

Information Statement

Innovative Technologies in Diagnosing Eye Diseases and Conditions

Introduction

New innovative diagnostic technologies have proliferated in the past several years, based on wide availability of smartphones, other devices, and the Internet. These technologies provide the means for patients to measure their own visual acuity and refractive error, and for physicians or other health care providers to take images of the eye, without requiring expensive equipment. The potential of these technologies could be positive in enhancing patient understanding and management of their condition, making diagnostic tools available in more remote settings, permitting remote diagnosis and interpretation, and reducing health care visits and costs.

Background

The Academy's [Code of Ethics](#) provides broad principles for the use of these innovative technologies. The Code of Ethics states that it is the responsibility of an ophthalmologist to act in the best interest of the patient. In addition, the honored ideals of the medical profession imply that the responsibility of the ophthalmologist extends not only to the individual but also to society as a whole. Activities that have the purpose of improving the health and well-being of the patient and/or the community in a cost-effective way deserve the interest, support, and participation of the ophthalmologist.

Recommendations

The Academy recognizes the potential of information technology, including Internet-based screening, refraction, and other diagnostic tests, in increasing access to health care services, enhancing patient involvement in their health care decision making, improving efficiency, and reducing overall health care costs. The Academy recommends that ophthalmologists evaluate these technologies as they would any other diagnostic modalities: FDA approval (if required), evidence of reliability and reproducibility from clinical trials or studies, evaluation of risk to the patient, (for example, situations that pose low risk to patients would be refractive assessments), and provisions for security of protected health information (PHI). As with any other device or technology selected for use in the patient's care, the ophthalmologist would potentially bear the risk of medicolegal liability of any harm to the patient, for a missed diagnosis, or a breach of PHI.

Approvals

American Academy of Ophthalmology, Health Policy Committee
American Academy of Ophthalmology, Quality of Care Secretary
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