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AnAmerican National Standard

Standard Specification for Continuity of Care Record (CCR)[1]

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ε[1] NOTE—Section 2 was corrected editorially in August 2009.
ε[2] NOTE—Footnote 1 was corrected editorially in October 2011

1. Scope

1.1 The Continuity of Care Record (CCR) is a core data set of the most relevant administrative, demographic, and clinical information facts about a patient's healthcare, covering one or more healthcare encounters.[2] It provides a means for one healthcare practitioner, system, or setting to aggregate all of the pertinent data about a patient and forward it to another practitioner, system, or setting to support the continuity of care.

1.1.1 The CCR data set includes a summary of the patient's health status (for example, problems, medications, allergies) and basic information about insurance, advance directives, care documentation, and the patient's care plan. It also includes identifying information and the purpose of the CCR. (See 5.1 for a description of the CCR's components and sections, and Annex A1 for the detailed data fields of the CCR.)

1.1.2 The CCR may be prepared, displayed, and transmitted on paper or electronically, provided the information required by this specification is included. When prepared in a structured electronic format, strict adherence to an XML schema and an accompanying implementation guide is required to support standards-compliant interoperability. The Adjunct[3] to this specification contains a W3C XML schema and Annex A2 contains an Implementation Guide for such representation.

1.2 The primary use case for the CCR is to provide a snapshot in time containing the pertinent clinical, demographic, and administrative data for a specific patient.

1.2.1 This specification does not speak to other use cases or to workflows, but is intended to facilitate the implementation of use cases and workflows. Any examples offered in this specification are not to be considered normative.[4]

1.3 To ensure interchangeability of electronic CCRs, this specification specifies XML coding that is required when the CCR is created in a structured electronic format.[5] This specified XML coding provides flexibility that will allow users to prepare, transmit, and view the CCR in multiple ways, for example, in a browser, as an element in a Health Level 7 (HL7) message or CDA compliant document, in a secure email, as a PDF file, as an HTML file, or as a word processing document. It will further permit users to display the fields of the CCR in multiple formats.

1.3.1 The CCR XML schema or .xsd (see the Adjunct to this specification) is defined as a data object that represents a snapshot of a patient's relevant administrative, demographic, and clinical information at a specific moment in time. The CCR XML is not a persistent document, and it is not a messaging standard.

NOTE 1—The CCR XML schema can also be used to define an XML representation for the CCR data elements, subject to the constraints specified in the accompanying Implementation Guide (see Annex A2).

1.3.2 Using the required XML schema in the Adjunct to this specification or other XML schemas that may be authorized through joints efforts of ASTM and other standards development organizations, properly designed electronic healthcare record (EHR) systems will be able to import and export all CCR data to enable automated healthcare information transmission with minimal workflow disruption for practitioners. Equally important, it will allow the interchange of the CCR data between otherwise incompatible EHR systems.

1.4 *Security*—The data contained within the CCR are patient data and, if those data are identifiable, then end-to-end CCR document integrity and confidentiality must be provided

[1] This specification is under the jurisdiction of ASTM Committee E31 on Healthcare Informatics and is the direct responsibility of Subcommittee E31.25 on Healthcare Data Management, Security, Confidentiality, and Privacy.

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[2] A CCR is not intended to be a medical-legal clinical or administrative document entered into a patient's record, but may in specific use cases be used in such a manner, provided that accepted policies and procedures in adding such data to a patient's record are followed. A personal health record, with the information under the control of the patient or their designated representative, would be an example of such a use case, as would be importation into an electronic health record system, a data repository, or a registry.

[3] Available from ASTM International Headquarters. Order Adjunct No. ADJE2369. Original adjunct produced in 2006.

[4] Since the CCR is a core data set of selected, relevant information, it is not a discharge summary, that is, it does not include all of a patient's health information that would be routinely recorded at the time of discharge, nor is it the transfer of an entire patient record.

[5] The required XML may be as represented in the Adjunct to this specification or Annex A2 or other XML representation made possible through joint efforts of ASTM and other standards development organizations.

while conforming to regulations or other security, confidentiality, or privacy protections as applicable within the scope of this specification.

1.4.1 Conditions of security and privacy for a CCR instance must be established in a way that allows only properly authenticated and authorized access to the CCR document instance or its elements. The CCR document instance must be self-protecting when possible, and carry sufficient data embedded in the document instance to permit access decisions to be made based upon confidentiality constraints or limitations specific to that instance.

1.4.2 Additional Subcommittee E31.20 on Security and Privacy guides, practices, and specifications will be published in support of the security and privacy needs of specific CCR use cases. When a specification is necessary to assure interoperability or other required functionality, the CCR core schema will be extended to meet the profile requirements of the underlying use case, building upon existing standards and specifications whenever possible.

1.4.2.1 For profiles that require digital signatures, W3C's XML digital signature standard (http://www.w3.org/TR/xmldsig-core) will be used with digital certificates. Encryption will be provided using W3C's XML encryption standard (http://www.w3.org/TR/xmlenc-core).

1.5 The CCR is an outgrowth of the Patient Care Referral Form (PCRF) designed and mandated by the Massachusetts Department of Public Health for use primarily in inpatient settings.

1.5.1 Unlike the PCRF, the CCR is designed for use in all clinical care settings.

1.6 It is assumed that information contained in a CCR will be confirmed as appropriate in clinical practice. For example, the CCR insurance fields should not be construed to address all reimbursement, authorization, or eligibility issues, and current medications and other critical data should be validated.

1.7 Committee E31 gratefully acknowledges the Massachusetts Medical Society, HIMSS (Health Information Management and Systems Society), the American Academy of Family Physicians, the American Academy of Pediatrics, the American Medical Association, the Patient Safety Institute, the American Health Care Association, the National Association for the Support of Long Term Care, the Mobile Healthcare Alliance (MoHCA), the Medical Group Management Association (MGMA) and the American College of Osteopathic Family Physicians (ACOFP) as co-leaders with ASTM in the standard's development and adoption, and joins them in inviting the collaboration of all stakeholders, including other clinical specialty societies, other professional organizations, insurers, vendors, other healthcare institutions, departments of public health, and other government agencies.

