

Judith Sparrow  
US Dept of Health & Human Services  
Office of the National Coordinator for Health IT  
330 C Street, SW, Suite 1104  
Washington, DC 20201

Re: HIT Standards Committee Vocabulary Task Force Hearing September 1-2, 2010

Dear Vocabulary Task Force:

We, Intelligent Medical Objects, Inc. respectfully submit the following responses to the questions as requested by Judith Sparrow on behalf of the Task Force, dated August 19th, 2010.

Intelligent Medical Objects (IMO<sup>®</sup>) develops, manages, and licenses medical vocabularies through vendor partners for use in Electronic Health Record (EHR) systems. Our leading suite of clinical interface terminology products, including IMO<sup>®</sup> Problem  and IMO<sup>®</sup> Procedure , provide seamless mapping of diagnostic terminologies to billing codes and medical concepts, enhancing decision support, research, patient education, and financial operations. IMO provides the tools necessary for health care organizations to authoritatively support uniform labeling of health profiles, services rendered, and outcomes across their enterprise. This intersection of clinical and financial data provides health care organizations with dependable quality information to deliver services, bear risk, and to enable efficient, cost-effective operation and accountability. IMO's terminology products improve physician satisfaction, facilitate physician adoption, speed the coding process, reduce unnecessary physician-coder communication, and result in fewer rejected claims. Our experienced team of medical informaticists, terminologists, clinicians, health information management professionals and software engineers provide our vendor partners a just in time vocabulary outsourcing partner for their EHR solutions.

IMO's mission is to provide innovative medical informatics products that empower the clinician, improve decision-making and efficiency in order to realize better health care. Therefore, we appreciate the ability to provide input to the task force on the benefit of value sets and subsets. We understand the importance and appreciate the honor of working with the task force in this regard.

Sincerely,

Frank Naeymi-Rad, PhD, MBA  
CEO

## Attending from IMO: Frank Naeymi-Rad, CEO and Regis Charlot, CTO and SVP

### Overall questions

1. **What are the requirements for a centralized infrastructure to implement “one-stop shopping” for obtaining value sets, subsets, and vocabularies for meaningful use?**

**IMO:** It is most important to provide a centralized, trusted distribution source for terminology and the format of the terminology distribution is important. While IMO provides all of our content in textual format, we now provide as a preferred media our terminology, domain by domain – our subsets - as a one-file distribution powering our web service for terminology distribution and consumption. This tremendously simplifies the monthly update process for our vendor clients and organization end-users. Another important point of our distribution is that any term from our subsets drives Meaningful Use. This means that any term will be uniquely identified complete with linkages to the recognized reference and administrative code sets.

2. **Which requirements or functionalities are urgent, i.e., absolutely required to support “meaningful use”? Which would be most useful immediately? What would be a staged approach over time to get to the desired end state?**

**IMO:** Nationally approved vocabulary value sets are necessary to drive Meaningful Use without the burden of licensing and cost. We believe all such vocabulary subsets should be simply and conveniently available from the National Library of Medicine without limitation, and no private agency should be able to block compliance to such vocabulary subsets through licensing requirements. IMO believes it is important to (a) enable users to access value set codes using terminology they are comfortable with, and (b) to enable users to get value out of clinical data correctly captured to support longitudinal care delivery required by Meaningful Use.

### Detailed Questions

3. **Where are you using value sets and subsets? For what domains? How many value sets and subsets?**

**IMO:** We provide problem & assessment value sets and a procedure value set. We also provide subsets of procedures such as radiology, laboratory & surgical and problems by specialty. Subset creation is driven by working closely with our vendor partners, thereby serving the needs of our end users.

4. **In your experience with creating, disseminating, updating and/or using value sets, subsets, and entire vocabularies, what works and what does not work?**

**IMO:** The challenge is usability from both terminology and technical standpoints.

- From a terminology standpoint, it is imperative that end user clinicians are able to record clinical data in a familiar ways and that value set codes are automatically attached/included.
- From a technical standpoint, it is absolutely critical to have a simple, easily accessed maintenance process from the outset. Processes of accessing/searching terminology and regular updates of terminology must be transparent to the end user. The end user must be able to contribute and the processing of such contributions should follow an editorial process to best support Meaningful Use requirements. Any such enhancements should be available back to the user within a 1 to 2 month timeframe.

**5. What human resources does it take to implement and manage value sets, subsets, and entire vocabularies? Informaticists? Clinicians? IT people? How are you organized?**

**IMO:** IMO manages terminology using software engineering processes. We create teams of ‘knowledge workers’ – medical informatics physicians, nurses, health information management experts and coders –, product managers, project managers, software developers for the many tools and web sites, database administrators, quality assurance staff for clinical content and software deliverables, IT staff, and technical writers. We manage the process of terminology creation and releases using processes supported by documentation and use agile processes to guarantee an unsurpassed level of quality at every transition point of our terminology creation, maintenance and distribution processes.

