, brachytherapy, x-ray units, we are literally speaking of an infinite number of potential mistreatments if radiation equipment is not commissioned and subsequently maintained by well trained and licensed medical physicists. Furthermore, considering the continuing rise in cancer in Texas and the United states, this number will certainly increase with time. The role of medical physicists is to diligently commission radiation devices in use in radiation therapy, diagnostic imaging, and nuclear medicine and to provide end-to-end quality assurance to ensure that every patient is treated with the correct dose and that every aspect of the treatments is safe. I am a proud native of Texas and I am equally proud to work in a state that values the training of medical physicists and requires licensure to work here. Our state wisely recognized the magnitude of what could happen if unqualified individuals "practice" medical physics in our great state. I urge you to keep licensure

for medical physicists and to ensure quality radiation delivery for all Texans. As a concluding remark, I mention that I previously worked in a non-licensure state and witnessed firsthand the consequences of poorly trained individuals practicing medical physics. I hope to never witness such circumstances here in my home state.

Medical physicists are essential for patient safety in diagnostic imaging (radiology), nuclear medicine and radiation therapy. Professional licensure helps to ensure that well qualified individuals provide these services. I would be glad to discuss with you the importance of medical physicist licensure and why it should remain in place. Please contact me at: rhowell@mdanderson.org or 832-459-9531

Sincerely,

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