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November 20, 2017

Donald Rucker, M.D.
National Coordinator for Health IT
U.S. Department of Health and Human Services
200 Independence Ave, SW
Washington, DC 20201

Dear Dr. Rucker:

On behalf of the Healthcare Information and Management Systems Society (HIMSS), we are pleased to provide written comments to the Office of the National Coordinator for Health Information Technology (ONC) in response to their Request for Stakeholder Feedback to inform the creation of the 2018 Interoperability Standards Advisory (ISA). HIMSS appreciates the opportunity to leverage our members' expertise in commenting on the Standards Advisory, and we look forward to continuing our dialogue with ONC on identifying, assessing, and determining the best available interoperability standards and implementation specifications. We feel that this effort will provide the necessary foundation for more rapidly advancing interoperability in our country.

HIMSS is a global, cause-based, not-for-profit organization focused on better health through information and technology. In North America, HIMSS focuses on health information and technology thought leadership, education, market research, and media services. Founded in 1961, HIMSS North America encompasses more than 64,000 individuals, of which more than two-thirds work in healthcare provider, governmental, and not-for-profit organizations, plus over 640 corporations and 450 not-for-profit partner organizations, that share this cause.

HIMSS is committed to supporting and educating all stakeholders to achieve interoperability leading to information exchange that improves the quality and cost effectiveness of healthcare delivery. We will continue to leverage our resources and diverse membership to ensure that all individuals and communities have access to the tools necessary to share health information in a secure and appropriate manner.

Historically, HIMSS has taken a leading role in supporting the definition and specifications for interoperability, even prior to the enactment of the Medicare and Medicaid Electronic Health Record Incentive Programs. Starting in September 2004, HIMSS began leveraging our interoperability expertise to provide oversight across our many integration and interoperability-related activities. Since then, we have provided thought leadership to advance the effective delivery of care for individuals and communities. We have accomplished this by enabling community stakeholders to support widespread adoption and implementation of standards-based interoperable systems to achieve seamless, effective, and secure exchange practices of health information worldwide.

HIMSS offers substantial experience as a co-founder of Integrating the Healthcare Enterprise (IHE). Since 1998, IHE has achieved widespread consensus and adoption of a common framework for

applying health IT standards to the real world. Given this strong relationship, a number of the comments below also reflect the opinions of IHE.

In the spirit of the ONC's ongoing review process for the ISA, HIMSS will continue to submit comments on an ongoing basis. Included below is feedback on several of the questions outlined in Section VI: Questions and Requests for Stakeholder Feedback. Feedback on additional sections of the ISA is also included after our Section IV responses. We look forward to the release of the 2018 Reference Edition and offering subsequent comments in 2018 to continue to drive efforts toward ubiquitous, interoperable health information exchange.

Question 17-1. In what ways has the ISA been useful for you/your organization as a resource? ONC seeks to better understand how the ISA is being used, by whom, and the type of support it may be providing for implementers and policy-makers.

HIMSS members have shared a number of examples of this resource's usefulness within their respective organizations. Some leverage ISA as a guide for the direction of programs and policy both within the organization and in the interactions between their organization and others. The ISA is also used as a starting point and a guideline in discussing best practices in health information and technology. Others cited the ISA as a means for communicating standards and aligning expectations among stakeholders. For example, a stakeholder can point to ISA to demonstrate the use of RxNorm codes for medications and receive little pushback from other stakeholders.

Furthermore, the goals of the ISA are incorporated into HIMSS educational efforts and thought leadership. For example, the HIMSS Health Story Project works to educate the community on how to optimize the implementation of many standards in the ISA. They also work to identify patient stories that can be leveraged in the development of new use cases to further evolve the ISA. HIMSS believes that the ISA creates a communication channel for stakeholders to address and plan for future interoperability needs.

HIMSS also believes that the ISA can be used to encourage new stakeholders to become involved with and leverage the ISA. As new stakeholders are represented in the ISA, such as the ISA expansions to include a consumer perspective, the uses of this resource are likely to expand.

Question 17-2. Over the course of 2017, various new functionality has been added to the ISA to make it a more interactive and useful resource (e.g., print-friendly pages, change notifications, advanced search functionality, etc). Are there additional features or functionalities that would enhance the overall experience?

