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Karen B. DeSalvo, MD, MPH, MSc
National Coordinator for Health Information Technology
Office of the National Coordinator for Health
Information Technology (ONC)
Hubert H. Humphrey Building
Suite 729D
200 Independence Ave, SW
Washington, DC 20201

Re: 2015 Interoperability and Standards Advisory: Best Available Standards and Implementation

The Academy of Nutrition and Dietetics (the “Academy”) is pleased to comment on the Office of the National Coordinator of Health Information Technology (ONC) *2015 Interoperability and Standards Advisory: Best Available Standards and Implementation*. With more than 75,000 registered dietitian nutritionists (RDNs),¹ dietetic technicians, registered (DTRs), and advanced-degree nutritionists members, the Academy is the largest association of food and nutrition professionals in the United States and is committed to improving the nation’s health through food and nutrition across the lifecycle. Academy members work in many different settings — from prenatal care through end of life care — providing nutrition care services relevant to the care setting and practice. The Academy created the world’s first evidence-analysis nutrition library and produces guides for condition-specific nutrition care. We are committed to improving the nation’s health through food and nutrition, including ensuring that nutrition is included in relevant health information technology (health IT) standards.

The Academy has provided resources necessary to ensure nutrition data remains a part of treatment team data and that nutrition care follows the patient as needed for health IT adoption. Nutrition related standards, terminologies and implementation guidance relevant to assuring nutrition care are included in our comments.

The Academy supports the visionary guidance of the ONC by providing a standards advisory for health IT standards and implementation specifications. We embrace widespread adoption and consistent use of consensus driven Health IT standards to attain improved health and health care via consumer-centric informed decisions using available, time-sensitive, patient data.

The Academy respectfully submits the following comments for consideration, in response to questions posed in the Standards Advisory:

¹ The Academy recently approved the optional use of the credential “registered dietitian nutritionist (RDN)” by “registered dietitians (RDs)” to more accurately convey who they are and what they do as the nation’s food and nutrition experts. The RD and RDN credentials have identical meanings and legal trademark definitions.

5-1. [General] What other characteristics should be considered for including best available standards and implementation specifications in this list?

We applaud the designation of “best available” and encourage the continuation and inclusion of emerging standards where relevant. While the Academy continues to advocate and contribute to nutrition-related health IT standards and terminologies, there is additional work and pilots that need to occur. In some cases, there are standards under development that fulfill the purpose of an existing “gap.” These standards may not yet be in use by a significant number of stakeholders, but represent the collective input of experts and those who are struggling to merge best practices with existing processes that exist in electronic health record (EHR) technology. An example is the standard for parenteral and enteral nutrition orders within current EHR systems. The American Society for Enteral and Parenteral Nutrition (A.S.P.E.N.) has created the A.S.P.E.N. Parenteral Nutrition Safety Consensus Recommendations,² which identify best practices for minimizing errors in parenteral nutrition therapy, including prescribing, order review and verification, compounding and administration. While there have been discussions between stakeholders – including physicians, pharmacists and dietitian/nutritionists – these critical guidelines have not yet been incorporated into standards. Inclusion of emerging standards allows for greater awareness and potential piloting of often critical gaps in standards.

We also request that you provide clarification on the appropriate use and listing of the ONC Common Data set as mentioned in the Interoperability Roadmap.

5-3 [General] For sections I through IV, what “purposes” are missing? Please identify the standards or implementations specifications you believe should be identified as the best available for each additional purpose(s) suggested and why.

