

STANDARD-SETTING ACTIVITIES IN HEALTH CARE

Executive Summary

Standardization of imaging and terminology is a critical part of the infrastructure for providing quality health care. It will create a common platform of terminology that can provide a basis for comparison and communication among the different entities within the field of health care. Standards will bring confidence to the physician and hospital-user community that different brands of products will conform at the least to a minimum level of performance and safety. The health care industry will reap benefits as well, because standards will reduce excess costs that otherwise would have to be spent on defining product specifications and service requirements. International standards will facilitate the availability of products and help create a global market.

The interests and needs of ophthalmologists can be best served by establishing global standards to govern the communication of images and data, which increasingly will be done in digital formats for speed, accuracy, and convenience. Communication of data needs to be accurate and reliable, yet this is difficult to accomplish in settings that use multiple different proprietary devices. There is no easy way to exchange digital image data from one vendor's equipment to another's without creating a custom interface. Similarly, "common" terminology is not used uniformly across medicine, and there is no easy way to compare results on like conditions and to differentiate between dissimilar conditions with data collected in computer-based patient records.

A digital imaging standard will permit users to communicate readily, no matter what specific technology they use, and a system of globally agreed ophthalmological definitions can be applied through it. Such common terminology will permit accurate communication even if alternative words or phrases are used to refer to the same clinical entities. The Digital Imaging and Communications in Medicine (DICOM) standard is recognized in the United States and throughout the world as the medical imaging standard, and the Systematized Nomenclature of Human and Veterinary Medicine (SNOMED) is recognized here and abroad as the most comprehensive medical terminology for describing clinical care situations. The American Academy of Ophthalmology is committed to supporting and working with these entities to assure that these standards reflect the needs and interests of ophthalmology and eye care.

Background

DICOM was initiated by the American College of Radiology and the National Electrical Manufacturers' Association, but was opened up in 1996 to other medical specialties and vendors. The DICOM standard is a detailed specification that describes a way to format and exchange images and associated information, such as the text describing the image. This standard applies to the operation of the interface that transfers data in and out of an imaging device. It relies on media devices and computer network connections that address the communication and storage of images from modalities such as CT, MR, PET,

nuclear medicine, ultrasound, x-ray, digitized film, video capture and cameras. This standard has been implemented for a number of medical products already, and it is supported by industry and professional societies in the United States, as well as internationally by the Committee European de Normalization (CEN) and the Japanese Industry Association for Radiation Apparatus (JIRA).

SNOMED is increasingly adopted as a standard nomenclature, based on its comprehensive scope and content as a clinical reference terminology. The SNOMED International classification system contains 11 separate modules with more than 144,000 terms and term codes included in the system and has been partially or completely translated into ten languages.

The Academy can have a far-reaching impact if it lends its influence on resources to encourage standard-setting activities. Standards will provide a common platform of terminology, content, and communication for information about patients, and they will allow ophthalmologists to exchange data and learn from each others' experiences. The Academy's efforts are focused on making sure that medical technology is more relevant to the needs of the end user, the ophthalmologist, by ensuring that there is interoperability, that is, that there is a seamless interface that allows for the communication and comprehension of data between two parties. The most effective way to do this is to work with other specialty groups and industry, within established national and international standard-setting bodies, namely with DICOM and SNOMED.

Approved by the Quality of Care Secretary, December 1999

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