

# The Dosimetry Educator: Advancing Education and Innovation in Medical Dosimetry

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## ABSTRACT

### BACKGROUND

The Medical Dosimetry Department at Mayo Clinic provides education for several groups: radiation therapy students, medical physics residents, medical residents, and various other learners including fellows and visiting professionals. These educational responsibilities combined with simultaneous heavy clinical workloads created a suboptimal learning environment due to inadequate dosimetry resources. Thus, dosimetry leadership created the dosimetry educator position to specialize in the organization and facilitation of instruction of medical dosimetry to these groups.

### AIMS/OBJECTIVE

The Dosimetry Educator (DE) plays a critical role in enhancing dosimetry education through mentorship and the integration of innovative practices. This poster will highlight the DE's significant contributions at Mayo Clinic.

## LEARNING OBJECTIVES

### 1. Understand the Role and Responsibilities of the Dosimetry Educator

Learners will describe the DE's key responsibilities, including their role in overseeing clinical rotations, managing educational content, and ensuring successful training outcomes.

### 2. Recognize the Importance of Mentorship and Personalized Training

Learners will be able to identify how the DE provides mentorship and personalized training to ensure learner success in dosimetry education.

### 3. Adopt Innovative Approaches to Enhance Dosimetry Education

Learners will evaluate the use of innovative technologies and methodologies in enhancing training and promoting continuous improvement in dosimetry education.

## METHODOLOGY

- Serving as the primary preceptor for physics residents, medical residents, fellows and radiation therapy program students, the dosimetry educator coordinates the rotation schedule and provides guidance for planning-related inquiries as needed.
- Coordinates review sessions utilizing a team-based approach to cover treatment planning techniques for all disease site groups. The DE schedules sessions with disease site experts and monitors content completion, guided by each learner's progress through the rotation.
- Provides introductory and personalized training sessions to ensure learner success. These sessions vary in length and frequency based on individual learner needs.
- Manages and expands a comprehensive library of enduring content including Standard Operating Procedures (SOPs) and treatment planning training videos. These have proved to be crucial for training our students, onboarding new employees and maintaining best practices.
- Facilitates observation requests to optimize learning opportunities for new hires, trainees, and other visiting professionals. The DE schedules all observations and administers observation hours when appropriate based on the goals of the observation.

TABLE 1:

Treatment Planning Video Assessment Scores		
Content	Pre-Quiz	Post-Quiz
3DCRT	72.06%	93.79%
IMRT	65.34%	92.44%
Other	65.84%	96.64%

Table 1 demonstrates the average scores for quizzes taken prior to and after viewing the associated treatment planning video.

FIGURE 1:

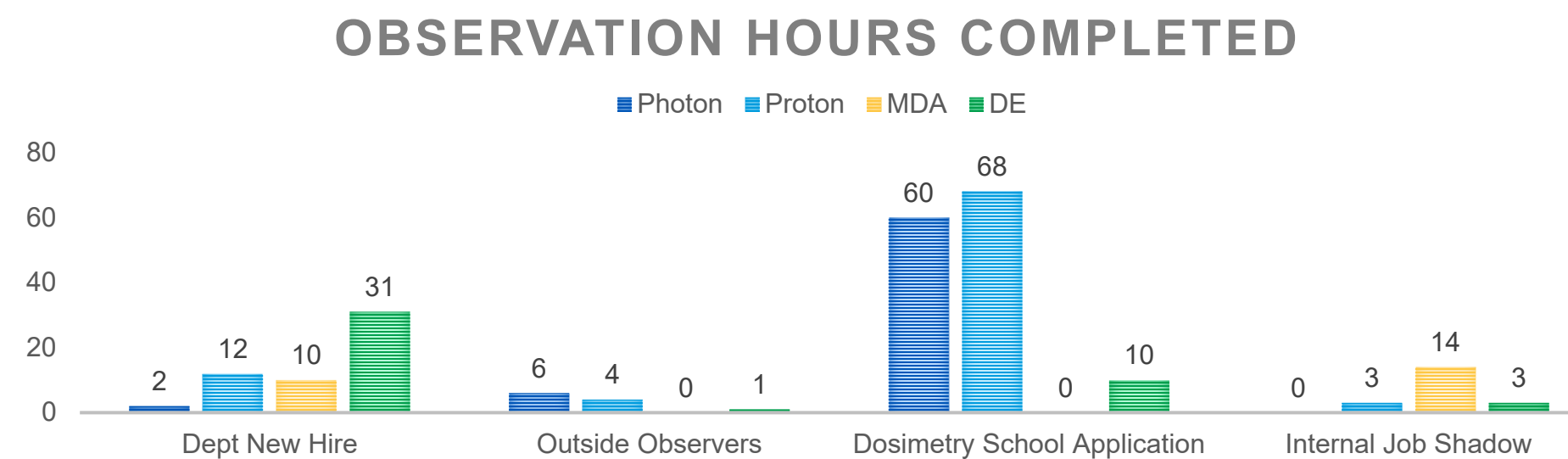


Figure 1 illustrates the number of observation hours completed across the dosimetry team. Hours are tracked and represented to highlight time distribution across each category and the DE's contribution.

## RESULTS

Through the adoption of innovative technologies and methodologies, the DE ensures the continuous improvement of training experiences and promotes a forward-thinking approach to dosimetry education. Feedback gathered from students in evaluations of their dosimetry clinical rotation has proven the DE role to be effective. Furthermore, the balanced responsibilities of clinical workload and education is more manageable for the dosimetry work group.

FIGURE 2:

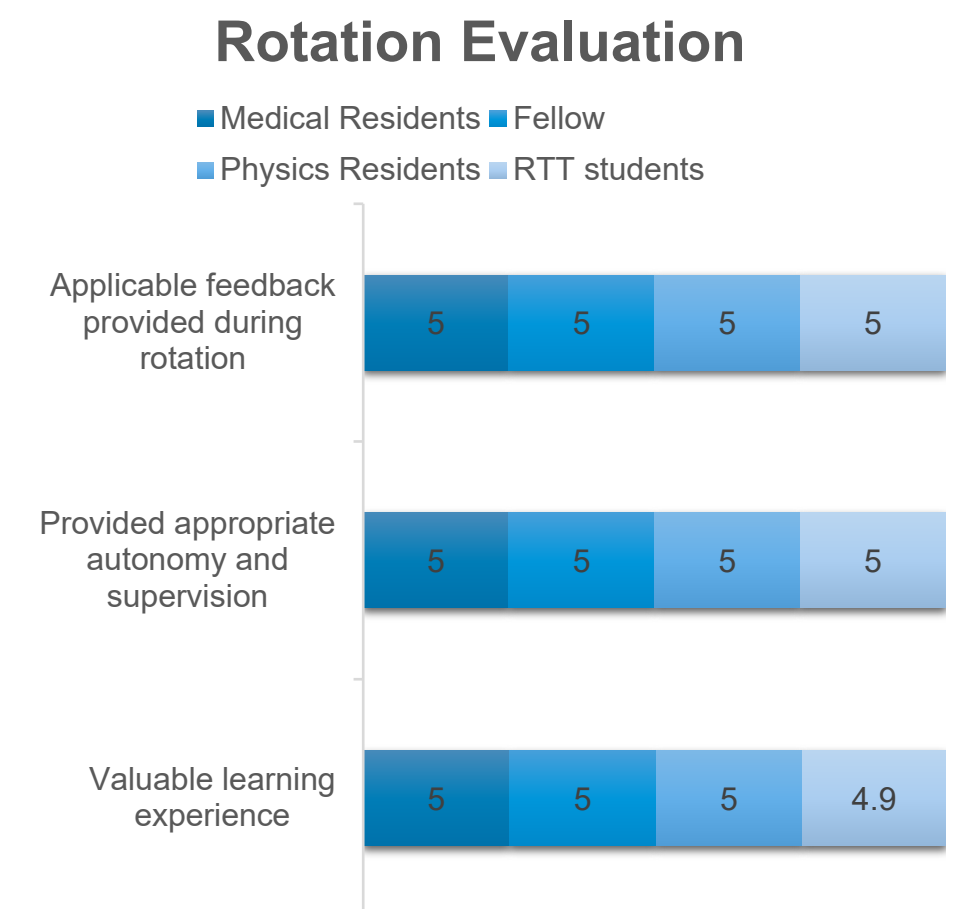


Figure 2 represents feedback from evaluations completed post rotation. Feedback is scaled from strongly disagree (1) to strongly agree (5). This figure represents the average score from each group of learners

## ACKNOWLEDGEMENTS

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