HIMSS supports the effort to add new interactive features and does suggest additional functionalities to enhance the resource. Examples of how the community leverages ISA should be shared to enhance the value of the tool. Question 17-1 starts to gather information about different uses of the ISA, but more direct solicitation of developers and end-users could gather clearer examples. These use cases and success stories can also be highlighted in other areas of the ONC website to further promote interoperability and use of the ISA.

Change notifications are also important in this new interactive setting. ONC states they have implemented these notifications but it is unclear how change notifications are actually communicated. As a result, ISA consumers have to go through a time-consuming process of periodically checking the ISA to determine what changes occurred. It would be helpful if those interested, not just those that submit comments, could "subscribe" to email notifications on when a change occurs.

For those that do provide comments, it would be helpful to know the status of the comments, including but not limited to, whether comments have been reviewed, approved, rejected or not yet considered. To date, HIMSS has not received any responses or notifications as to the status of submitted comments.

Lastly, a mobile platform for smartphones and tablets would be a welcome addition.

Question 17-3. An Appendix II has been added that includes educational and informational resources as recommended by the Health IT Standards Committee/2017 ISA Task Force. Are there other topics and/or existing resources which would be helpful to include in this area to increase stakeholder understanding of health IT interoperability issues?

HIMSS is pleased with the addition of Appendix II and believes the subject matter included is extremely helpful. To continue this great work, HIMSS suggests a section on Data Provenance. Data provenance, along with data attribution, quality and integrity, is an important element of user adoption and use of exchanged data.

We also suggest a resource that promotes understanding of key (cyber)security mechanisms employed during transmission of information over the internet. An example of such resource is "*NIST Special Publication 800-52 Revision 1. Date Published: April 2014 - Guidelines for the Selection, Configuration, and Use of Transport Layer Security (TLS) Implementations"*

Question 17-4. Are there additional Interoperability Needs (with corresponding standards) that represent specific socio-demographic, psychological, behavioral or environmental domains that should be included in the ISA?

HIMSS recommends that eLTSS (electronic Long Term Services and Support) should be acknowledged as an emerging data set that needs to go through a Standards Development Organization (SDO) for guidance on existing, revised, or new standards to represent the eLTSS data. The eLTSS initiative has not yet reached the point of defining or recommending standards, but it has achieved a harmonized dataset regarding planning of non-clinical needs, goals, and services that many states have agreed to.

HIMSS also continues to encourage broader parameters around an Interoperability Need for "Non-medicinal Substance Use and Overuse". Beyond alcohol currently listed as an Interoperability Need, it also should include heroin and other opioids, cannabis and cannabinoids, cocaine, hallucinogens, inhalants, psychoactives, sedatives, CNS stimulants and any other substances that are used and overused non-medicinally.

HIMSS further recommends addition of an Interoperability Need that assesses homelessness, home safety and fall risks, unemployment, access to drinking water and electricity, access to internet, and access to public transportation.

HIMSS recommends that, within Section I-H: "Representing Patient Industry and Occupation", the Applicable Value sets be updated with the following hyperlink references:

- For Industry Value Set PHVS_Industry_CDC_Census2010 urn:oid:2.16.840.1.114222.4.11.7187 add hyperlink: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7187
- For Occupation Value Set PHVS_Occupation_CDC_Census2010 urn:oid:2.16.840.1.114222.4.11.7186 add hyperlink: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7186

Question 17-6. A new subsection, III-J: Consumer Access/Exchange of Health Information has been added, with four interoperability needs. Please review and provide comment about the accuracy of the attributes. ONC also seeks suggestions for additional consumer access related interoperability needs for inclusion, as well as other known standards or Open APIs that should be listed for existing consumer access interoperability needs.

HIMSS supports the addition of subsection III-J and the interoperability needs it includes. However, we have several suggestions to enhance and refine the descriptions and the references to standards and implementation specifications for each. In further development of these Interoperability Needs, HIMSS suggests that ISA continue to reference the 13 use cases outlined to ONC by HITSC (slides 22-32) that discuss additional recommendations to represent the consumer.