Nutrition/Diet Orders should be included as a purpose in sections I through IV. Nutrition orders represent an actual order within a treatment facility and/or the chosen dietary regime that a patient is adhering to on the advice of a dietitian/nutritionist, a physician and/or at their own choosing. In patient care facilities, an order must be placed before the patient is seen. Due to broad variances in the way these orders are placed and very limited exchange of nutrition orders between facilities, the Academy has developed a framework for the development of Health Level 7 (HL7) Fast Healthcare Interoperability Resources Nutrition Orders³ – presently being balloted in the May 2015 HL7 ballot cycle. This Nutrition Order Resource is built upon foundational work within the HL7 Version 3 Domain Analysis Model: Diet and Nutrition Orders, Release 2⁴ and the Nutrition Orders Clinical Messaging, available under the Nutrition Management section of HL7 Orders and Observations⁵. At present, the

²Ayers, P. et al Parenteral Nutrition Safety Consensus Recommendations. *J Parenter Enteral Nutr* March 2014 vol. 38 no. 3 296-333. <http://pen.sagepub.com/content/38/3/296.abstract> Accessed May 1, 2015.

³ Fast Healthcare Interoperability Resources. Health Level Seven website. <http://hl7.org/fhir/2015May/nutritionorder.html> Accessed May 1, 2015.

⁴ HL7 Version 3 Domain Analysis Model: Diet and Nutrition Orders, Release 2. Health Level Seven website. http://www.hl7.org/implement/standards/product_brief.cfm?product_id=289 Accessed May 1, 2015.

⁵ HL7 Nutrition Management. Health Level Seven website. http://wiki.hl7.org/index.php?title=Nutrition_Management Accessed May 1, 2015.

FHIR Nutrition Order standard represents the best and most comprehensive nutrition order guidance and provides considerable improvement over the HL7 v2.x standards that convey nutrition standards. This work is supported but nutrition terminology in SNOMED-CT and now LOINC (for assessments); vocabulary bindings for FHIR Nutrition Orders are included in the FHIR standard.

5-4. [General] For sections I through IV, is a standard or implementation specification missing that should either be included alongside another standard or implementation specification already associated with a purpose?

We recommend the clustering of all allergies alongside each other. In Stages I and II of Meaningful Use regulations, hospitals and providers were required only to record medication allergies, with no guidance for food or environmental allergies. Due to this gap, the Academy has supported and advocated for one process for creating a “list” of allergies, using coded values that can follow the patient across all episodes of care. The potential impact of missing food allergy data is a patient safety issue which must be addressed with similar intensity to medication allergies. We recommend including the following standards together:

- Allergy reactions (SNOMED-CT)
- Food Allergies (using SNOMED-CT)
- Medication Allergies (using RxNorm)
- Allergies and Intolerances (using HL7 Allergies and Intolerances DSTU)⁶
- FHIR Allergies and Intolerance Resource

In addition, the vocabulary bindings for food allergies is as of yet not reconciled. We recommend creation of Allergy and Intolerances Value Sets that align with the past work HL7 Allergies and Intolerances of the Academy. In December 2014, an invitational meeting was held by ONC –a Federal Interagency Summit on Materials and Adverse Effects. This meeting brought together stakeholders who hold potential resources and projects, which collaboratively, could provide a foundational method of managing materials and substances via electronic means in support of patient safety and overall patient care. While several independent agencies have continued the discussion, we hope that the products and discussion of this summit will be used for continued evaluation and content development for inclusion in standards that direct consistent management of allergies, intolerances and patient adverse reactions.

5-6. [Section I] Should more detailed value sets for race and ethnicity be identified as a standard or implementation specification?

We believe ONC should identify a more robust set of race and ethnicity value sets. While it is likely overwhelming to consider the full breakout of terms, even a more detailed breakdown of

⁶ HL7 Version 3 Allergies and Intolerances. Health Level Seven website.
http://wiki.hl7.org/index.php?title=Allergy_%26_Intolerance#Allergy.2FIntolerance_Topic_DSTU Accessed May 1, 2015.

ethnicity/race would allow for granular population health assessment using EHR data. Lists should be consumer-friendly, relevant, and culturally sensitive.

5-7. [Section I] Should more traditionally considered “administrative” standards (e.g., ICD-10) be removed from this list because of its focus on clinical health information interoperability purposes?

The Academy requests clarification on this question. Assuming that this question is in reference to the use of both ICD-10 and SNOMED-CT for the documentation of medical procedures, for example, we recommend utilizing clinical coding as needed for the care and treatment of patients. In cases regarding nutrition, in particular, terms that map cleanly for ICD-10 to SNOMED-CT are often not available. In addition, the use of both “administrative” terms such as ICD-10 in one system and SNOMED-CT in another system, make for a difficult case in interoperability due to mismatched mappings.

