## Written testimony of Lonny Reisman, MD, Chairman, ActiveHealth Management

1. **What EHR capacities/functionalities are absolutely required to enable a safe, patient-centric, high-quality health care system that optimizes patient outcomes?**

   Among the capabilities required to ensure optimized patient outcomes, *advanced* clinical decision support (CDS) is one of the most essential. While CDS is required under the statute, I encourage the Committee to adopt a high standard for CDS functionality and performance – a standard commensurate with the significant investment and aspirations within the stimulus statute. By *advanced* CDS, I refer to just such a standard. Advanced CDS is a capability that has already been proven to improve quality and cost of care but goes beyond the capabilities resident in EHR systems today in several important ways:

   - **Use of a broad set of patient data**. Advanced CDS makes full use of clinical data, including lab values and patient-reported data, to ensure precision in alerting and to minimize false-positive alerts to physicians and patients.
   - **Patient and physician specificity**. Alerts generated by the systems should be truly patient-specific and actionable based on the clinical profile of the patient. In addition, they should be targeted to the provider best positioned to act on the information.
   - **Sophisticated clinical rules**. The clinical rules at the foundation of the CDS system should be designed with sophistication that mirrors the real complexities of patient physiology and care delivery. This includes validation logic to ensure that messages are directed at patients who really have the relevant conditions, and exclusionary logic to prevent alerts for patients for whom an exception applies (e.g., a normally recommended medication is contraindicated because of a different condition the patient has).
   - **Complementary messaging to patients**. In addition to physician messaging, the patient should receive complementary, consumer-friendly messages encouraging a dialogue with the physician related to the specific alert.
   - **Dynamic use of new information**. The CDS capability should incorporate feedback from providers and use that feedback in subsequent analyses. For example, if a physician indicates that a patient has an allergy to a certain medication, future alerts should not recommend that medication. Similarly, if a patient provides health information through a PHR or other engagement mechanism, that information should be reflected in subsequent analysis of that patient's clinical data.
   - **Demonstrated outcomes**. Again, the CDS system should have a track record of achieving clinical and financial outcomes.

2. **What are the critical EHR functionalities (*e.g.*, e-prescribing, decision support, problem list management) of which providers should be required to demonstrate use in order to earn an incentive as a "meaningful user" of certified EHR technology in 2011? Should the functionalities or other specific requirements to meet the statutory "meaningful use" criteria be different or specific to provider type (*i.e.*, eligible professionals, hospitals)?**

   The most effective way providers will meet the expected quality and value gains that are expected in the HIT portions of the stimulus statute (which also underpin the associated efficiencies and savings assumption embodied in the President's broader health reform budget analysis) will be through the use of advanced clinical decision support technology as describeD in the response above.

   In determining the "meaningful use" of functionalities such as decision support, the key issue is that providers should demonstrate not only that they viewed the available data and CDS alerts but also that, in a verifiable way, they took appropriate action. Specifically, there should be evidence that they either acted on the alert (i.e. stopped a medication, added a medication, ordered a DIAGNOSTIC OR SCREENING test) or that they provide appropriate feedback that the alert is not appropriate (e.g., patient allergic or intolerant to a suggested medication).

   In further developing mechanisms to help assess "meaningful use," the committee should closely examine how incentives tied to EHR use can be linked to the scoring criteria applied by the NCQA for the recognition of "medical homes". Many commercial payers have already endorsed the NCQA recognition standards as part of their pay-for-performance initiatives. In particular, the committee should consider how the application of these

scoring criteria help to assess how providers are "meaningfully using" capabilities such as clinical decision support to embed quality care processes to provide effective coordinated patient care with the goal of achieving better overall outcomes.

3. **Are these functionalities supported in current certified EHR products? If not, what are the gaps?**

Several current certified EHR products have limited clinical decision support capabilities embedded in their logic. To date however, such EHRs have had a very poor record of adoption by the providers. The 2008 survey of physicians published in the New England Journal of Medicine[1] showed that 4% of physicians had adopted "fully functional" EMRs which would include capabilities like clinical decision support. What has limited the utility of these tools has been that most current EHR's are not built to exchange data with other provider EHR systems unless connected through a health information exchange. Consequently, they are not able to incorporate data from multiple sources (e.g., claims, PBM data, lab data, patient derived data from a PHR or Disease Management system) and have relatively unsophisticated clinical logic capabilities. The net result is that they have relatively limited CDS capabilities with relatively high false positive messaging rates.

4. **What additional functionalities would be most important to require providers use by 2014 or 2015?**

To encourage the optimal use of EHRs to produce better quality and value outcomes, providers should be required to use more robust clinical decision support tools that are available and used now in the current market which are connected to HIEs and linked to the providers' EHR workflow. By using this more advanced functionality providers have the advantage of gaining access to a complete data profile on their patient from sources that include labs, pharmacy, patient reported data (from a PHR), as well as diagnostic and procedural claims. Equally important is that these more advanced clinical decision support solutions contain the inclusion/exclusion rules that make their decision making logic reliable and accurate by reducing "false positive" care alerts to providers.

The committee should additionally assess the clinical literature available on CDS. Building on the 2003 Institute of Medicine's report calling for the expanded adoption of clinical decision support, it is worth noting that this advanced level of functionality has undergone further rigorous assessment of its effectiveness as a solution to both improve quality outcomes and provide economic value. In 2005 the results of a randomized, controlled clinical study using advanced clinical decision support was published in the American Journal of Managed Care[2]. Advanced clinical decision support was used to assess and analyze complete patient data profiles for those in the study group and then produce care considerations for their physicians when gaps or issues in care were identified. The use of the technology and the subsequent actions on the care alerts by their physicians produced a reduction in patient hospitalizations of 8% and a savings in charges of more than $8 PMPM. Additionally, in 2008 a follow up study[3] was published which further validated this study finding that the use of advanced clinical decision support with care alerts reduced overall charges by 6% with charge savings in excess of $21 PMPM.

After years of use by employers and health insurance companies, this approach to deploying a robust clinical decision support capability across a community of providers is being employed now by a number of health information exchanges and integrated provider delivery systems across the country. In particular, the Committee should look to the work now underway with the Brooklyn Healthcare Information Exchange (BHIX) and the provider groups affiliated with the Maimonides Hospital to apply the integrated use of Personal Health Records, Electronic Health Records and hosted advanced clinical decision support for the entire patient population in the Brooklyn region along with the development of an Advanced Medical Home model supported by CDS for select HIV and geriatric patient populations.

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[1] The New England Journal of Medicine, "National Survey on Physician Adoption of Electronic Health Records," July 2008

[2] The American Journal of Managed Care, "Using a Claims Data–Based Sentinel System to Improve Compliance With Clinical Guidelines: Results of a Randomized Prospective Study," *2005;11:93-102*

[3] The Journal of Health Economics, "Information Technology and Medical Missteps: Evidence From a Randomized Trial," 2008; 585–60.