Interoperability Need: Remote Patient Authorization and Submission of EHR Data for Research

HIMSS suggests the following updates to the "Limitations, Dependencies, and Preconditions for Consideration":

- Bullet 3: "RESTful FHIR API" should be written as "FHIR RESTful API" as FHIR uses RESTful API framework.
- Bullet 4: "Patient-Centered Outcomes Research" should also be included as projects to reference in the Interoperability Proving Ground.

HIMSS recommends the following bullet point be added to the "Limitations, Dependencies, and Preconditions for Consideration":

- Health Relationship Trust (HEART) Working Group's use case is designed to develop, primarily through profiling, a set of privacy and security specifications that enable an individual to control the authorization of access to RESTful health-related data sharing APIs, and to facilitate the development of interoperable implementations of these specifications by others. HEART WG has profiles for OAuth 2.0, OpenID Connect, User-Managed Access UMA and FHIR®.

Interoperability Need: View, Download, Transmit Data from EHR

HIMSS recommends adjusting the name of this Interoperability Need to "View, Download and Transmit *to a Third Party*" since this wording is consistent with the language currently used in regulation under Meaningful Use.

HIMSS further suggests that the first listed "Implementation Specification" be changed from "Applicability Statement for Secure Health Transport v1.2 (Direct)" to "Direct (Applicability Statement for Secure Health Transport v1.2)" and that the adoption level be changed to 4 out of 5.

HIMSS also recommends the following updates to "Limitations, Dependencies, and Preconditions for Consideration":

- Bullet 2: Add "Patient Engagement" and "Patient Centric" as projects to reference from the Interoperability Proving Ground.
- Bullet 3: Add the following language to the end of the paragraph: "and X.509 certificates. Participants in exchange are identified using standard e-mail addresses associated with X.509 certificates."
- Bullet 6: "RESTful FHIR API" should be reworded as "FHIR RESTful API" since FHIR *uses* RESTful API framework.

Interoperability Need: Patient Exchanging Secure Messages with Care Providers

HIMSS suggests the following updates to be made to the Direct "Implementation Specification" The Standard Implementation/Specification should be changed from "Applicability Statement for Secure Health Transport v1.2 (Direct)" to "Direct (Applicability Statement for Secure Health Transport v1.2)".

HIMSS further suggests the following updates be made to the "Limitations, Dependencies, and Preconditions for Consideration":

- Bullet 2: Add "Patient Engagement" and "Patient Centric" as projects to reference from the Interoperability Proving Ground.
- Bullet 3: Add the following language "and X.509 certificates. Participants in exchange are identified using standard e-mail addresses associated with X.509 certificates."

Interoperability Need: Push Patient Generated Health Data into Integrated EHR

For the Direct "Implementation Specification", HIMSS recommends a title change from "Applicability Statement for Secure Health Transport v1.2 (Direct)" to "Direct (Applicability Statement for Secure Health Transport v1.2)". HIMSS suggests an Adoption Level of 1 out of 5.

Furthermore, HL7 FHIR® should be classified as *Emerging Standard* (as opposed to Implementation Specification) since HL7 FHIR® is a *Standard* for *Trial* Use (STU). Also, since FHIR is *not* federally required, the value for the "Federally Required" category should be changed to "No".

While Direct and HL7 FHIR® are a reasonable start for standards listed in this new subsection, HIMSS also suggests the inclusion of **SMART on FHIR** as an implementation specification.

HIMSS also recommends the following updates for "Limitations, Dependencies, and Preconditions for Consideration":

- Bullet 4: Add "Patient Engagement" and "Patient Centric" as projects to reference from the Interoperability Proving Ground.

HIMSS recommends that several types of Patient-Generated Health Data (PGHD) content be considered for addition to ISA as Implementation Specifications. Strictly speaking, these belong in "Section II: Content / Structure Standard and Implementation Specifications" since they are payloads, rather than the "services" that deliver the payloads. Nevertheless, we mention them here because they fit within the proposed Interoperability Need of "Pushing patient data into integrated EHR." Patients can provide a unique point of view about outcome evaluation and can be engaged to contribute assessment and screening information in more automated, efficient ways.