In regards to administrative standards in general, it seems prudent to include these alongside clinical guidance due to the need for consistency to support interoperability.

5-8. [Section I] Should “Food allergies” be included as a purpose in this document or is there another approach for allergies that should be represented instead? Are there standards that can be called “best available” for this purpose?

Food allergies are an increasing cause of morbidity and mortality in the United States and are responsible for hundreds of preventable fatal outcomes each year. Food is an essential part of clinical health care services, with hospitals and long term care facilities providing meals, nutraceuticals, and parenteral or enteral nutrition to individuals in their care and with prescribed diets for a number of high-prevalence diseases. Additionally, a number of immunizations and other pharmaceuticals contain residues of edible substances with potential for food allergies. Most EHR systems do allow capture of food allergies in patient records, and interoperability requires that this should be done with codeable data.

The Health Level 7 C-CDA Allergy and Intolerance templates (R 1.1 and R2.0) and FHIR allergy and intolerance resource provide for the capture of food allergies in addition to capture of allergies to drugs and other substances. The published HL7 Allergy/Intolerance domain analysis model⁷ includes foods and other substances along with drugs. Through the efforts of the dietitian nutritionist community and the Academy of Nutrition and Dietetics, HL7 v2 includes implementation guidance for food/nutrition orders, and Consolidated-CDA R2.0 includes templates for nutrition assessment and nutrition orders. Through the efforts of dietitian nutritionists and HL7, SNOMED CT codes for substances associated with food allergies have been updated as well. The inclusion of nutrition assessment parameters and nutrition orders will enable Clinical Decision Support for food allergies and will have a significant patient safety impact only if food allergy is included in consideration of best available standards.

⁷ HL7 Allergy and Intolerances Domain Analysis Model. Health Level Seven website. http://wiki.hl7.org/index.php?title=AllergyIntolerance_FHIR_Resource_Proposal Accessed May 1, 2015.

We recommend the use of the HL7 Allergies and Intolerances DSTU for use across care setting. While additional work is necessary to provide food substances (the SNOMED CT substances tree data must be mapped to industry food data), this work represents the most widespread work in the area of allergies and intolerance standards to date). While the use of UNII codes has been proposed for allergy terminologies, the granularity of the ingredient UNII codes adds a great layer of complexity. Use of SNOMED-CT for food allergies helps on the clinical and patient centered side, with UNII being more at the ingredient chemical application. Regardless of which terminology is bound to food allergies, we recommend and request that a standard for all allergies be designated. Given the significant patient safety risk of missing allergy data, we believe that use of the HL7 Allergy and Intolerance standard is the best solution for timely interoperability of allergy data.

5-9. [Section I] Should this purpose category be in this document? Should the International Classification of Functioning, Disability and Health (ICF) be included as a standard? Are there similar standards that should be considered for inclusion?

We agree with the inclusion of Functioning and Disability purpose in this standard. While there appears to be a lack of consensus on the standard for this topic, we recommend inclusion of the ICF standard, with encouragement of a review and efforts to achieve consensus. This component of health and health care, which is so often not included in the health record, impacts a patient's overall wellness, including the ability to procure, utilize and consume food, food insecurity and other aspects of daily sustenance that encompass a critical component of well-being.

5-13. [Section I] If a preferred or specific value set exists for a specific purpose and the standard adopted for that purpose, should it be listed in the "implementation specification" column or should a new column be added for value sets?

We recommend adding a new column for inclusion of value sets alongside of the standard and implementation specification. This would align with the definition of value sets (which should be included) so that implementers, providers and clinicians understand the need for appropriate terminology and code set lists according to need. This would provide useful guidance where multiple existing value sets are available.

5-14. [Section II] Several laboratory related standards for results, ordering, and electronic directory of services (eDOS) are presently being updated within HL7 processes. Should they be considered the best available for next year's 2016 Advisory once finalized?

