



American National Standard/American Dental Association
Specification No. 1040

Dental Extension to the ASTM Continuity of Care Record

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AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION SPECIFICATION NO. 1040 FOR DENTAL EXTENSION TO THE ASTM CONTINUITY OF CARE RECORD

The Council on Dental Practice of the American Dental Association has approved American Dental Association Specification No. 1040 for Dental Extension to the ASTM Continuity of Care Record. Working Groups of the ADA Standards Committee on Dental Informatics (SCDI) formulate this and other specifications and technical reports for the application of information technology and other electronic technologies to dentistry's clinical and administrative operations. The ADA SCDI has representation from appropriate interests in the United States in the standardization of information technology and other electronic technologies used in dental practice. The specification was forwarded to the American National Standards Institute with a recommendation that the specification be approved as an American National Standard. Approval of ADA Specification No. 1040 as an American National Standard was granted by the American National Standards Institute on September 25, 2008.

The Council thanks the working group members and the organizations with which they were affiliated at the time the specification was developed: Maxwell Anderson (chairman), Delta Dental Plans Association Consultant, Sequim, WA; Mark Diehl, Mark Diehl Consulting, Frederick, MD; Scott Trapp, US Public Health Service, Fort Totten, ND; and Gregory Zeller, University of Maryland, Baltimore, MD.

SCDI Working Group 11.5 Dental Extension to the Continuity of Care Record prepared this specification at the request of SCDI Subcommittee for Clinical Informatics, Mark Diehl, chairman.

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FOREWORD

(This Foreword does not form a part of ANSI/ADA Specification No. 1040 for Dental Extension to the ASTM Continuity of Care Record).

In 1992, there was interest in the standardization of clinical information systems related to electronic technology in the dental environment. After evaluating current informatics activities, a Task Group of the ANSI Accredited Standards Committee MD156 (ASC MD156) was created by the ADA to initiate the development of technical reports, guidelines, and standards on electronic technologies used in dental practice. In 1999, the ADA established the ADA Standards Committee on Dental Informatics (SCDI). The ADA SCDI is currently the group that reviews and approves proposed American National Standards (ANSI approved) and technical reports developed by the standards committee's working groups. The ADA became an ANSI accredited standards organization in 2000. The scope of the ADA SCDI is:

“To promote patient care and oral health through the application of information technology to dentistry's clinical and administrative operations; to develop standards, specifications, technical reports, and guidelines for: components of a computerized dental clinical workstation; electronic technologies used in dental practice; and interoperability standards for different software and hardware products which provide a seamless information exchange throughout all facets of healthcare.”

Proposed ANSI/ADA Specification No. 1040 for Dental Extension to the ASTM Continuity of Care Record is an adoption from the work of ASTM committee on the Medical Continuity of Care Record. It reproduces Figure A2.1 of ASTM E2369-05 Standard Specification for Continuity of Care Record (CCR). ¹

¹ Reprinted, with permission from E2369-05 Standard Specification for Continuity of Care Record (CCCR), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM (www.astm.org).

AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION SPECIFICATION NO. 1040 FOR DENTAL EXTENSION TO THE ASTM CONTINUITY OF CARE RECORD

1 INTRODUCTION

The Continuity of Care Record (CCR) contains all the salient data that are needed in a variety of healthcare settings to provide transfer of information relevant to the safe and effective transfer of a patient between one or more healthcare settings.

2 RATIONALE

The CCR 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.

3 SCOPE

The 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.

The Dental Extension to the CCR is organized into three major sections, the Header; the Body; and the Footer. Each section conforms to the same sections of ASTM E2369-05, Standard Specification for Continuity of Care Record (CCR), 2007.

4 NORMATIVE REFERENCES

The following standards contain provisions, which, through reference in this text, constitute provisions of this specification. At the time of publication, the editions indicated were valid. Since all standards are subject to revision, parties to agreements based on this specification are encouraged to investigate the possibility of applying the most recent edition of the specification or standard listed.

ASTM E2369-05 Standard Specification for Continuity of Care Record (CCR), 2007

(ASTM standards are available from ASTM International, 100 Barr Harbor Dr., West Conshohocken, PA 19428 or www.astm.org).

