

On February 1, 2022 a group of Professional Medical Physicists licensed in Radiation Oncology Physics (consisting of Drs. Ray Beers, Eli Furhang, Thomas Petrone and Matthew Podgorsak ) met with Mr. Stephen Boese and Mr. Robert Pizzutiello to address the questions posed by NYSDOH regarding scope of practice for medical physics and treatment plans and double-checks.

The informal, ad-hoc working group (WG) held a robust and practical discussion of the issue of medical physics scope of practice with regard to “oversight and responsibility for patient radiation dose measurement, calibration and reporting” §8702(b). The WG agreed that Treatment Planning and MU calculations are contained within this section. The WG discussed current state of practice and published positions of AAPM and recognized that the Education Law and associated regulations were substantially less prescriptive and were written before many current technological and staffing realities were available or commonplace.

The WG offers the following responses to the question of medical physics scope of practice regarding treatment plans and double checks.

1. **Oversight and responsibility for Treatment Plans falls with the scope of practice of medical physics §8702(b).** Hence each treatment plan must demonstrate this oversight, typically by “signing off” by a PMP. This may be accomplished by manual or electronic means. Any treatment plan that does not demonstrate oversight by a PMP in this way indicates that one or more persons has infringed on the scope of practice of medical physics.
2. Double-checking the treatment plan and associated calculations by a person who did not create them is the current standard of care. The regulation is silent on who must initially prepare the treatment plan, as well as the sequence of who prepares vs. double-checks the treatment plan and calculations. As indicated above, “signing off” by a PMP is required by scope of practice. The group unanimously agreed that it is unacceptable for a treatment plan to be prepared and double-checked when neither individual is a PMP. This would be an infringement on the scope of practice of medical physics.
3. The working group discussed the current standard of care regarding whether the double-check should be performed prior to the first patient treatment. The WG agreed that the Education Law and Regulations are silent on this matter. Nonetheless this is a critical patient safety issue that might be best addressed in the Health Code 10 NYCRR16, currently under revision.
4. The WG discussed whether the scope of practice activities described above must be performed by a LMP who is physically present at the site, or whether remote oversight was acceptable. The WG agreed that the Education Law and Regulations were silent in this regard, but that this was another critical patient safety issue that might be best addressed in the Health Code 10 NYCRR 16, currently under revision.
5. The WG members agreed to raise these concerns with NYSDOH when the revised Part 16 is available for comment.

Respectfully submitted,  
Robert Pizzutiello

# DOH licensure query

The questions are as follows:

*"I went over the State ED medical physics practice guidelines. The emphasis is on calibration, QC, who may do what etc. Did not see reference to treatment plans or double checks anywhere, saw only measurement of patient doses. I understand that to mean using a TLD or other means to measure dose to the patient during treatment or patient's IMRT plan check, not treatment planning and mu calculations for external beam therapy which have to be double checked by physics staff (self by LMP or other) and approved by the physician.*

*In the past, for most cases, a dosimetrist would do the plan and mu calculations for routine cases, another dosimetrist or a physicist would do the double check. Sometimes, a physicist would do the initial plan and a dosimetrist would do the double check. The exception was SRS or other complex treatments. Physicists did the plan, double check etc. The P&P manual stated these responsibilities clearly.*

*With medical physicists licensed in NY state and both treatment machines and techniques more complex, would like to know State ED/Medical Physics Board's position on this issue."*

**The pertinent regulations are:**

**Education Law §8702 defines the Practice of Medical Physics as follows:**

The use and application of accepted principles and protocols of physics in a clinical setting to assure the correct quality, quantity and placement of radiation during the performance of a radiological procedure, so as to protect the patient and other persons from harmful, excessive or misapplied radiation. Such practice shall include, but is not necessarily limited to:

- a. radiation beam calibration and characterization;
- b. oversight and responsibility for patient radiation dose measurement, calculation and reporting<sup>1</sup>;
- c. oversight and responsibility for quality control (QC);
- d. instrument specification;
- e. optimization of image quality;
- f. acceptance testing;
- g. shielding design;
- h. protection analysis on radiation emitting equipment and radio-pharmaceuticals; and
- i. consultation with a physician to assure accurate radiation dosage and application to a specific patient.

**Education Law §8701(2)(d) defines**

**Therapeutic radiological physics or radiation oncology physics** means the branch of medical physics relating to the therapeutic application of radiation, the analysis and interpretation of radiation equipment performance measurements

and the calibration of equipment associated with the production and use of such radiation, the analysis and interpretation of measurements associated with patient doses, and the radiation safety aspects associated with the production and use of such radiation.