While laboratory standards are not the primary domain of our members, laboratory results and values are a critical component of a nutrition care plan created by RDNs. Laboratory results are used as part of the Nutrition Care Process⁸ to determine recommendations and interventions necessary for optimal nutrition care in a comprehensive treatment plan. Inclusion of greater clarity and guidance on

⁸ The Nutrition Care Process is a systematic approach to providing high quality nutrition care which includes four processes completed by RDNs: nutrition assessment, diagnosis, intervention and monitoring and evaluation.

<http://www.eatrightpro.org/resources/practice/nutrition-care-process>

laboratory standards will allow for improved interoperability. It is hoped that such standards provide a starting point for technical implementation staff that can then be endorsed by clinical staff. In some cases, technical staff is left to make decisions on which content is used, shared or summarized – in situations which necessitate a standardized clinical interpretation.

5-15. [Section II] Are there best available standards for the purpose of “Patient preference/consent?” Should the NHIN Access Consent Specification v1.0 and/or IHE BPPC be considered?

The Academy recognizes the importance of obtaining and providing a patient’s or resident’s food and medication preferences. This is a patient’s right and important for ensuring disliked foods or medications, some of which may cause unpleasant side-effects, be documented and communicated via the EHR. The Academy supports and requests the inclusion of the HL7 Version 3 Standard: Care Provision; Food and Medication Preferences, Release 1⁹ as the best available standard for addressing this important patient care issue.

This work was completed, in part, due to the need for a defined process for “patient preferences” related to food. In many instances patients often report a food as part of their food allergies and intolerances, when in fact, it is a patient dislike or preference. We believe the same model can be utilized to provide a standard for patient preferences across other domains.

5-17. [Section II] For the 2015 list, should both Consolidated CDA® Release 1.1 and 2.0 be included for the “summary care record” purpose or just Release 2.0?

We recommend adoption of only the C-CDA 2.0 standard for the 2015 list for the following reasons:

- The difference in vocabulary bindings between the two standards creates additional burden on using both standards (R 1.1 utilizes SNOMED-CT for assessment terms while R 2.0 is bound to LOINC).
- If both releases are allowed, it is likely that many providers/hospitals will use only the R 1.1 version, which does not contain the rich section additions which are included in R 2.0. In the case of nutrition, R 1.1 has one entry level template in the entire standard (discharge diet in the discharge summary), while R 2.0 provides a nutrition section level template and 3 entry level templates (nutrition status, nutrition recommendation and nutrition assessment). In addition, the additional content contained in R 2.0 promotes the use of patient-generated data and many activities of daily living and functional status that are critical indicators of health status and wellness.
- Transition to R 2.0 would allow for a comprehensive release that provides a lower barrier to interoperability due to the lack of necessary compatibility between the two releases.

⁹ HL7 Nutrition and Drug Preferences. Health Level Seven website.
http://www.hl7.org/documentcenter/private/standards_temp_9D5C589F-1C23-BA17-0CAFF7F1CC52EBB4/v3/edition_web/domains/uvpc/uvpc_NutritionandDrugPreferences.html
Accessed May 1, 2015.

Conclusion

The Academy appreciates the opportunity to comment on *ONC’s 2015 Interoperability and Standards Advisory: Best Available Standards and Implementation*. We appreciate the dedication and guidance of ONC, which is necessary to ensure Health IT adoption evolves to attain optimal health and health care. We remain committed to continued work to ensure nutrition inclusion in health IT standards and implementation specifications. Please contact either Jeanne Blankenship at 312-899-1730 or by email at jblankenship@eatright.org or Lindsey Hoggle at 202-775-8277 ext. 6014 or by email at lhoggle@eatright.org with any questions or requests for additional information.

Sincerely,



Jeanne Blankenship, MS, RDN
Vice President, Policy Initiatives and Advocacy
Academy of Nutrition and Dietetics



Lindsey Hoggle, MS, RDN, PMP
Director, Nutrition Informatics
Academy of Nutrition and Dietetics