

**Table 5. Barriers to widespread effective use of CDS in eRx.**

<b>Barriers</b>	<b>General solutions</b>
CDS capabilities of existing eRx products	<p>Determine core capabilities</p> <p>Publish practical recommendations and design concepts to reduce vendor rework</p>
Usability of systems and of CDS modules	<p>Sharing of best practices and lessons learned</p> <p>Bibliography/reading list provided by industry thought leadership groups and/or certification organizations</p>
Access to patient data needed to support CDS	<p>Increased data availability with appropriate protections</p> <p>Integration of eRx with EHR</p> <p>Clear pathway from eRx to EHR – through same or different vendors</p>
Access to best CDS knowledge for all products	<p>Accessible published/stored knowledge</p> <p>Practical standard representations of knowledge and content</p> <p>Knowledge acquisition and execution tools</p>
Local management and maintenance of knowledge	<p>Practical organizational models for development, selection, and updating of rules, content, and interventions</p> <p>Tools to select / extract / customize knowledge</p>

<p>Lack of standards for dictionaries, data, sigs, etc., increases cost, variability, and error</p>	<p>Creation and acceptance of practical standards</p> <p>Endorsement of standards by government agencies and key stakeholder organizations</p> <p>Industry collaboration and financial support for standards programs</p>
<p>Cost and difficulty of implementation</p>	<p>Financial support programs</p> <p>Revolving loans</p> <p>Removing barriers on support programs (e.g., Stark)</p> <p>Development of systems that are easier to implement and configure</p> <p>Implementation guides, templates, and toolkits</p>
<p>Cost of use</p>	<p>Ongoing reimbursement differential</p> <p>Pay-for-performance programs</p>
<p>Difficulty in recognizing value</p>	<p>Standard classifications and common definitions for CDS elements, to improve generalizability of research on CDS methods</p> <p>Educational forums, references, and websites</p> <p>Increased publication of results</p>
<p>Perception of increased liability if CDS advice is rejected</p>	<p>Clearly-stated liability considerations</p> <p>Appropriate liability protections and safe harbors</p> <p>Education</p>

## **Appendix- Whitepaper People and Process**

During the summer of 2004, ONCHIT expressed interest in obtaining expert input to help guide Federal Government activities concerning CDS in electronic prescribing and related domains. ONCHIT approached the Health Information and Management Systems Society (HIMSS) with the request to collect this expert input and produce a whitepaper. The HIMSS CDS Workgroup had recently published a detailed guide for CDS implementers, and was actively working on a second edition of that resource and related initiatives. Concurrently, the American Medical Informatics Association (AMIA) had struck an agreement with the Agency for Healthcare Research and Quality to produce a series of whitepapers on various topics; CDS was already slated to be one of the topics covered in that series. All members of the HIMSS workgroup are active members of AMIA as well. It was agreed by all participants that the CDS workgroup would produce this whitepaper under the auspices of both AMIA and HIMSS, using support by AMIA through the AHRQ whitepaper grant, and additional support from HIMSS for the CDS workgroup activities. The workgroup also includes the chair of the eHealth Initiative's e-Prescribing Project (which had recently published a comprehensive whitepaper containing recommendations for improving value and adoption of eRx, including CDS issues) and the chair of the HL7 Clinical Decision Support technical committee. Some of the material in this whitepaper reflects work done by those two organizations as well.

HHS units designated as primary recipients for the whitepaper include ONCHIT and AHRQ, as well as NCVHS and CMS (due to their related responsibilities under the

Medicare Modernization Act). Because the newly-created Commission on Certification of Health Information Technology (CCHIT) will play an important role in driving CDS features in electronic health records, and because the models developed here have direct applicability to CCHIT's work, two members from that commission were also included as primary recipients of the recommendations.

The workgroup developed drafts of the recommendation tables, and discussed these in detail during a half-day meeting with invited experts at the Medinfo Conference on September 9, 2004 in San Francisco. The initial panelists were selected based on stakeholder representation and expertise concerning the issues at hand. Based on feedback obtained during this meeting, the tables were revised and circulated to a broader group for feedback. After a number of further rounds of input, the tables were revised into the final versions presented in this whitepaper.

## **Participants List**

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