1.8 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*[6]

E1382 Test Methods for Determining Average Grain Size Using Semiautomatic and Automatic Image Analysis

E1384 Practice for Content and Structure of the Electronic Health Record (EHR)

E1762 Guide for Electronic Authentication of Health Care Information

E1869 Guide for Confidentiality, Privacy, Access, and Data Security Principles for Health Information Including Electronic Health Records

E1985 Guide for User Authentication and Authorization

E1986 Guide for Information Access Privileges to Health Information

E2084 Specification for Authentication of Healthcare Information Using Digital Signatures (Withdrawn 2009)[7]

E2085 Guide on Security Framework for Healthcare Information (Withdrawn 2009)[7]

E2086 Guide for Internet and Intranet Healthcare Security (Withdrawn 2009)[7]

E2147 Specification for Audit and Disclosure Logs for Use in Health Information Systems

E2182 Specification for Clinical XML DTDs in Healthcare (Withdrawn 2011)[7]

E2183 Guide for XML DTD Design, Architecture and Implementation (Withdrawn 2011)[7]

E2184 Specification for Healthcare Document Formats (Withdrawn 2011)[7]

E2211 Specification for Relationship Between a Person (Consumer) and a Supplier of an Electronic Personal (Consumer) Health Record

E2212 Practice for Healthcare Certificate Policy

2.2 *Other References:*

Health Information Portability and Accountability Act, U.S. Congress, 1996

ICD-9-CM (http://www.cdc.gov/nchs/about/otheract/icd9/abticd9.htm)

LOINC (http://www.loinc.org/)

Massachusetts Department of Health Patient Care Referral Form

NDC (http://www.fda.gov/cder/ndc/)

RxNorm (http://www.nlm.nih.gov/research/umls/rxnorm_main.html)

SNOMED (http://www.snomed.org/)

W3C XML Digital Signature Standard (http://www.w3.org/TR/xmldsig-core/)

W3C XML Encryption Standard (http://www.w3.org/TR/xmlenc-core)

2.3 *ASTM Adjuncts:*

W3C XML Schema[3]

[6] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[7] The last approved version of this historical standard is referenced on www.astm.org.

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 These terms also include the common terms seen in many documents related to the CCR. See also Annex A1 for definitions of additional terms specific to this specification.

3.1.2 *actors*—all the individuals, organizations, locations, and systems associated with the data in the CCR.

3.1.3 *attribute*—for the purposes of this specification, an attribute is a characteristic of data, representing one or more aspects, descriptors, or elements of the data. In object-oriented systems, attributes are characteristics of objects. In XML, attributes are characteristics of tags.

3.1.4 *CCR body*—contains the core patient-specific data in a CCR, for example, Insurance, Medications, Problems, Procedures, and the like.

3.1.5 *CCR components*—CCR Header, CCR Body, CCR Footer; each component is made of sections, which in turn are made up of data fields.

3.1.6 *CCR footer*—contains data defining all of the actors, as well as information about external references, all text comments, and signatures associated with any data within the CCR.

3.1.7 *CCR header*—defines the document parameters, including its unique identifier, language, version, date/time, the patient whose data it contains, who or what has generated the CCR, to whom or what the CCR is directed, and the CCR's purpose.

3.1.8 *comments*—all text comments associated with any data within the CCR not containing core relevant, clinical, or administrative data, and not containing pointers to references external to the CCR.

3.1.9 *CDA*—the HL7 CDA (Clinical Document Architecture) is a document markup standard for the structure and semantics of exchanged clinical documents. **E2182**

3.1.10 *complex data type or a group*—concepts used more than once; defined by adding the post-fix 'Type.'

3.1.11 *continuity of care record (CCR)*—a core data set of the most relevant administrative, demographic, and clinical information facts about a patient's healthcare, covering one or more healthcare encounters. It provides a means for one healthcare practitioner, system, or setting to aggregate all of the pertinent data about a patient and forward it to another practitioner, system, or setting to support the continuity of care. See Section 5 for a summary of CCR contents, and Annex A1 for a detailed list of data fields.

3.1.12 *current procedural terminology (CPT)*—an annual reference published by the American Medical Association that lists descriptive terms and identifying codes for reporting medical services and procedures performed by physicians.

3.1.13 *data fields*—required or optional data within a section. Data fields may be repeated as often as necessary (see Annex A1).

3.1.14 *data objects*—discrete patient-specific data (Medications, Problems, Procedures, and the like).

3.1.15 *DERF*—NCPDP's Data Element Request Form used to request an addition or modification to NCPDP's current or new standards. **www.ncpdp.org**

3.1.16 *digital signature*—data associated with, or a cryptographic transformation of, a data unit that allows a recipient of the data unit to prove the source and integrity of the data unit and protect against forgery, for example, by the recipient. **E2084**

3.1.17 *DMR*—durable medical equipment

3.1.18 *document object*—the CCR as an XML document, consisting of a header, a body, and a footer, each built from a set of discrete XML building blocks.

3.1.19 *domain-specific applications*—additional, optional sets of CCR data elements specific to such areas as clinical specialties, institutions or enterprises, payers, disease management, and personal health records. Data sets for optional CCR domain-specific applications will be developed and balloted separately from this specification.

3.1.20 *element and attribute names*—the literal names of the XML tags (elements) and attributes of the XML tags (attributes).

3.1.21 *encounter—(1)* an interaction, regardless of the setting, between a patient and a practitioner who is vested with primary responsibility for diagnosing, evaluating, or treating the patient's condition. It may include visits, appointments, as well as non face-to-face interactions; and *(2)* a contact between a patient and a practitioner who has primary responsibility for assessing and treating the patient at a given contact, exercising independent judgment. **E1384**

3.1.22 *enumeration*—the process of limiting the allowed data values within a defined set of XML tags to a defined and constrained list, an enumerated list.

3.1.23 *electronic health record (EHR)*—any information related to the physical or mental health/condition of an individual that resides in electronic system(s) used to capture, transmit, receive, store, retrieve, link, and manipulate data for the primary purpose of providing health care and health-related services. The EHR is meant to be a much more comprehensive collection of information than the CCR. **E1384**

3.1.24 *extensible markup language (XML)*—a standard from the World Wide Web Consortium (W3C) that provides for tagging of information content within documents, offering a means for representation of content in a format which is both human and machine readable. Through the use of customizable style sheets and schemas, information can be represented in a uniform way, allowing for interchange of both content (data) and format (metadata). **E1382**

3.1.25 *fields*—see *data fields*.

3.1.26 *Health Level 7*—also known as HL7, a standards organization traditionally focused on message-oriented standards for healthcare. HL7 messages are the dominant standard for peer-to-peer exchange of clinical, text-based information. **E2182**

3.1.27 *HIPAA*—Health Information Portability and Accountability Act adopted by U.S. Congress in 1996.

3.1.28 *HL7*—see *Health Level 7*.

