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DOS 516 Fundamentals of Radiation Safety

Radiation Safety Paper

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Radiation therapy can induce anxiety and fear in patients because in many instances much of what they know about it comes from the media where they report on overdoses, deaths, and treatment errors. Usually when they begin their radiation treatments the patient has already been seen by many different doctors and gone to numerous appointments with a great deal of information thrown at them. It can be extremely overwhelming and on top of it all they are reminded of all of the stories that they have read about the dangers of radiation therapy. Patient safety is a priority in radiation oncology departments and there have been many improvements in department workflow, policies, and education that have caused this to increase. It is the responsibility of all of the radiation oncology staff to promote a culture of increased patient safety in the department as well as educate the patients about all of the ways we are implementing checks and tasks that ensure their safety.

Recently there have been many stories published in the New York Times that featured devastating errors from radiation treatments.¹ This stimulated a greater focus on identifying risks and developing ways to eliminate errors in radiation oncology. Many initiatives were created at both the national and departmental levels to establish standards that define quality and comprehensive QA programs that addresses personnel, workflow, and equipment concerns.¹ A majority of the errors occurring in radiation therapy are multifactorial and call for a review of the different processes, communication, and workflow currently in place within a department.¹ Since there are so many different roles in the radiation oncology department that are involved in delivering treatment to a patient (physicians, dosimetrists, radiation therapists, nurses, etc.) it is imperative to look at more than just the incident itself, but rather take a team view point to help cultivate a culture of continuous advancement and growth towards increased radiation safety.¹ Treatment errors provide the radiation oncology community an opportunity to review and improve policies and procedures, but many times incidents go unreported because there is fear that disciplinary action will be taken on them.² For an incident reporting system in a department

to be successful there has to be an understanding that there will be “no-blame” given to those involved or reporting the error.²

The field of radiation therapy is becoming ever more complex with the advancements in technology and techniques used for treatment planning and delivery. With increased complexity comes an increased risk of treatment errors, a greater need for quality assurance, and a demand for enhanced radiation safety. Although it has been common to address these areas of concern through focusing solely on the healthcare professional, there has been recent interest in the patient’s involvement in this setting, as well.

Involving patients in their treatment process not only encourages empowerment and inclusion in treatment choices and decisions being made, but they can be an active participant of their own safety.³ J.-E. Bibault et al. conducted a survey of 155 patients at the end of their treatment that analyzed patient education, patient involvement in treatment delivery safety, and their experience during delays of treatment and “unusual events”.³ Their findings suggest that although 69% of the patients surveyed feel that they were very involved in their safety during treatment, there is still a great deal of room for improvement.³ They also reported that 48% of the patients surveyed wanted more information about their treatments.³ Patient education is extremely important because it gives the patient an idea of what to expect during their treatment process and empowers them to alert the radiation oncology staff if they something seems unusual. Working as a radiation therapist, I have noticed many patients paying close attention to how long their treatments normally take and if it seems to vary they have asked what was different. There are three ways that were discussed by J.-E. Bibault et al. that patients could participate in treatment safety which included identity verification, compliance with positioning and breathing instructions, and reporting errors and unusual events.³ If patients feel like they are involved in their treatment then they are more apt to comply which, in turn, results in increased radiation safety.

Radiation therapy will never be completely void of treatment errors, but there are ways to minimize the frequency of them. When departments have open communication and a strong structure of workflow less errors are likely to reach the patients. From past treatment errors we are provided an opportunity to learn from and improve on the policies and procedures that lead to the misadministration and further promote increased radiation safety. The patients themselves

can actively participate in their safety through empowerment and compliance. The patients may hear of treatment errors that resulted in severe injury from the media, but we must take it upon ourselves, working in the radiation therapy field, to assure and educate them on just how many policies, procedures, and checkpoints are in place to keep their safety a priority.

References

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