**6. What national resources and services could be leveraged to reduce the level of effort required for local implementations? What is the irreducible minimum of local work at an implementation site, or within an organization or system?**

**IMO:** Intrinsic difficulties of building applications compliant to national value set/subset standards consist of:

- The knowledge of knowing what value set/subset should be used is arduous and rapidly changing.
- Clinical solutions are often built by hard coding value set/subset references supporting the workflow and processes. Such solutions are hard to develop, hard to maintain, hard to migrate to new value set/subset items.

Government or responsible entities must ensure that a nationally approved value set/subsets are kept up-to-date and include the expansion of value sets and subsets based on local needs in alignment with national health initiatives. A “just in time” methodology for creating and implementing requested local vocabulary needs would greatly reduce the implementation efforts as well as the expert terminology resources needed on the local or vendor level.

**7. What is your maintenance process? How do you manage updates?**

**IMO:** Our updates are seamless, flexible and comply with regulatory requirements. With a centralized management scheme, our maintenance is a continually ongoing process. IMO has developed the tools to manage the complex workflow needed for such processes. We involve our user community for augmenting and enhancing our offerings. We submit change requests to government bodies to enhance Meaningful Use standard code sets.

**8. What metadata do you maintain and how do you maintain versioning?**

**IMO:** IMO internal tools are built using IMO’s multi-patented Adaptive Data Manager (ADM) meta-data database technology providing us with field level and metadata level audit trail. This technology provides IMO with the flexibility to address rapid change management, essential to delivering just-in-time change management. This technology is also critical for supporting the web-based tools available to our knowledge workers in many different time zones, and to support the terminology transformation requirements from our vendor partners. An essential aspect of our versioning is recognizing that the pragmatic nature of updates is not always applied in a busy HIT environment – for example skipping updates, etc.

**9. Is there a difference between versioning for clinical documentation vs. versioning for reported measures, i.e., when do you go live with a change in the EHR vs. when do you use the new version for measures?**

**IMO:** We do not believe there is a difference between versioning for clinical documentation vs. versioning for reported measures. At a very fundamental level, every term of our product offering has a unique code as well as a time stamped version control code. From this combination, you can always get the appropriate

mandated codes for any given point in time. As a practical measure, we advocate to our vendor partners to supplement the clinical documentation with all Meaningful Use codes when capturing a finding at the point of care. We then work with our vendor partners to better understand how changes can affect reporting and recommend strategies that will mitigate risks to their application with each vocabulary version.

#### **10. How do you manage versioning in clinical decision support vs. changes in value sets?**

**IMO:** We believe that the principles outlined in (9.) are required to support decision support rules that are written at a certain point in time and valid over time. We also recognize that such decision support rules are written at a higher level than clinical documentation.

#### **11. How does an application know which value set is for which purpose? How is the specific context for a value set maintained at the message data element level of specificity? How is the English language intent of the value set context documented and maintained?**

##### **How does an application know which value set is for which purpose?**

**IMO:** This is an application design question and is independent of terminology concerns. The application is codified to access/reference different value sets for different sections, such as problem list, surgical history, etc...

##### **How is the specific context for a value set maintained at the message data element level of specificity?**

**IMO:** In an effort to manage context, we have pre-coordinated our terms. For example, 'Asthma' and 'Family History of Asthma' are distinct.

##### **How is the English language intent of the value set context documented and maintained?**

**IMO:** We provide a default unambiguous description for all of our concepts and additional descriptions to enhance usability and acceptance.

#### **12. What are lessons learned about web links vs. storage of the vocabulary or other artifact in a physical repository?**

**IMO:** While we believe web distribution of content is important, ultimately what should be stored in a patient record should be decoupled from any web link, because the patient record becomes a legal, immutable document.

#### **13. How do you manage distribution of updates to multiple sites?**

**IMO:** We have created a standard process that fits to regulatory guidelines and community feedback with the goal of keeping this process as streamlined and easy as possible for our vendor partners and their end-users. We manage monthly distribution using potentially customized format for each vendor partner.

#### **14. Where is local customization appropriate and how much customization is acceptable?**

**IMO:** Our belief, as a good partner to our customers, is to make sure that their local customizations do not lose their intended meaning thus yielding bad data. We believe that local customization has a place for creation of alternate descriptions as well as convenience based subsets.

**15. How do you manage distribution of updates with local variations and optionality? Unique subsets? Local mappings?**

**IMO:** We work with our vendor partners to help them meet point of care local solution variations. Local requirements outside of regulatory requirements are the biggest challenges that, without clear local medical informatics leadership, can lead to disaster. While we are able to support the technology needs of local variations, unique subsets, and local mappings, our focus has been to work directly with our vendor partners and their clients to insure that the local changes comply with our distributions of regulatory requirement and vocabulary first before providing vocabulary tools for local unique subsets.

**16. What has to be local in an EHR implementation vs. what can be external in a vocabulary repository?**

**IMO:** This question is in respect to our vendor partners' solutions and to the needs – and care provider specialties - they address. It is their choice on implementation.

**17. What functions are required that users have not yet appreciated?**

**IMO:**

- Being able to capture patient data with full semantic mappings, while preserving the clinical term intent.
- Subtleties of language variation in usability.
- Implication of long term terminology maintenance.