3.1.29 *ICD9-CM*—The International Classification of Diseases, Ninth Revision, Clinical Modification, is based on the World Health Organization's Ninth Revision, International Classification of Diseases (ICD-9). ICD-9-CM is the official system of assigning codes to diagnoses and procedures associated with hospital utilization in the United States. Source: National Center for Health Statistics.

3.1.30 *ICD-10*—the International Classification of Diseases, Tenth Revision, the World Health Organization.

3.1.31 *integrity*—property that data has not been altered or destroyed in an unauthorized manner. **E2084**

3.1.32 *language*—Refers to the language in which the CCR is expressed.

3.1.33 *LOINC*—Logical Observation Identifiers Names and Codes (LOINC) is a database to facilitate exchange and pooling of results, such as hemoglobin, serum potassium, or vital signs, for clinical care, outcomes, management, and research. **http://www.loinc.org/**

3.1.34 *messaging standard*—a method of electronic data exchange offered by HL7.

3.1.35 *NCPDP*—National Council for Prescription Drug Programs. Creates and promotes standards for transfer of data to and from the pharmacy services sector of the healthcare industry. **www.ncpdp.org**

3.1.36 *NCPDP SCRIPT*—A standard created by NCPDP to facilitate the electronic transfer of prescription data between pharmacies and prescribers. **www.ncpdp.org**

3.1.37 *NDC*—National Drug Code; originally established as an essential part of an out-of-hospital drug reimbursement program under Medicare. The NDC serves as a universal drug identifier for human drugs. The current edition of the National Drug Code Directory is limited to prescription drugs and a few selected OTC products. **http://www.fda.gov/cder/ndc/**

3.1.38 *normalization*—the process of listing data only once within a data object (XML document) or database and then referring to that data through a link, reference, or pointer.

3.1.39 *optional field*—a CCR data field that is not required but should be completed when there is relevant information about the patient available (see Annex A1).

3.1.40 *optionality*—defining whether or not something is optional or not.

3.1.41 *patient health record*—the primary legal record documenting the healthcare services provided to a person in any aspect of healthcare delivery. This term is synonymous with: medical record, health record, patient care record (primary patient record), client record, and resident record. The term includes routine clinical or office records, records of care in any health-related setting, preventive care, life style evaluation, research protocols, special study records, and various clinical databases. **E1384**

3.1.42 *persistent document*—a document that remains as a document within a data structure or file system once it has been used for its original intended use.

3.1.43 *personal health record (PHR)*—an electronic application where individuals can maintain and manage their health information or that of others for whom they are authorized in a private, secure, and confidential environment that allows the individual or other authorized persons to access and share such information. **E2211**

3.1.44 *practitioner*—an individual who is qualified to practice a healthcare profession, for example, physician, nurse, or physical therapist. Practitioners are often required to be licensed as defined by law. **E2184**

3.1.45 *purpose*—the specific reason for which a specific CCR is generated, such as patient admission, transfer, consult/referral, or inpatient discharge.

3.1.46 *referral*—the process of transferring all or a portion of a patient's care from one setting or practitioner to another.

3.1.47 *references*—data sources/locations that are outside the CCR, for example, URLs, diagnostic images, clinical documents.

3.1.48 *required field*—a field that must be completed within the CCR (see Annex A1). *None* or *unknown* is an acceptable entry.

3.1.49 *role*—defines the healthcare or support role of the <Actor> relative to the patient. <Role> does not define, in itself, an explicit role relative to data security, confidentiality, privacy, or access control.

3.1.50 *RxNorm*—a clinical drug nomenclature produced by the National Library of Medicine, in consultation with the Food and Drug Administration, the Department of Veterans Affairs, and HL7. RxNorm provides standard names for clinical drugs and for dose forms as administered. **http://www.nlm.nih.gov/research/umls/rxnorm_main.html**

3.1.51 *section*—a group of data fields within each component of the CCR (see Annex A1).

3.1.52 *SIG*—the use or administration instructions for a medication.

3.1.53 *SNOMED CT*—SNOMED Clinical Terms is the universal healthcare terminology that makes healthcare knowledge usable and accessible wherever and whenever it is needed. **http://www.snomed.org/**

3.1.54 *transfer*—referral of a patient that results in the physical movement of the patient from one location to another.

3.1.55 *vendor configurable fields*—fields where a vendor can define their use or content, or both.

3.1.56 *version*—refers to the version of the CCR as defined by the release of the standard used.

3.1.57 *W3C XML schema*—defines the elements that may appear within the XML document and the attributes that may be associated with an element. An element that has no content must not be present in the CCR XML. It also defines the structure of the XML document: which elements are children of others, the sequence in which the child elements may appear, and the number of child elements. It defines whether an element is empty or can include text. The schema can also define default values for attributes. **E2183**

3.1.58 *XSLT*—extensible style language transformation; a standard from the W3C that is a language for transforming XML documents into other XML documents and with extensions into other formats. **http://www.w3.org/TR/xslt**

3.1.59 *Xpath*—a standard from the W3C that is a language for addressing parts of an XML document, designed to be used by XSLT and other XML technologies. **http://www.w3.org/TR/xpath**

3.1.60 *XML*—extensible markup language; a standard from the World Wide Web Consortium (W3C) that provides for tagging of information content within documents, offering a means for representation of content in a format which is both human and machine readable. Through the use of customizable style sheets and schemas, information can be represented in a uniform way, allowing for interchange of both content (data) and format (metadata). **E2182**

3.1.61 *XML codes*—descriptors used to define the fields of the CCR when it is prepared in a structured electronic format.

3.1.62 *XML document*—a document constructed of XML tags and data.

3.1.63 *XML encryption*—a W3C standard for encrypting XML.

3.1.64 *XML signature*—a signature to an XML document that is similar in intent to a signature for paper-based document. In actual use within XML, these tend to be digital signatures.

3.1.65 *XML tag attributes*—attributes that apply to a specific XML tag and its data.

3.1.66 *xsd*—the XML schema.

3.1.67 *xsl*—extensible style language; used to format and transform XML documents into other XML formats or to non-XML data or print formats.

3.1.68 *W3C*—the World Wide Web Consortium develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential as a forum for information, commerce, communication, and collective understanding. **E2182**

4. Significance and Use

4.1 Standardizing patient care information transfer through the CCR will greatly benefit the healthcare process. It addresses the lack of appropriate, succinct, and up-to-date patient health information for practitioners at a new point of care, and it can improve continuity of patient care by providing a method for easily communicating the most relevant clinical information about a patient among practitioners, institutions, and other entities. It enables a practitioner to readily access information about a patient's healthcare at any point in an encounter and to easily update the information at any time, particularly at the end of an encounter or when the patient goes from one provider to another.