- HIMSS recommends adding the HL7 Personal Advance Care Plan (PACP) Document as an emerging Implementation Specification underneath PGHD, since it is a type of document that contains PGHD (specifically the patient's goals, priorities, and preferences), encompassing but going beyond what was traditionally known as "Advance Directives." The PACP document is one of the most mature types of PGHD documents, having passed ballot as a Standard for Trial Use (STU), and is available at https://www.google.com/url?q=http://www.hl7.org/implement/standards/product_brief.cfm?product_id%3D434&sa=D&ust=1510006179271000&usg=AFQjCNE5HYceW6wl1OPNrV5iqFQrUHgy9g. The consumer-facing MyDirectives.com solution already supports creation of a PACP document as an Unstructured CDA Document, Level-2 CDA (population of the human readable narrative in the structured document sections), and Level-3 CDA (population of machine readable entries that encode the human readable narrative for improved computer processing). Exchange of the PACP document has been tested at the CDA Implementation-a-thon and two HL7 FHIR® Connect-a-thons.
- HIMSS recommends the HL7 CDA Questionnaire and HL7 CDA Questionnaire Response implementation guides, which are relevant for PGHD surveys that collect information about the patient experience of care. These potentially include patient-reported outcomes, which are a critical form of PGHD that is key to the Triple Aim for healthcare reform efforts.
- HIMSS also recommends considering many other types of Care Plan documents that are beginning to be defined through HL7: these also would be implementation guides that would be appropriate for gathering this PGHD. Examples include Pharmacy Care Plan, Nutrition Care Plan, Cancer Survivorship Care Plan, and other disease specific care plan documents as well as the IHE Dynamic Care Planning (DCP) Profile.

Question 17-7. Is the existing ISA format used for listing standards and implementation specifications applicable for listing Models and Profiles? Are there additional or different attributes that should be collected for them? Are there additional models and/or profiles that should be listed?

HIMSS believes there is a need to create a registry of CDA Templates and HL7 FHIR® Profiles that have been defined in the various Implementation Guides that get published as available standards. It would helpful if the ISA resource became the one place where "advised" standards could register their component CDA Templates and HL7 FHIR® Profiles so that others could seek first to reuse existing work before inventing the wheel in a way that perpetuates problems for interoperability.

Furthermore, a description of how to read and utilize the models and profiles would be helpful. People unfamiliar with the HL7 website might have a hard time discerning what they are supposed to do with all of that information.

Question 17-8. Please review the contents of the new Section V: Administrative Standards and Implementation Specifications and provide comments about the accuracy of any of the listed standards/specifications and attributes.

For the Applicable Security Patterns for Consideration" of V-A, V-B, V-C, V-D, V-E subsections, HIMSS recommends the link name be changed from "ONC website" to "ONC Guide to Privacy and Security of Electronic Health Information".

V-A Interoperability Need: Health Care Claims or Equivalent Encounter Information for Retail Pharmacy Claims

HIMSS suggests adding NCPDP Standards Matrix (and Implementation Guide), October 2017 to "Limitations, Dependencies, and Preconditions for Consideration". There is also a dummy link currently listed for the Yes under "Test Tool Availability". HIMSS recommends updating to the appropriate link or removing.

V-A Interoperability Need: Health Care Claims or Equivalent Encounter Information for Retail Pharmacy Supplies and Professional Services

HIMSS suggests adding NCPDP Standards Matrix (and Implementation Guide), October 2017 to "Limitations, Dependencies, and Preconditions for Consideration".

V-B: Interoperability Need: Eligibility for a Health Plan – Request and Response for Retail Pharmacy Coverage

HIMSS suggests adding NCPDP Standards Matrix (and Implementation Guide), October 2017 to "Limitations, Dependencies, and Preconditions for Consideration".

V-C Interoperability Need: Electronic Funds Transfer for Payments to Health Care Providers – Professionals and Institutions

ONC requested feedback for the Applicable Security Patterns for Consideration. HIMSS would like to provide the following items for consideration for this section.

- All covered entities are required to meet HIPAA security and privacy requirements in order for Electronic Data Interchange (EDI) to occur.
- For Automated Clearing House (ACH) Network risks and enforcement, one can refer to NACHA's ACH Network Risk and Enforcement Topics and 2017 NACHA Operating Rules & Guidelines. ACH Network is an electronic funds transfer system governed by the NACHA Operating Rules, which provides for interbank clearing of electronic entries for participating financial institutions.

V-D: Interoperability Need: Health Care Attachments to Support Claims, Referrals and Authorizations

HIMSS suggests adding ""HIPAA administrative Simplification Standards" for "Limitations, Dependencies, and Preconditions for Consideration".