ANSI/HL7 V3 RIM, R1-2003 - HL7 Reference Information Model

(HL7 standards are available from Health Level Seven, Inc., 3300 Washtenaw Avenue, Suite 227, Ann Arbor, MI 48104 or www.hl7.org).

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5 DENTAL EXTENSION TO THE CCR

The Dental Extension to the CCR is organized into three major sections, the Header; the Body; and the Footer. Each section conforms to the same sections of the ASTM E2369-05, Standard Specification for Continuity of Care Record (CCR), 2007 (Figure 1).

5.1 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.

A. CCR Unique Identifier

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.

1. Attributes

a) XML

<CCRDableObjectID>

b) Definition

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.

c) Explanation / Description

The <CCRDableObjectID> is of type xs:string. Ideally it is a UUID or OID.

d) Comments / Examples

Any numeric or alphanumeric string.

e) Required / Optional

Required

f) No changes for Dental

B. Language

Refers to the language in which the CCR is expressed.

1. Attributes

a) XML

<Language>

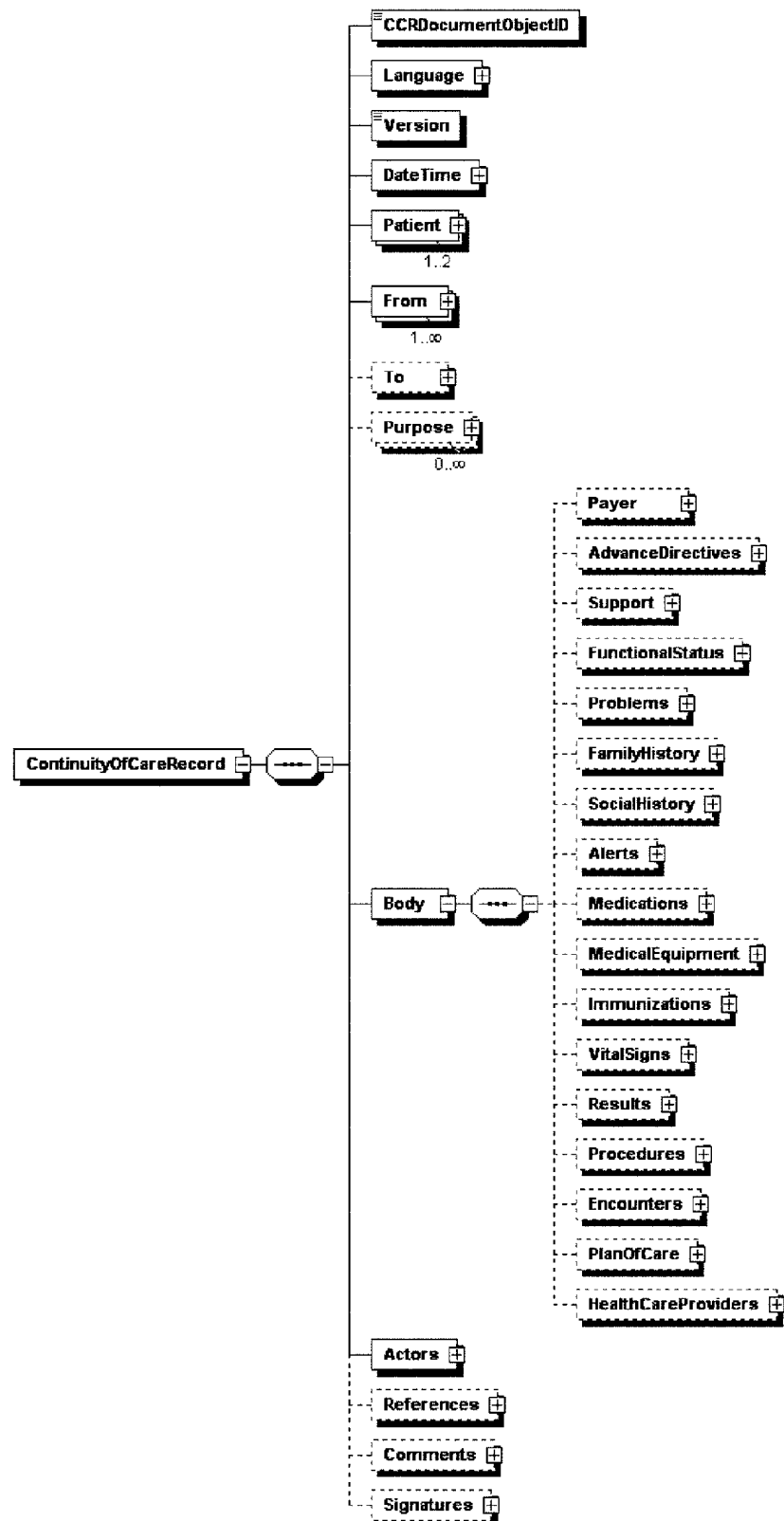


Figure 1. Organization of patient data in the CCR.

b) Definition

The Language in which the CCR is expressed.

c) Explanation / Description

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.

d) Comments / Examples

English

e) Required / Optional

Required

f) No changes for Dental**c. Version**

Refers to the version of the CCR as defined by the release of the standard used.

1. Attributes**a) XML**

<Version>

b) Definition

The Version of the CCR Implementation Guide that is used to create a given instance of a CCR.

c) Explanation / Description

<Version> is expressed as type xs:string. For this <Version> of the CCR it must state "V1.0."

d) Comments / Examples

V1.0

e) Required / Optional

Required

f) No changes for Dental**D. 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.

1. Attributes**a) XML**

<Date Time>

b) Definition

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.

c) Explanation / Description

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.

d) Comments / Examples

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.

e) Required / Optional

Required

f) No changes for Dental

E. 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.

1. eHR 1

2. Attributes

a) XML

<Patient>

b) Definition

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.

c) Explanation / Description

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.

d) Comments / Examples

e) Required / Optional

Required

f) No changes for Dental