4.2 The intent of the CCR is to enhance patient safety, reduce medical errors, reduce costs, enhance efficiency of health information exchange, and assure at least a minimum standard of health information transportability when a patient is referred, transferred, or is otherwise seen by, another practitioner.

4.2.1 The information included in the CCR is essential to good patient care and thus serves as a necessary bridge to a different environment, often with new practitioners who know little about the patient. By using the CCR, the next healthcare practitioner may:

4.2.1.1 Be informed about a patient's allergies, medications, current and recent past diagnoses, most recent healthcare assessments and services, advance directives, and the recommendations of practitioners who last treated the patient.

4.2.1.2 More quickly and easily verify patient demographics and insurance status, saving time and effort by not having to repeatedly ask a patient for this information in detail.

4.2.1.3 Minimize the effort required to update the patient's most essential and relevant information in an EHR.

4.2.1.4 Reduce costs associated with the patient's care, for example, through avoiding repetitive tests and basic information gathering.

4.3 The CCR will be completed by practitioners, such as physicians, nurses, and ancillary practitioners (for example, social work, physical therapy, occupational therapy), for example, in the following instances, which are non-normative.

4.3.1 *Referral (inpatient or outpatient) or Transfer (from an inpatient or institutional setting)*—The referring practitioner should transmit the CCR to the receiving practitioner and new care setting where the patient is being sent so that it arrives before or with the patient.

4.3.2 *Discharge without a Referral or Transfer*—The CCR should be provided to the patient for future use, including visits to an urgent care or emergency department, and to whomever the patient designates as the primary care practitioner who will be responsible for follow-up care, if needed.

4.3.3 *Personal Health Record*—A person may keep copies of his/her CCRs and supplement them, for example, with alternative medicine information and other personal health information. It should be noted, as well, that a person may also generate their own CCR.

4.4 Subsequently, the CCR may provide additional content and support for the EHR through domain-specific applications,[8] including the following non-normative examples:

4.4.1 *Enterprise- and Institution-specific Information*—particularly regarding discharge or transfer, for example, hospital to nursing and rehabilitation facilities or to home care agencies, and vice versa.

[8] Where representation of data for such additional content cannot be achieved through the current CCR structure, it shall be addressed through the ballot process. Variability of data expression will be limited in order to support interoperability.

4.4.2 *Clinical Specialty Information,* for example, Pediatrics, Surgery, OB-GYN, Cardiology, Orthopedics, and so forth

4.4.3 *Disease Management Information,* to accommodate the recording of disease-specific management information, performance measures, or guidelines, for example, for diabetes, congestive heart failure, asthma, and so forth. This extension may be utilized by health plans, pharmaceutical companies, patient advocacy groups, and others interested in promoting "best practices".

4.4.4 *Payer-related Information,* including additional financial and care documentation.[9]

4.4.5 *Patient-entered Personal Health Record Information,* for example, complementary and alternative medicine care documentation or other patient considerations, such as private or sensitive health information a patient may be reluctant to share with certain practitioners or spouses. Expanded family history information is another potential use.

4.4.6 With appropriate modifications for confidentiality, the CCR may also be useful to researchers and others not directly involved in a patient's treatment.

5. Specifications

5.1 The CCR consists of three core components: the CCR Header, the CCR Body, and the CCR Footer.

5.1.1 *CCR Header* consists of the following CCR Sections:

5.1.1.1 *Unique Identifier* of the CCR, generated by the originating entity/system uniquely identifies each explicit instance of a CCR.

(1) The uniqueness of the ID is defined within the generating system and must be unique to and within each CCR and ideally is unique across the universe of CCRs.[10]

5.1.1.2 *Language* refers to the language in which the CCR is expressed.

5.1.1.3 *Version* refers to the version of the CCR Implementation Guide that is used to create a given instance of a CCR.

5.1.1.4 *Date/Time* refers to the exact time the data on a specific patient were aggregated to create a CCR, which is not necessarily the time the CCR was transmitted, printed, or sent.

5.1.1.5 *Patient* identifies the person to which the CCR refers.

(1) Patient identification is not based on a centralized system or a national patient identifier. Rather, it is based on a distributed identification system that links various practitioners and contains the core data set of identifying information that could be used by any record system to assign the individual their own identifier.

(2) A CCR can be about only one patient with the rare exception of Siamese Twins, where it contains data on two patients. Other than within that rare exception, the CCR is a snapshot in time of the clinical, demographic, and administrative data of a unique patient.

5.1.1.6 *From* identifies who or what has generated the CCR and also defines the healthcare role that entity is playing when generating the CCR.[11]

5.1.1.7 *To* identifies to whom or to what the CCR is targeted and that recipient's role in relationship to the patient.

5.1.1.8 *Purpose* defines the specific reason that a CCR is generated, such as patient admission, transfer, consult/referral, or inpatient discharge.

5.1.2 *CCR Body* includes the following patient administrative and clinical sections.

5.1.2.1 *Payers* contains data on the patient's payers, whether a 'third party' insurance, self-pay, other payer or guarantor, or some combination of payers and is used to define which entity is the responsible fiduciary for the financial aspects of a patient's care.

(1) This CCR section defines each unique instance of a payer and all the pertinent data needed to contact, bill to, and collect from that payer.

(2) Also contained within the Payers section is authorization information that can be used to define pertinent referral, authorization tracking number, procedure, therapy, intervention, device, or similar authorizations for the patient or provider, or both.

5.1.2.2 *Advance Directives* contains data defining the patient's advance directives and any reference to any existing supporting documentation and the physical location of that documentation, such as a durable power of attorney for healthcare.

5.1.2.3 *Support* lists the patient's support providers and contacts (family, next of kin, legal guardian, durable power for healthcare, clergy, caregivers, support organizations, etc.) at the time the CCR is generated.

(1) The patient's healthcare providers are not listed in this section. They are listed under the Practitioners Section in the CCR.

5.1.2.4 *Functional Status* lists and describes the patient's functional status, for example, competency, ambulatory status, ability to care for self, activities of daily living, at the time the CCR is generated.

5.1.2.5 *Problems* contains data defining the patient's relevant current and historical clinical problems, conditions, diagnoses, symptoms, findings, and complaints at the time the CCR is generated. If the CCR is being created for a referral, they should be ranked in order of importance for the referral purpose. Otherwise, reverse chronological order of onset should prevail.