Question 17-9. Are there additional administrative-related interoperability needs that should be listed in this section?

While HIMSS is uncertain on the appropriate location for this interoperability need, standards should be considered and included for Patient Consent to participate in the Regional HIE/HIO (Opt-in, or Opt-out).

The Council for Affordable Quality Healthcare (CAQH) CORE Phase IV Operating Rules, even though it is not yet mandated, would be a good addition. There are other items in the list, which are not yet mandated, and many plans have adopted phase IV on their own. This package contains operating rules for four healthcare business transactions: healthcare claims, prior authorization, employee premium payment, and enrollment and disenrollment in a health plan.

Question 17-10. For Interoperability Need: Health Care Claims or Equivalent Encounter Information for Institutional Claims, feedback is requested on the update process for X12 standards, and how a more streamlined process can be implemented with greater industry engagement. Other improvement ideas are also encouraged to enhance the benefit of the transaction.

HIMSS recognizes that the update process for X12 standard is tedious, but with good reason. This process sets the standard for the entire country for a process that involves sensitive information and payment. Trying to involve broader industry participation is a great goal, but people are only going to participate if they have desire and time. The participants with desire and time are the ones that are currently working on these specifications. The X12 standards are also complex and there is a steep learning curve for people to participate. Just learning about the inner workings of the transactions is a costly endeavor. HIMSS recommends the provision of free onboarding and education to new participants and suggest that each payer, vendor and interested health system provide a representative. Furthermore, a continuous improvement process with LEAN principles can be applied to the update process to decrease the time to market and increase participation.

Question 17-12. For Interoperability Need: Enrollment and Disenrollment in a Health Plan, feedback is requested on the use of the adopted enrollment transaction, its value to the industry, and any enhancements that could be made to increase utilization.

HIMSS believes there is room for improvement in the enrollment and disenrollment transaction on the group side. Many groups do not have the ability to create the transaction. Payers receive enrollment files in spreadsheets or a stack of enrollment forms because the group does not have the mechanism to enroll year after year electronically. It is unclear whether this is because they cannot afford the software or they simply do not have the technical resources to utilize a web interface. Some sort of required tooling for groups to enroll, like the marketplace for the individual market, that could create the enrollment and disenrollment transactions for the group would assist in the adoption of this transaction.

17-15. For Interoperability Need: Referral Certification and Authorization Request and Response for Dental, Professional and Institutional Services, feedback is requested to better understand the workflows that will increase adoption of this transaction.

To comply with the mandate that the 278 be accepted, many payers have added messaging that asks the provider to call an authorization phone number for assistance. There are deeply embedded workflows and departments at payers that work authorizations and utilization management. Current workflows involve phone calls and faxes to determine the medical necessity and other factors related to an authorization. Some payers have a portal where providers can enter the clinical information needed to make a determination. Several groups of payers are beginning to utilize claims attachments standards published by HL7 to provide the information required for an automated determination. This workflow seems to be helping alleviate some of the pain points in the prior authorization process. The 278 is used to carry an HL7 attachment of needed clinical information in a programmatic fashion that can be automatically read on the payer side. Uniform, mandated workflow of any kind would increase the use of this transaction. Claims attachments might be a way to create uniformity in the workflow for both payers and providers.

Question 17-16. For Interoperability Need: Operating Rules to Support Eligibility and Claim Status Transactions (Phase II), feedback is requested on: a) the process for creating the operating rules; b) current adoption of the batch vs. real time rules for both providers and health plans; c) need for other operating rules that will improve adoption of the transactions.

If guidance on administrative standards is being posted on the ISA, HIMSS suggests that WEDI and X12 organizations be consulted directly. That being said, the standards referenced for Claims Status Inquiry and Response appear to be correct per the latest mandate.

a) The process for creating the operating rules is currently long and tortuous. However, the mandate of a new operating rule seems to be the only way to move the industry forward so the operating rules are necessary.
b) Most payers that HIMSS members have spoken with receive both batch and real time requests for eligibility information and claims status inquiry. The bulk of the transactions are in batch.