F. From

Identifies who or what has generated the CCR and also defines the healthcare role that entity is playing when generating the CCR.

1. Attributes

a) XML

<From>

b) Definition

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.

c) Explanation / Description

An Actor and their Role must be specified under <From>. An <ActorLink> and <ActorID> are REQUIRED.

d) Comments / Examples

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).

e) Required / Optional

Required

f) No changes for Dental

G. To

Identifies to whom or to what the CCR is targeted and that recipient's role in relationship to the patient.

1. Attributes

a) XML

<To>

b) Definition

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.

c) Explanation / Description

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.

d) Comments / Examples

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).

e) Required / Optional

Required

f) No changes for Dental**H. Purpose**

The specific reason for which a specific CCR is generated, such as patient admission, transfer, consult/referral, or inpatient discharge.

1. Attributes**a) XML**

<Purpose>

b) Definition

Defines the specific reason for which the CCR was generated.

c) Explanation / Description

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.

d) Comments / Examples**e) Required / Optional**

Optional

f) Discuss need

Within the uses contemplated for dental it would seem this would be a required field either as a sender or receiver of the CCR. If that's true, then this should be a Required field and not an Optional field. Also, the DCCR would need to redo the definition to match the Requirement.

If used, the daughter fields apply unchanged.

2. Daughter Fields**a) <Date/Time>****(1) Definition**

An optional data attribute used to define Date Times relevant to the <Purpose> of the CCR.

(2) Explanation / Description

Exact DateTime, age, approximate DateTime, or DateTime range are permitted.

(3) Comments / Examples

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.

(4) Required / Optional

Optional

b) <Description>**(1) Definition**

Used to express the <Purpose> of the CCR. One or more purposes are allowed.

(2) Explanation / Description

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.

(3) Comments / Examples

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.

(4) Required / Optional

Required if Purpose Section/Object is included

c) <Order/Request>**(1) Definition**

Used to define a specific Procedure, Device/Product, Medication, Immunization, Service, Encounter, and/or Authorization that is the <Purpose> of this CCR.