5.1.2.6 *Family History* contains data defining the patient's blood or genetic relatives in terms of possible or relevant health risk factors.

5.1.2.7 *Social History* contains data defining the patient's occupational, personal (for example, lifestyle), social, and environmental history and health risk factors, as well as administrative data (ADT) such as marital status, race, ethnicity, and religious affiliation.

[9] The CCR is not intended for use as a claims attachment. Claims attachments are standardized (U.S. Realm) under the ASC X12N standard ASC X12N 275 (004050X15) 275 – Additional Information to Support a Health Care Claim or Attachment.

[10] The use of a universally unique ID representation is recommended, such as a UUID or OID.

[11] The intent of <From> is for validity of origin of the CCR not validity of data.

5.1.2.8 *Alerts* lists and describes any allergies, adverse reactions, and alerts that are pertinent to the patient's current or past medical history.

(1) Alerts data represent critically important variations from the norm that have temporal relevance in the near term or long term to the patient's condition and therapeutic options.

(2) Alerts are prompts or warnings related to patient safety.

5.1.2.9 *Medications* defines a patient's current medications and pertinent medication history.

(1) At a minimum, the currently active medications should be listed, with an entire medication history as an option, particularly when the CCR is used for comprehensive data export.

5.1.2.10 *Medical Equipment* defines a patient's implanted and external medical devices and equipment that their health status depends on, as well as any pertinent equipment or device history. This section is also used to itemize any pertinent current or historical durable medical equipment (DME) used to help maintain the patient's health status.

5.1.2.11 *Immunizations* defines a patient's current immunization status and pertinent immunization history.

5.1.2.12 *Vital Signs* defines the patient's current and historically relevant vital signs, for example, blood pressure, pulse. respiratory rate, height, weight, body mass index, head circumference, crown-to-rump length, pulse oximetry, and pulmonary function tests.

(1) At a minimum, pertinent vital signs, such as the most recent, maximum or minimum, or both, baseline, or relevant trends should be listed.

5.1.2.13 *Results* captures detailed pertinent and most recent laboratory, diagnostic, and therapeutic results data.

5.1.2.14 *Procedures* defines all interventional, surgical, diagnostic, or therapeutic procedures or treatments pertinent to the patient historically and at the time the CCR is generated.

(1) The preferred controlled vocabulary here is SNOMED CT, as well as the current CPT Codeset for the procedure and LOINC for any result,

5.1.2.15 *Encounters* contains data defining all healthcare encounters pertinent to the patient's current health status or health history.

(1) Encounters can be hospitalizations, office visits, home health visits, long-term care stays, or any other pertinent encounters.

5.1.2.16 *Plan of Care* contains data defining all pending orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only.

(1) All active, incomplete, or pending orders, appointments, referrals, procedures, services, or any other pending event of clinical significance to the current and ongoing care of the patient should be listed, unless constrained due to issues of privacy.

(2) Clinical reminders should also be placed here for purposes of providing prompts that may be used for disease prevention, disease management, patient safety, and healthcare quality improvements, including widely accepted performance measures.

5.1.2.17 *Healthcare Providers* contains data defining all healthcare providers involved in the current or pertinent historical care of the patient. At a minimum, the patient's key healthcare providers should be listed, particularly the patient's primary physician and any active consulting physicians, therapists, and counselors.

5.1.3 *CCR Footer* contains the following sections:

5.1.3.1 *Actors* contains data defining all of the individuals, organizations, locations, and systems associated with the data in the CCR.

5.1.3.2 *References* contains details concerning all references within the CCR to external data sources.

(1) External reference data can be URLs, references articles, clinical documents, paper or electronic patient records, diagnostic or document images, or any other data that would be of value to the providers using the CCR data for patient care.

5.1.3.3 *Comments* contains all text or structured comments associated with any data within the CCR.

(1) Comments are text or structured comments that are not intended to contain core relevant clinical or administrative data.

(2) Comments are not to be used to contain any data that correctly belong under <Description>, <Type>, <Status>, <Source>, or <ReferenceID>.

(3) Comments should also not contain pointers to references or other data external to the CCR that apply to a CCR section.

5.1.3.4 *Signatures* contains all signatures associated with any data within the CCR.

5.2 Annex A1 provides a detailed list of the CCR sections contained within the CCR Header, Body, and Footer, as well as all data fields within each section. Each field within a section includes: an XML code; a definition; explanations, descriptions, requirements, and restrictions; comments and examples; and specification of whether the field is required or optional.

5.3 The Adjunct to this standard provides the W3C XML schema derived from the XML codes in Annex A1. When the CCR is prepared in a structured electronic format, this XML schema in conjunction with Annex A2, the Implementation Guide, or other XML xsd and its related implementation guide that may be authorized through joint efforts of ASTM and other standards development organizations, must be used to assure interoperability.

5.4 Annex A2 provides the Implementation Guide, which contains instructions for using the XML schema (provided in the Adjunct to this specification) for generation of a standards-compliant, interoperable CCR.

5.5 Detailed coding is recommended whenever practical within the CCR. In all instances, the coding system and version must be specified.[12] Specific coding recommendations (for the U.S.) include the following. (note that these are coding suggestions and are non-normative).

[12] While it is recognized that there is no clear method to interpret the relationship between coded elements, it is outside the scope of this specification to resolve this difficulty.

5.5.1 Problems should be coded at the highest level using SNOMED CT and the most recent ICD-9 CM codes at the time the CCR is generated to accommodate the need for the various healthcare entities that will be interacting with the CCR data to have accurate coding for reimbursement purposes. These and other controlled vocabularies are integral to the enhancement of data contained within the CCR to support intelligent clinical decision support. It is recommended that problems be categorized with SNOMED CT codes to as granular a level as possible.

5.5.2 Procedures should be coded at the highest level using SNOMED CT, LOINC, and the most recent CPT codes at the time the CCR is generated to accommodate the need for the various healthcare entities that will be interacting with the CCR data to have accurate coding for reimbursement purposes as well as potential utilization for clinical decision support functions. It is recommended that procedures be coded with SNOMED CT and LOINC codes to as granular a level as possible.

5.5.3 Products and agents should be coded with RxNorm to as granular a level as possible. In addition, they may be coded with another standard as applicable (NDC, for example) or proprietary code, with the type of code and the source and version clearly defined. If any coding system is used, however, an RxNorm code must be included, if legally required.

5.5.4 Procedures generating results should be coded with the most recent CPT codes at the time the CCR is generated for procedures and with LOINC for <Result> and <Test>.