There are several reports and accounts of providers checking eligibility multiple times prior to a visit and again at check-in. This increases the batch file numbers. There are also providers that check the status of all unpaid claims in a nightly batch, again adding to the numbers. It is difficult to get a good handle on how often the transactions are used in a meaningful way and how often they are just part of an automated process when looking at a batch eligibility or claims status inquiry report.

c) It appears that one of the reasons that these transactions are not adopted is the lack of real time response within the existing workflow. Office managers feel a sense of instant gratification if they call and receive a response. With electronic transactions, staff sometimes may not get an answer until the next day when the batch file runs.

ADDITIONAL SECTION FEEDBACK

In our review of Section VI, HIMSS identified additional updates to the ISA for the following sections. We look forward to a continued review of these sections with the release of the Reference Edition for 2018.

SECTION I: Vocabulary/Code Set/Terminology Standards and Implementation Specifications

HIMSS recommends that the ISA states the general importance of reviewing and updating all vocabularies and code sets in Section I to the latest versions, consistent with their release dates. For example, SNOMED CT should be updated twice a year, since it is released twice a year.

HIMSS also suggests that the ISA articulate the importance of consistent definition and representation of all data elements in Section I. For example, data elements should be consistently defined and represented using ISO 11179 standard. Consistent definition and representation of data elements enables alignment and interoperability of data *across* various interoperability needs.

New Section on Representing Birth and Newborn Datasets:

As HIMSS has highlighted in a previous comment, we support the creation of a new subsection in Section I of the ISA to represent birth and newborn data sets. We again suggest the consideration of the following IHE Profiles in the creation of this subsection. The IHE Antepartum Profile, the Labor & Delivery Summary, and the Post-Partum Summary (as below) close the loop for complete obstetrical care summaries, and serve as the genesis for the already discussed Newborn Discharge Summary, which begins the infant's lifetime health record with inclusion of relevant maternal and pregnancy items gleaned from the IHE Antepartum Profiles.

While the existing OB Profiles do not incorporate HL7 FHIR®, that could be possible in future efforts should the need be recognized and prioritized.

Antepartum Profiles (includes the following profiles) - Revised 2011-09-09

- Antepartum Education (APE)
- Antepartum Laboratory (APL)

- Antepartum History and Physical (APHP)
- Antepartum Summary (APS)

Labor and Delivery Profiles (includes the following profiles) - Revised 2013-10-04

- Labor and Delivery History and Physical (LDHP)
- Labor and Delivery Summary (LDS)
- Maternal Discharge Summary (MDS)

Postpartum Visit Summary (PPVS) - Revised 2011-09-09

Section I-G Immunizations: HIMSS recommends that, within "Representing Immunizations-Administered", the Adoption Level of National Drug Code (NDC) standard be updated to 2 out of 5. We also recommend that "Limitations, Dependencies, and Preconditions for Consideration" field add a note that there is a potential issue regarding which NDC code to use when there are multiple active ingredients in a single package or multiple separate ingredients that need to be mixed together. CDC and AIRA now have guidance on this that either the Unit of Sale or the lyophilized portion of the Unit of Use should be used. Lastly, we recommend that the last bullet point be rephrased to: "CPT and RxNorm are an acceptable alternative code set for local use, but may have limitations for interoperability of immunization information across systems".

HIMSS also recommends that, within "Representing Immunizations - Historical", the following note be added to the beginning of the second bullet point in Limitations subsection: "MVX codes are designed to represent the names of vaccine manufacturer". Also, please update the entire last (third) bullet point to: "Although MVX information is fairly rare to have for historical vaccines, if a provider has the information, it should be captured and messaged as part of the historical vaccination record

Section I-V: Vital Signs: HIMSS recommends that ONC add new LOINC codes to the existing value set "Vital Sign Result" (urn:oid:2.16.840.1.113883.3.88.12.80.62). These additional LOINC codes are specified in the IHE Profile "IHE QRPH Healthy Weight (HW)" in Table "Assessment: Anthropometric Measurements" on pages 79-81.

SECTION II: Content/Structure Standards and Implementation Specifications

Section II-B: Care Team: HIMSS recommends ONC consider the addition of a new Interoperability Need within Section II-B to represent Dynamic Care Team Management (DCTM). Dynamic Care Team Management provides the means for sharing care team information about a patient's care teams that meet the needs of many users, such as providers, patients and payers.