(2) Explanation / Description

See <OrderRequest> under <PlanOfCare>.

(3) Comments / Examples

See <OrderRequest> under <PlanOfCare>.

(4) Required / Optional

Optional

d) <Indications>**(1) Definition**

Defines a specific <Indication> that supports the <Purpose> of this CCR.

(2) Explanation / Description

See <Indication>.

(3) Comments / Examples

See <Indication>.

(4) Required / Optional

Optional

e) <ReferenceID>**(1) Definition**

Used to link the <Purpose> to an external data source or location.

(2) Explanation / Description

This is a link to <Reference>.

(3) Comments / Examples

See References.

(4) Required / Optional

Optional

f) <CommentID>**(1) Definition**

Used to link to and support a free text or structured <Comment> for the <Purpose>.

(2) Explanation / Description

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>.

(3) Comments / Examples

See Comments

(4) Required / Optional

Optional

5.2 Body

Contains the core patient-specific data in a CCR, for example, Insurance, Medications, Problems, Procedures, and the like.

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.

1. eHR 3

2. Attributes

a) XML

<Payers>

b) Definition

This CCR DataObject contains data on the patient's payers, whether insurance, self-pay, other payer, or some combination of payers.

c) Explanation / Description

At a minimum, the patient's pertinent current payment sources should be listed.

d) Comments / Examples

e) Required / Optional

Optional

f) No changes for Dental

3. Daughter Fields

a) <Payer>

(1) Definition

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.

(2) Explanation / Description

(3) Comments / Examples

(4) Required / Optional

Required if Insurance Section/Object is included

b) <CCRDataObjectID>

(1) Definition

All CCR data objects must have a unique data object ID.

(2) Explanation / Description

The <CCRDataObjectID> is of type xs:string.

(3) Comments / Examples

Any numeric or alphanumeric string.

(4) Required / Optional

Required if Insurance Section/Object is included

c) **<PaymentProvider>**

(1) Definition

Identifies the <PaymentProvider>. This is a link to an Actor <ActorID> and also defines the healthcare role <ActorRole> that the actor plays.

(2) Explanation / Description

(3) Comments / Examples

(4) Required / Optional

<ActorID> is Required, <ActorRole> is Optional.

d) **<DateTime>**

(1) Definition

Used to define dates and times relevant to the payer and patient relationship.

(2) Explanation / Description

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.

(3) Comments / Examples

For healthcare insurance: Effective Date, End Date, Termination Date

(4) Required / Optional

Optional

e) **<Type>**

(1) Definition

Used to define the <Payer> <Type>.

(2) Explanation / Description

This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

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.

(4) Required / Optional

Optional

f) **<Subscriber>****(1) Definition**

Identifies the <Subscriber>. This is a link to an Actor through <ActorID> and also defines the role through <ActorRole> that the <Subscriber> plays.

(2) Explanation / Description**(3) Comments / Examples****(4) Required / Optional**

<ActorID> is required, <ActorRole> is optional.

g) **<IDNumber>****(1) Definition**

Used to list all of the relevant IDs for this patient relative to the defined payer.

(2) Explanation / Description

If an <ID> is listed, then <Type> is also required in this instance.

(3) Comments / Examples

Subscriber Number, Group Number, Employer Number, Plan Code, Worker's Comp Claim Number, Etc.

(4) Required / Optional

Optional but required if <ID> is listed

h) **<Authorizations>****(1) Definition**

Used to define any authorizations/preauthorizations that are currently active for this patient and payer.

(2) Explanation / Description**(3) Comments / Examples**

Authorization for service, encounter, product/device, medication, immunization, procedure.

(4) Required / Optional

Optional

i) **<Source>****(1) Definition**

Used to define the person, system, or institution that is the <Source> of the <Insurance> data.

(2) Explanation / Description

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.

(3) Comments / Examples

Link to the patient or patient's parent, child, relative, guardian, durable power, primary physician, practice management system, etc.

(4) Required / Optional

Required if Insurance Section/Object is included

j) <InternalCCRLink>**(1) Definition**

Used to link one CCRDataObject to another CCRDataObject.

