**HIT Policy Committee**
**Meaningful Use Workgroup**

**Care Coordination Among Specialists, Primary Care, Care Management, and Patients**

**Testimony of Michael Chiang, MD**
**Chair, Medical Information Technology Committee**
**American Academy of Ophthalmology**

**May 13, 2011**

---

Good morning, my name is Dr. Michael Chiang, and I am the Chair of the Medical Information and Technology Committee for the American Academy of Ophthalmology. I am also Professor of Ophthalmology & Medical Informatics and Clinical Epidemiology at Oregon Health & Science University. On behalf of the Academy, I would like to thank you for the opportunity to participate in the workgroup's proceedings today. The American Academy of Ophthalmology is the world's largest organization of eye physicians and surgeons, with more than 32,000 members. Over 18,000 of our members are in active practice in the United States.

The Academy and its members are supportive of adopting robust and applicable electronic health records (EHRs) into their practice to improve quality of care and enhance patient safety. EHRs show promise as tools to facilitate information exchange between health care settings and promote greater coordination between health care providers. However, true meaningful use of EHRs in support of these goals will require EHRs to be user friendly, affordable for small practices, flexible to the needs of specialists, and compatible with in-office technology.

## Technology and Quality Improvement in Ophthalmology

The Academy and its members have been at the forefront of quality improvement and technology issues. Ophthalmologists have a long history of being innovators and early adopters of technologies that they believe improve patient care and practice efficiency.

The Academy offers a number of educational resources for members to assist them with selecting an EHR vendor, implementing an EHR in their practice, and qualifying for meaningful use incentives. According to a national Academy survey in 2007, about 12 percent of ophthalmologists have either purchased or implemented an EHR, which was consistent with EHR adoption rates among other medical specialists at the time. A more recent Academy member survey indicates these numbers are on the rise.

Ophthalmologists also have a consistently high success rate in the Medicare Physician Quality Reporting System (PQRS), and our specialty now has nine PQRS measures. One of these measures specifically addresses coordination with primary care providers, and I will discuss it in more detail later in my testimony. In addition to these measures, the Academy has submitted two new patient reported outcomes measures to the National Quality Forum for endorsement.

The new measures are unique in their patient-centered focus. One measure assesses the patient's improvement in visual function after cataract surgery, and the other assesses the patient's satisfaction with the cataract surgeon and care prior to, during and after cataract surgery.

PQRS reporting for ophthalmology is supported by the Ophthalmic Patient Outcomes Database, a data registry sponsored by the Academy and a partner society, the American Society of Cataract and Refractive Surgery. 450 ophthalmologists now participate in the registry. The Academy anticipates that the registry will also serve as the platform for reporting on the new patient outcomes measures once they have been accepted by NQF and CMS.

We believe that the best way in which quality measures can be tracked is through a registry approach. Data registries such as the Ophthalmic Patient Outcomes Database require manual entry of data into special websites, which may be prohibitively expensive for most physicians. EHRs have the potential to alleviate this burden if relevant data points can be captured and uploaded by the EHR as a by-product of routine clinical care. Decision support tools, longitudinal patient data collection, and quality improvement are best supported by a registry overlay on the EHR.

**Coordination with Primary Care**

The panel today was asked to address coordination within the health care system, and one of the most salient examples of care coordination in ophthalmology practice is the treatment of patients with diabetes mellitus. Over time, diabetes can cause damage to the blood vessels in the retina, a condition known as diabetic retinopathy. Most often, diabetic retinopathy has no symptoms until the damage to the retina is severe. Patients experience blurred vision and gradual vision loss, shadows or missing areas of vision, and difficulty seeing at night time. Diabetic retinopathy is a leading cause of new cases of visual loss and blindness among working-age adults. Adults with type 2 diabetes should have annual eye exams from the time of the diabetes diagnosis to evaluate for the initiation of diabetic-related eye diseases, including diabetic retinopathy, diabetic macular edema, neovascularization of the iris, and glaucoma, Diabetes is also a risk factor for the development of other vision-impairing conditions, including primary open-angle glaucoma and cataracts.