Person-centered and collaborative-focused care teams are needed for effective care planning to occur. Care planning is needed to manage medically complex and/or functionally impaired individuals as they interact with the health care system. Often, these individuals require real time coordination of care as they receive care from multiple care providers and care settings. These care providers make up patient

centered collaborative focused care teams. Effective care planning and care coordination amongst care teams are essential for patients with complex health problems. IHE DCTM profile provides the ability to dynamically share care team information so effective care coordination can occur.

The Interoperability Need, Sharing Patient Care Plans for Multiple Clinical Contexts, currently includes IHE Dynamic Care Planning (DCP) Profile. IHE DCTM Profile compliments IHE DCP to support real time coordination of care. HIMSS recommends updating the linked HL7 FHIR® DSTU 2 version of IHE Dynamic Care Planning (DCP), Rev 1.1 Trial Implementation profile to the updated HL7 FHIR® STU 3 Version of IHE Dynamic Care Planning (DCP), Rev 1.2 Trial Implementation profile. HIMSS suggests the following characteristics to be included with this care plan:

Interoperability Need:	*Sharing Patient Care Teams for Multiple Clinical Contexts*
Type:	*Emerging Implementation Specification*
Standard/Implementation Specification:	IHE Dynamic Care Team Management (DCTM), Rev 1.1 Trial Implementation
Standards Process Maturity	*Balloted Draft*
Implementation Maturity:	*Pilot*
Adoption Level:	*Feedback Requested*
Federally Required:	*No*
Cost:	*Free*
Test Tool Availability:	*Yes* (Forge)

Section II-P: Patient Identification Management: HIMSS suggests that recent publication on digital identity guidelines, issued by NIST ("NIST Special Publication 800-63, Revision 3") be added to this section under "Limitations, Dependencies, and Preconditions for Consideration". These guidelines define technical requirements in each of the areas of identity proofing, registration, authenticators, management processes, authentication protocols, federation, and related assertions. The guidelines can be applied for identity proofing of any user or participant in healthcare such as clinicians, caregivers, patients and others.

Section II-R: Public Health Reporting: With respect to Reporting Administered Immunizations to Immunization Registry, HIMSS believes the IIS (Immunization Information Systems) community's level of adoption is closer to a 3 for adoption of HL7 2.5.1 release 1.5. HIMSS also feels the current title *"Reporting Administered Immunizations to Immunization Registry"* is too restrictive when considering other immunization-related sections within the ISA that explicitly separate Administered from Historical, and consider Query/Response activities. This section really encompasses all of those activities and the title should represent that. HIMSS suggests renaming the title to *"Exchanging Immunization Data with Immunization Registries"*

SECTION III: Services

Section III-F Public Health Exchange: For Interoperability Need, Transport for Immunization Submission, Reporting, the title of this section should be rephrased to incorporate both "Immunization Submission" and "Query/Response" exchanges that EHRs and IIS must support as part of Meaningful Use Stage 3 and the Quality Payment Program (QPP). The CDC WSDL referenced in this Interoperability Need can be used for any HL7 V2 message. It is not limited to just submission as potentially suggested by the title. We would suggest that ONC consider renaming this section "Transport for Immunization Submission and Query/Response". Furthermore, the test tool column properly notes a test tool exists, but doesn't provide a link. NIST provides the test tool for this, which can be found here: https://hl7v2-iz-r1.5-testing.nist.gov/iztool/#/home

APPENDIX I: Security Sources and Standards

HIMSS recommends that Appendix I be updated with following information:

- *Update* ISO/TS 21298:2008 "Health informatics -- Functional and structural roles" to the 2017 (most recent) version of the standard: "ISO 21298:2017 - Health informatics -- Functional and structural roles" available at https://www.iso.org/standard/63514.html.
- *Add* the following standards:
    - ISO/IS 17090-5 Health informatics -- Public key infrastructure -- Part 5: Authentication using Healthcare PKI credentials https://www.iso.org/standard/67883.html
    - ISO 25237:2017 - Health informatics – Pseudonymization https://www.iso.org/standard/63553.html
    - ISO/TS 17975:2015 - Health informatics -- Principles and data requirements for consent in the Collection, Use or Disclosure of personal health information https://www.iso.org/standard/61186.html