AbstractID: 4506 Title: Introduction to medical errors and implications

There has developed, over the last few years, an increased awareness of the risks patient take when submitting themselves to medical procedures all of which are prone to errors. As a medical intervention, radiation therapy is no less susceptible to errors than any other branch of health care. Indeed in the case of radiation therapy both the consequences of errors and the number of patients affected can easily exceed those experienced elsewhere. A relatively small deviation from the prescription in either dose or volume irradiated can result in severe side effects or a failure to achieve the desired therapeutic outcome. Many patients are planned and/or treated on the same equipment facilitating the possible exposure to systematic effects.

In this presentation the current status of error prevention activities in radiation therapy will be reviewed. This will include initiatives in both North America and Europe. The AAPM has recently formed a working group to focus on this issue. In Europe, ESTRO is particularly active in this area through workshops, teaching courses and the ROSIS database. In addition there are less formal groups who are dealing with particular components of safety in radiation therapy.

If we are to live by the maxim “First, do no harm” then we need to do better than we are doing now. The degree of ambiguity in the available literature confounds interpretation in many cases. In particular we need to speak the same language when describing safety/quality issues. We need to have a metric for describing the severity of incidents in radiation therapy. One will be suggested for discussion. Ideally we should have a causal structure, which could be linked to a high level process map, for investigating incidents. With a causal structure we have a much better chance of learning from the actual and potential incidents which do occur. The learning component is one that we are particularly weak at. With a better understanding of the probability and severity of incidents we will make more informed decisions on the allocation of safety/quality resources. Finally, patient safety in radiation therapy is too big to deal with effectively on an individual clinic basis. While local issues undoubtedly influence the local risk of incidents, we will be able to give our patients a far better guarantee of both a safe and effective treatment if we work together across professional and geographic boundaries. To do this we need a common taxonomy, a degree of commonality in causal analysis and a common commitment to effective learning strategies.

Learning Objectives:

To appreciate the current status of error reduction activities in radiation therapy.

To identify some of the limitations of current activities.

To consider approaches to improving error reduction strategies.