

AbstractID: 7830 Title: Developing medical physics technical standards through the AAPM and ANSI

The AAPM has for many years developed guidelines and recommendations, in the form of task group reports and other publications, for performing many of the technical aspects of medical physics practice. Notable examples include the TG-51 calibration protocol and the TG-40 recommendations for quality assurance in radiation therapy. These publications and many others state specifically that they are intended as advice, and are not to be followed "slavishly" or used for accreditation or regulation without consideration of other related activities conducted by an institution. Despite these statements, some AAPM recommendations have been adopted in their entirety by regulatory agencies. In other cases, language that should arguably be incorporated into regulation cannot, because of the way in which it is published.

The AAPM should instead develop mechanisms to create, adopt, and promulgate technical standards of practice, in a format that can be adopted by regulatory agencies. The mechanisms must include ways of adopting standards developed by other organizations, and ways of developing standards in concert with these organizations, to make sure we don't duplicate each other's work.

An ideal method for technical standards development is for the AAPM to become a standards developer of the American National Standards Institute (ANSI). Standards developed through the ANSI mechanism would have the recognition of the standards and regulatory industries, and could be adopted by regulators simply by reference. Thus, the AAPM could determine which requirements belonged in a standard and which were suitable for recommendations. This would reduce the risk that AAPM recommendations were incorporated into standards, but could increase the likelihood that provisions believed by the AAPM to be crucial to safe and effective practice would be incorporated into regulation.

For the AAPM to develop ANSI standards, it must first become an ANSI "organizational" member. This is the mechanism chosen by the Health Physics Society, which currently develops ANSI standards "pertaining to products and equipment for non-medical scientific, industrial, and educational uses". The AAPM should then consider becoming the secretariat for the ANSI N44 committee on medical applications. Once membership is obtained, the AAPM should develop:

1. A template for AAPM standards, and boilerplate language.
2. A "roadmap" by which standards developed internally would be reviewed, approved, and published.
3. A similar roadmap by which standards developed and published by other organizations would be reviewed and adopted.
4. Mechanisms (if necessary) for ensuring collaboration on the development of new standards.
5. A list of topics for which AAPM standards of practice should be considered.

Recommendations for each of these steps will be enumerated and discussed.

Learning objectives

Participants will:

1. Understand the current situation in which AAPM publications can be inappropriately turned into regulations.
2. Become familiar with the methods of standards development through ANSI.
3. Learn of the possible benefits of the AAPM becoming an ANSI standards developer.
4. Review and contribute to a list of possible future AAPM/ANSI standards.