Coordination between ophthalmologists and primary care doctors to manage diabetes is beneficial to patient care. Diabetic retinopathy can be prevented through tight control of blood glucose, blood pressure, and cholesterol. The Academy's Preferred Practice Pattern for diabetic retinopathy encourages involvement of the patient and primary care physician in the management of the patient's systemic disorder, with specific attention to control of these factors. Regular eye exams provide an opportunity to coordinate care and manage the patient's underlying condition. During exams, ophthalmologists can counsel patients about the importance of blood glucose, blood pressure, and cholesterol control to the health of their eyes.

Patients may be more likely to comply with management recommendations by understanding that their vision is being affected by their systemic condition.

As I mentioned earlier, the Academy has endorsed and promoted PQRS Measure 19 (percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed within a 12 month period, where the ophthalmologist documented communication of the exam findings to the physician who manages the ongoing care of the patient) to assess coordination with primary care providers in the management of diabetic retinopathy. We are pleased that CMS has documented a 41 percentage point increase in performance on this measure between 2007 and 2009.

EHRs have the potential to facilitate and automate this type of coordination between ophthalmologists and primary care providers by allowing for electronic transmission of exam results and patient information. Before the eye exam, EHRs could be used to transfer essential patient information to the ophthalmologist such as a summary of the patient's medical history, the duration of diabetes, hemoglobin A1c level, and any medications the patient is currently taking. Following the eye exam, the ophthalmologist can use the EHR to provide the primary care physician with an examination summary, measures of visual acuity and intraocular pressure, status of any retinopathy or diabetic macular edema indicative of the severity or progression of disease, and any additional medications or treatments recommended for the patient.

**Obstacles to Care Coordination and Meaningful Use**

EHRs show promise to aid coordination between specialists and primary care providers to improve the management of chronic conditions such as diabetes, but several obstacles to widespread adoption and meaningful use by specialists remain. I will briefly outline the greatest challenges for ophthalmology, which include:

- Lack of adherence to standards for device interoperability (between EHRs and office-based equipment),
- EHR technology expense and product inflexibility, and
- Physician concerns that stage 2 meaningful use criteria will not be applicable to ophthalmology work flow.

The obstacles to broader EHR adoption that our specialty faces hinder our ability to provide optimum coordination and collaboration with other actors in the health care system. We believe that many other specialties will encounter similar challenges.

*Device Interoperability*

Ophthalmologists use many diagnostic testing instruments that are operated within the ophthalmology practice rather than sending patients to laboratories for diagnostic studies or to

radiologists for imaging studies. Results from these office-based ophthalmic measurement and imaging devices are used to make management decisions for virtually every patient. However, an insufficient number of vendors currently comply with standards such as the Digital Imaging and Communication in Medicine (DICOM) standards for the exchange of images and data among these imaging devices, picture archiving and communication systems, and EHRs. This creates the need for manual re-entry of data or purchasing costly proprietary interfaces. It also increases the risk of errors when such electronic data are transcribed incorrectly or not available at the point of care. Other specialties that perform office-based imaging and measurement studies are likely to have similar problems. It has been our experience that the vendors claim that there is no demand for adoption of device interoperability standards from physicians.

Although EHR certification criteria are intended to support meaningful use, the criteria as published in the final rule do not adequately address compatibility with office-based diagnostic equipment. Without a mechanism for enforcing these standards, we are worried that ophthalmologists will have difficulty using EHRs to coordinate care **within** our own offices, let alone with other physicians. Both the Veterans' Administration (VA) and the Department of Defense (DoD) Military Health System use the DICOM standards to enable images and associated diagnostic information to be retrieved and transferred between various manufacturers' devices as well as provider workstations (Joint VA/DoD DICOM Conformance Requirements for Digital Acquisition Modalities, 2005). Without a similar regulatory mechanism for enforcing these standards in EHRs, ophthalmologists will not be able to use their EHRs to their full potential to aggregate, store and retrieve patient information to the detriment of quality improvement and care coordination efforts.