6. Keywords

6.1 actor; advance directives; adverse reactions; alerts; allergies; attribute; care documentation; CCR; CCR Body; CCR components; CCR Footer; CCR Header; coding; comment; complex data type or group; condition; Continuity of Care Record; core data set; data field; data object; date/time; diagnosis; digital signature; discharge; disease management; document object; electronic health record; EHR; encounter; encryption; enumeration; external CCR link; family history; field; from; functional status; health risk factors; health status; healthcare provider; HIPAA-compliant; immunization; insurance; integrity; internal CCR link; laboratory results; language; medical equipment; medication; normalization; optionality; patient; patient health record; patient health status; patient identifying information; payer; personal health record; PHR; physiological measurements; plan of care; practitioner; problem; procedure; purpose; referral; reference; required data; result; sections; security; SIG; signature; social history; source; status; support; to; transfer; unique identifier; vendor configurable fields; version; vital signs; W3C; XML; XML code; XML document; XML schema; XML signature; .xsd; .xsl

ANNEXES

(Mandatory Information)

A1. CCR DATA FIELDS SPREADSHEET

A1.1 Table A1.1 lists and describes the data set attributes of the three core components of the CCR: the Header, the Body, and the Footer. The following information is included for each document object attribute:

A1.1.1 An XML code (see the Adjunct for the corresponding W3C XML schema derived from these XML codes);

A1.1.2 A definition;

A1.1.3 Explanations, descriptions, requirements, and restrictions;

A1.1.4 Comments and examples; and

A1.1.5 Required or optional status.

TABLE A1.1 CCR Data Fields Spreadsheet

CCR Attributes and Data Objects	XML	Definition	Explanations, Descriptions, Requirements, and Restrictions	Comments and Examples	Required or Optional
CCR Document Object Attributes					
CCR HEADER					
CCR Unique Identifier	<CCRDocumentObjectID>	The CCR and all Data Objects contained within the CCR must have ObjectIDs. The CCR Document Object ID is generated by the originating entity/system to uniquely identify each explicit instance of a CCR. The uniqueness of this ObjectID is defined within the generating system and must be unique to and within each CCR and ideally should be unique across the universe of all CCRs.	The <CCRDocumentObjectID> is of type xs:string. Ideally it is a UUID or OID.	Any numeric or alphanumeric string.	Required
Language	<Language>	The Language in which the CCR is expressed.	This is a CodedDescriptionType that supports a free text string, a structured text string or strings, or a structured and coded text string or strings.	English	Required
Version	<Version>	The Version of the CCR Implementation Guide that is used to create a given instance of a CCR.	<Version> is expressed as type xs:string. For this <Version> of the CCR it must state "V1.0."	V1.0	Required
CCR Creation Date/Time	<DateTime>	This is the exact clock time that this CCR was created/generated. This DateTime refers to the exact time the data on a specific patient were aggregated to create a CCR, which is not necessarily the time the CCR was transmitted, printed, or sent.	CCR Creation DateTime must be expressed in ISO-8601 date-time format, with precision to include seconds. All date times expressed in Hours, Minutes, and/or Seconds in the CCR must express a time zone offset, either using Z [universal coordinated time, or Zulu time], or an offset in hours and minutes. The CCR further requires that the time zone offset be a legal time zone. This latter constraint cannot be expressed in the schema, as time zones are determined by political entities [for example, Nations or States]. There presently exist time zones in the form ##:15 and ##:30. CCR Creation DateTime time should ideally come from a net-based atomic time service and not from an individual computing device's internal clock.	The ISO-8601 standard defines the time string as CCYY-MM-DDThh:mm:ss-hh:mm. 2005-01-25-T12:15:37-09:00 represents January 25, 2005 12:15:37 PST (Pacific Standard Time), which is minus (-) 9 hours from universal coordinated time (Zulu). This exact time can also be expressed as Zulu time as 2005-01-25-T21:15:37Z, which represents January 25, 2005 21:15:37 Zulu.	Required
Patient	<Patient>	Identifies the patient to which the CCR refers. This is a link to <Actor> through an <ActorID> of type xs:string. This should equal one of the <ActorObjectID> in <Actors>. Detailed data on each <Actor> is maintained in the <Actors> Section in the CCR Footer.	The CCR can only be about one patient with the extreme exception of Siamese Twins, where it can contain data on two patients. Therefore, patient cardinality must be at least 1, and at most 2, in the rare case of Siamese Twins. Other than within that extreme exception, the CCR is a snapshot in time of the clinical and administrative data of a unique patient.		Required

TABLE A1.1 *Continued*

CCR Attributes and Data Objects	XML	Definition	Explanations, Descriptions, Requirements, and Restrictions	Comments and Examples	Required or Optional
From	<From>	Identifies who or what has generated the CCR. This is a link to an Actor <ActorID> and also defines the healthcare role <ActorRole> that the actor is playing when generating the CCR.	An Actor and their Role must be specified under <From>. An <ActorLink> and <ActorID> are REQUIRED.	Originating practitioner(s), other healthcare provider, healthcare organization, or healthcare information system (in the use case where the CCR is generated by a computer system for data exchange or export, for example).	Required
To	<To>	Identifies to whom or what the CCR is targeted. This is a link to an Actor <ActorID> and also defines the healthcare role <ActorRole> that the Actor plays in receiving the CCR.	An Actor and their Role must be specified under <To> if the <To> object is used in the CCR. An <ActorLink> and <ActorID> are REQUIRED.	Receiving/target practitioner(s), other healthcare provider, healthcare organization, or healthcare information system (in the use case where the CCR is generated by one computer system for data exchange or export to another computer system, for example).	Optional
Purpose	<Purpose>	Defines the specific reason for which the CCR was generated.	The general use case does not require a <Purpose>. <Purpose> should be utilized when the CCR has a specific purpose such as patient admission, transfer, consult/ referral, or inpatient discharge.		Optional
	<DateTime>	An optional data attribute used to define DateTimes relevant to the <Purpose> of the CCR.	Exact DateTime, age, approximate DateTime, or DateTime range are permitted.	For a CCR with a <Purpose> defined as a request for consult, a range of time (e.g., within two weeks) may be specified, or ASAP, or Today, or a specific date or specific date and time. The same would hold true for a request for procedure, request for follow-up, request for authorization, etc.	Optional
	<Description>	Used to express the <Purpose> of the CCR. One or more purposes are allowed.	This is a CodedDescriptionType that supports a free text string, a structured text string or strings, or a structured and coded text string or strings.	Request For Consult, Request For Procedure, Request for Service, Request for Encounter, Request for Authorization, Request for Medical Device Or Product, Request for Medication, Request for Immunization, For Patient Use.	Required if Purpose Section/ Object is included
	<OrderRequest>	Used to define a specific Procedure, Device/ Product, Medication, Immunization, Service, Encounter, and/or Authorization that is the <Purpose> of this CCR.	See <OrderRequest> under <PlanOfCare>.	See <OrderRequest> under <PlanOfCare>.	Optional
	<Indications>	Defines a specific <Indication> that supports the <Purpose> of this CCR.	See <Indication>.	See <Indication>.	Optional
	<ReferenceID>	Used to link the <Purpose> to an external data source or location.	This is a link to <Reference>.	See References.	Optional
	<CommentID>	Used to link to and support a free text or structured <Comment> for the <Purpose>.	This is restricted to legitimate comments only. It is NOT to be used to contain any data that correctly belong under <Description>, <OrderRequest>, or <Indication>. This is a link to <Comment>.	See Comments.	Optional
CCR BODY					

