

**INTEGRATING THE HEALTHCARE ENTERPRISE – RADIATION ONCOLOGY (IHE-RO)
CLINICAL IMPACT STATEMENT**

Quality Assurance with Plan Veto

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Description:

The profile describes the way that an automated quality check can be done to prevent severe adverse events, thereby ensuring patient safety. It focuses on out-of-bounds verification errors. The profile also describes the behavior of the device that requests this quality check and provides a basis for future general quality check interactions.

Rationale for Profile Creation:

ASTRO charged the IHE-RO with creating a profile to address patient safety. The profile defines transactions and values to check for harmful data configurations, which may result in severe adverse events to patients. This profile's framework can be applied to other more general quality assurance checks.

Clinical Impact:

Having products and devices that adhere to this profile in the clinic will prevent severe adverse events to patients caused by unanticipated or unknown data or workflow inconsistency. Radiotherapy Treatment Delivery Systems and Quality Assurance Products will be utilized to implement this profile to prevent egregious errors in dose delivery.

This profile will also define a process by which multiple quality assurance procedures can be standardized among quality checks.

Testing of a patient's treatment delivery parameters to avoid clinical adverse events is essential. Examples of errors in these parameters include missing beam shaping devices, wrong beam positions, and excessive radiation dose settings. Such errors have occurred in the past and have been the subject of media coverage describing radiotherapy patient's suffering, severe injuries, and in some cases death.