*Technology Expense and Product Inflexibility*

EHR implementation requires a significant investment by physician practices with regard to the technology itself, staff time, training, device integration, and ongoing maintenance. Currently, costs to the physician practice, along with decreased efficiency and difficulties with electronic office workflow, are perceived by ophthalmologists to be major barriers to EHR adoption.

Proposed requirements for stage two meaningful use such as online messaging, patient web portals, and personal health records will be costly and burdensome for practices to implement. Until the cost issue can be adequately addressed, the Academy has significant concerns with requiring providers to give patients access to their health information online as a condition of receiving a meaningful use incentive. Many of these features may be best implemented using personal health record systems (PHRs), which are often considered "add-on" features by EHR vendors and pose an additional cost to the physician practice. We believe this is particularly pertinent for specialties, because many of the most compatible EHRs are developed by small specialty-specific vendors that may lack the resources to even offer these "add-on" features now. When available, it has been our experience that the cost of these "add on" PHR features alone is often as much as the CMS incentive payments for adoption.

*Applicability of Meaningful Use Criteria*

The Academy and its members remain concerned that the Stage 1 and proposed Stage 2 criteria for achieving meaningful use of EHRs are too extensive and aggressive, particularly when considering the workflow and needs of specialists. If the criteria do not become more flexible, it may deter specialists, including ophthalmologists, from EHR adoption.

For example, the high reporting thresholds currently proposed for Stage 2 raise concerns that the threshold can be easily missed if the objective that needs to be reported is something that is not performed regularly by the specialist. The Academy saw examples of this when the Centers for Medicare and Medicaid Services implemented the Physician Quality Reporting System. Many physicians were performing the measures, but often missed meeting the 80% threshold by a few patients because of administrative errors unrelated to patient care.

The Academy and its members are also concerned that the proposed Stage 2 requirements ask ophthalmologists to adhere to clinical practice and documentation standards that are not relevant to their clinical practices, while they do not address enforcement of standards for other aspects of information exchange (e.g. device interoperability) that are **fundamental** to day-to-day clinical ophthalmology workflow. In many cases, if the exclusions available in Stage 1 (e.g., for recording vital signs and submitting data to public health agencies) are not extended into Stage 2, ophthalmologists will have trouble meeting the requirements. Some objectives, such as medication reconciliation, are only relevant to ophthalmologists as they pertain to a specific eye condition or group of conditions.

However, we do see opportunities to include more appropriate specialty-specific substitutes for some measures in Stage 2. For example, ophthalmologists could record "vital signs of the eye," such as intraocular pressure and visual acuity through EHRs instead of height, weight, and blood pressure, which are not relevant to ophthalmology practice. With respect to clinical quality measures, the measures currently approved for meaningful use reporting are not relevant to some ophthalmology sub-specialties. We are pleased to report that the Academy is working to develop new measures for subspecialties that cannot report on existing measures with the intention of eventual use of these measures for PQRS, EHR incentives, and other reporting initiatives.

**Conclusion**

EHR technology has the potential to improve physician workflow, create linkages across the health care system, and improve care for patients. As a specialty, ophthalmologists are leaders in quality improvement and currently work in collaboration with primary care to treat patients. We believe that EHRs can enhance this collaboration if the challenges of interoperability, affordability, and relevance to ophthalmological practice can be addressed. In recognition of the remaining challenges widespread EHR implementation among specialists, the Academy urges the Meaningful Use Workgroup to consider the needs of specialists in the development of future meaningful use criteria. We greatly appreciate the opportunity to testify before the workgroup today and welcome your questions.

Thank you.