TABLE A1.1 *Continued*

CCR Attributes and Data Objects	XML	Definition	Explanations, Descriptions, Requirements, and Restrictions	Comments and Examples	Required or Optional
Payers	<Payers>	This CCR DataObject contains data on the patient's payers, whether insurance, self-pay, other payer, or some combination of payers.	At a minimum, the patient's pertinent current payment sources should be listed.		Optional
	<Payer>	Defines each unique instance of a payer - insurance or self-pay or other, and all the pertinent data needed to contact, bill to and collect from that payer.			Required if Insurance Section/Object is included
	<CCRDataObjectID>	All CCR data objects must have a unique data object ID.	The <CCRDataObjectID> is of type xs:string.	Any numeric or alphanumeric string.	Required if Insurance Section/Object is included
	<PaymentProvider>	Identifies the <PaymentProvider>. This is a link to an Actor <ActorID> and also defines the healthcare role <ActorRole> that the actor plays.			<ActorID> is Required, <ActorRole> is Optional.
	<DateTime>	Used to define dates and times relevant to the payer and patient relationship.	This is restricted to an ExactTime and requires <Type> and <ExactDateTime>, which should be specified to at least the Year/Month/Day. <ExactDateTime> must be expressed as an ISO8601 DateTime.	For healthcare insurance: Effective Date, End Date, Termination Date	Optional
	<Type>	Used to define the <Payer> <Type>.	This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.	Self-Pay, Primary Health Insurance, Supplemental Health Insurance, Prescription Drug Benefit, Mental Health Benefit, Long Term Care Benefit, Worker's Compensation, Auto Insurance, Dental Insurance, Other.	Optional
	<Subscriber>	Identifies the <Subscriber>. This is a link to an Actor through <ActorID> and also defines the role through <ActorRole> that the <Subscriber> plays.			<ActorID> is required, <ActorRole> is optional.
	<IDNumber>	Used to list all of the relevant IDs for this patient relative to the defined payer.	If an <ID> is listed, then <Type> is also required in this instance.	Subscriber Number, Group Number, Employer Number, Plan Code, Worker's Comp Claim Number, Etc.	Optional but required if <ID> is listed
	<Authorizations>	Used to define any authorizations/pre-authorizations that are currently active for this patient and payer.		Authorization for service, encounter, product/device, medication, immunization, procedure.	Optional
	<Source>	Used to define the person, system, or institution that is the <Source> of the <Insurance> data.	Source can be a link to an <Actor> with an <ActorRole> or a <Reference>. <Source> also has children <DateTime> and <Comment>. <Source> is required of all CCRDataObjects. This is so that any data within the CCR can be validated as to its origin/source.	Link to the patient or patient's parent, child, relative, guardian, durable power, primary physician, practice management system, etc.	Required if Insurance Section/Object is included

TABLE A1.1 *Continued*

CCR Attributes and Data Objects	XML	Definition	Explanations, Descriptions, Requirements, and Restrictions	Comments and Examples	Required or Optional
	<InternalCCRLink>	Used to link one CCRDataObject to another CCRDataObject.	This defines internal CCR links and uses a <LinkID> to refer/link to a CCRDataObjectID, which is of type xs:string. <LinkRelationship> defines the relationship to the CCRDataObjectID	Pharmacy benefit plan to cover medications. <Authorization> to a specific procedure, etc.	Optional
	<ReferenceID>	Used to link the <Payer> to a <Reference>.	This is a link to <Reference>. <Reference> under <AdvanceDirective> must be a child of <Source>.	A <Reference> to an insurance card on file, etc.	Optional
	<CommentID>	Used to link to and support a free text or structured <Comment> for the <AdvanceDirective>.	This is restricted to legitimate comments only. It is NOT to be used to contain any data that correctly belong under <Description>, <Type>, <Status>, <Source>, or <Reference>. This is a link to <Comment>.	See Comments.	Optional
Advance Directives	<AdvanceDirective>	This CCRDataObject contains data defining the patient's advance directives and any reference to any existing supporting documentation and the physical location of that documentation —such as a durable power of attorney for healthcare.	The most recent and up-to-date Advance Directives are required in the general use case, if known,, in as much detail as possible. Otherwise, optionality is use-case specific.		Required if known in general use case, otherwise use-case specific.
	<CCRDataObjectID>	Defined above.	Required of all CCRDataObjects.		Required if known in general use case, otherwise use-case specific
	<DateTime>	Used to define dates and times relevant to the patient's advance directives.	This is restricted to an ExactTime and requires <Type> and <ExactDateTime>. <ExactDateTime> should be specified to at least the Year/Month/Day. <ExactDateTime> must be expressed as an ISO8601 DateTime.	This should list the DateTime that the Advance Directive was last recorded and/or verified and any relevant applicable dates or ranges (applicable from Date A____ to Date B____). DateTime <Type> should express Last Recorded, Verified With Patient, Verified With Parent, Verified With Guardian, Verified With Family, Verified With Durable Power Of Attorney for Healthcare, Verified With Treating Physician, Start Date, End Date.	Optional
	<IDs>	Instance of IDType, which includes child elements <Type>, <ID>, and <IssuedBy>.	<IDs> is a container for any <ID> that applies to a data object but is not the <CCRDataObjectID>. This includes "external" IDs such as a driver's license number, Social Security number, product ID number, serial number, or "internal" IDs such as EHR or system-specific IDs for discrete data objects.		Optional
	<Type>	Defines the <AdvanceDirective> <Type>.	This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.	Resuscitation Status, Intubation Status, IV Fluid and Support Status, CPR Status, Antibiotic Status, Life Support Status, Tube Feedings, Other.	Required if Advance Directives Section/Object is included

TABLE A1.1 *Continued*

CCR Attributes and Data Objects	XML	Definition	Explanations, Descriptions, Requirements, and Restrictions	Comments and Examples	Required or Optional
	<Description>	Used to express the <AdvanceDirective>.	This is a CodedDescriptionType that supports a free text string, a structured text string or strings, or a structured and coded text string or strings.	Full Code, No Code, No CPR, Cardioversion Only, CPR Drugs Only, No Intubation, IV Fluids Only, No IV Fluids, Antibiotics Only, No Antibiotics, Tube Feedings, No Feeding Tube, No Prolonged Life Support.	Required if Advance Directives Section/Object is included
	<Status>	Used to define the <Status> of the <AdvanceDirective>.	This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.	Current and Verified, Supported By Healthcare Will, Supported By Durable Power of Attorney for Healthcare, Verified With Family Only, Verified By Medical Record Only.	Required if Advance Directives Section/Object is included
	<Source>	Used to define the person, system, or institution that is the <Source> of the <AdvanceDirective> data.	Source can be a link to an <Actor> with an <ActorRole> or a <Reference>. <Source> also has children <DateTime> and <Comment>. <Source> is required of all CCRDataObjects so that any data within the CCR can be validated as to its origin/source.	Link to the patient, or the patient's parent, child, relative, guardian, durable power, primary physician, etc.	Required if Advance Directives Section/Object is included
	<InternalCCRLink>	Used to link one CCRDataObject to another CCRDataObject.	This defines internal CCR links and uses a <LinkID> to refer/link to a CCRDataObjectID, which is of type xs:string. <LinkRelationship> defines the relationship to the CCRDataObjectID.	Advance Directive may be linked to a specific problem/diagnosis such as COPD or metastatic CA, etc.	Optional
	<ReferenceID>	Used to link the <AdvanceDirective> to a <Reference>.	This is a link to <Reference>. <Reference> under <AdvanceDirective> must be a child of <Source>.	A <Reference> to a durable power of attorney for healthcare or other documents or healthcare records that support the <AdvanceDirective>.	Optional
	<CommentID>	Used to link to and support a free text or structured <Comment> for the <AdvanceDirective>.	This is restricted to legitimate free text comments only. It is NOT to be used to contain any data that correctly belong under <Description>, <Type>, <Status>, <Source>, or <ReferenceID>. This is a link to <Comment>.	See Comments.	Optional
Support	<SupportProvider>	Used to list the patient's sources of support such as immediate family, relatives, guardian, durable power, spiritual advisory/clergy, and the like.	This is a link to an <Actor> with an <ActorRole>. This data object is *not* used for listing a patient's healthcare providers, which are listed under the <HealthCareProviders> Section of the CCR, with the exception that 'Care Giver' should be listed under <Support>. At a minimum, the patient's key support contacts relative to healthcare decisions, including next of kin, should be listed here.	Parent, immediate family, next of kin, relative, guardian, durable power, care giver, priest, minister, rabbi, iman, etc.	Optional
Functional Status	<Function>	This CCRDataObject is used to list and describe the patient's current functional status including ambulatory status, activities of daily living, mental status, home/living situation, ability to care for self, etc.	At a minimum, any functional limitations that affect the patient's ability to care for self, ambulate, follow diagnostic, therapeutic, or treatment advice, follow-up for care, or which in any way limit or compromise the patient's ability to function normally should be listed.		Optional

TABLE A1.1 *Continued*

CCR Attributes and Data Objects	XML	Definition	Explanations, Descriptions, Requirements, and Restrictions	Comments and Examples	Required or Optional
	<CCRDataObjectID>	Defined above.	Required of all CCRDataObjects.		Required if Functional Status Section/Object is included
	<DateTime>	Used to define dates and times relevant to the patient's <FunctionalStatus>.	This can be an exact DateTime, an age, an approximate DateTime, or a DateTime range.	Date of Onset, From Date A___ To Date B____, Since Age___, etc.	Optional
	<Type>	Defines the <FunctionalStatus> <Type>.	This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.	Ambulatory Status, Mental Status, Activities of Daily Living, Home/Living Situation, Ability to Care for Self.	Required if Functional Status Section/Object is included
	<Problem>	Used when the <FunctionalStatus> is a problem, such as a clinical condition.	See Problems.		Optional
	<Result>	Used when the <FunctionalStatus> is a result such as a mini-mental status exam or functional assessment.	See Results.		Optional
	<Description>	Used to express the <FunctionalStatus> *if and only if* the <FunctionalStatus> described is not a <Problem> or a <Result>.	This is a CodedDescriptionType that supports a free text string, a structured text string or strings, or a structured and coded text string or strings.	To be used only in the rare case where <FunctionalStatus> is not more appropriately described as a <Problem> or <Result>.	Optional
	<Status>	Defines the <Status> of the <FunctionalStatus>.	This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.	Active, Chronic, Temporary, Resolved.	Required if Functional Status Section/Object is included
	<Source>	Used to define the person, system, or institution that is the <Source> of the <FunctionalStatus> data.	Source can be a link to an <Actor> with an <ActorRole> or a <Reference>. <Source> also has children <DateTime> and <Comment>. <Source> is required of *all* CCRDataObjects so that any data within the CCR can be validated as to its origin/source.	Link to a healthcare provider, the patient, their parent, child, relative, guardian, durable power, a healthcare record, etc.	Required if Functional Status Section/Object is included
	<InternalCCRLink>	Used to link one CCRDataObject to another CCRDataObject.	This defines internal CCR links and uses a <LinkID> to refer/link to a CCRDataObjectID, which is of type xs:string. <LinkRelationship> defines the relationship to the CCRDataObjectID.	<Function> to a specific <Problem>.	Optional
	<ReferenceID>	Used to link the <FunctionalStatus> to a <Reference>.	This is a link to <Reference>. <Reference> under <FunctionalStatus> *must* be a child of <Source>.	A link to a reference such as a healthcare document, assessment tool, or healthcare record that is a <Reference> for the <FunctionalStatus>.	Optional
	<CommentID>	Used to link to and support a free text or structured <Comment> for the <FunctionalStatus>.	This is restricted to legitimate comments only. It is NOT to be used to contain any data that correctly belong under <Description>, <Type>, <Status>, <Problem>, <Result>, <Source>, or <ReferenceID>. This is a link to <Comment>.	See Comments.	Optional