(2) Explanation / Description

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

(3) Comments / Examples

Pharmacy benefit plan to cover medications. <Authorization> to a specific procedure, etc.

(4) Required / Optional

Optional

k) <ReferenceID>**(1) Definition**

Used to link the <Payer> to a <Reference>.

(2) Explanation / Description

This is a link to <Reference>. <Reference> under <AdvanceDirective> must be a child of <Source>.

(3) Comments / Examples

A <Reference> to an insurance card on file, etc.

(4) Required / Optional

Optional

l) <CommentID>**(1) Definition**

Used to link to and support a free text or structured <Comment> for the <AdvanceDirective>.

(2) Explanation / Description

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>.

(3) Comments / Examples

See Comments.

(4) Required / Optional

Optional

J. 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.

1. eHR 9**2. Attributes****a) XML**

<AdvanceDirective>

b) Definition

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.

c) Explanation / Description

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, optionally is use- case specific.

d) Comments / Examples**e) Required / Optional**

Required if known in general use case, otherwise use-case specific.

3. Daughter Fields**a) <CCRDataObjectID>****(1) Definition**

Defined above

(2) Explanation / Description

Required of all CCRDataObjects

(3) Comments / Examples**(4) Required / Optional**

Required if know in general use case, otherwise use-case specific

b) <DateTime>**(1) Definition**

Used to define dates and times relevant the patient's advance directives.

(2) Explanation / Description

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.

(3) Comments / Examples

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.

(4) Required / Optional

Optional

c) <IDs>

(1) Definition

Instance of IDType, which includes child elements <Type>, <ID>, and <IssuedBy>.

(2) Explanation / Description

<IDs> is a container for any <ID> that applies to a data object but is not the <CCRDDataObjectID>. 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.

(3) Comments / Examples

(4) Required / Optional

Optional

d) <Type>

(1) Definition

Defines the <AdvanceDirective> <Type>.

(2) Explanation / Description

This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

Resuscitation Status, Intubation Status, IV Fluid and Support Status, CPR Status, Antibiotic Status, Life Support Status, Tube Feedings, Other.

(4) Required / Optional

Required if Advance Directives Section/Object is included

e) <Description>

(1) Definition

Used to express the <AdvanceDirective>.

(2) Explanation / Description

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.

(3) Comments / Examples

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.

(4) Required / Optional

Required if Advance Directives Section/Object is included

f) <Status>

(1) Definition

Used to define the <Status> of the <AdvanceDirective>.

(2) Explanation / Description

This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

Current and Verified, Supported By Healthcare Will, Supported By Durable Power of Attorney for Healthcare, Verified With Family Only, Verified By Medical Record Only.

(4) Required / Optional

Required if Advance Directives Section/Object is included

g) <Source>

(1) Definition

Used to define the person, system, or institution that is the <Source> of the <Insurance> data.

(2) Explanation / Description

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.

(3) Comments / Examples

Link to the patient or patient's parent, child, relative, guardian, durable power, primary physician, practice management system, etc.

(4) Required / Optional

Required if Insurance Section/Object is included

h) <InternalCCRLink>

(1) Definition

Used to link one CCRDataObject to another CCRDataObject.

(2) Explanation / Description

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

(3) Comments / Examples

Pharmacy benefit plan to cover medications. <Authorization> to a specific procedure, etc.

(4) Required / Optional

Optional

i) <ReferenceID>

(1) Definition

Used to link the <Payer> to a <Reference>.

(2) Explanation / Description

This is a link to <Reference>. <Reference> under <AdvanceDirective> must be a child of <Source>.

(3) Comments / Examples

A <Reference> to an insurance card on file, etc.

(4) Required / Optional

Optional

j) <CommentID>

(1) Definition

Used to link to and support a free text or structured <Comment> for the <AdvanceDirective>.

(2) Explanation / Description

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>.

(3) Comments / Examples

See Comments.

(4) Required / Optional

Optional

k. Support

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. eHR 1

2. Attributes

a) XML

<SupportProvider>

b) Definition

Used to list the patient's sources of support such as immediate family, relatives, guardian, durable power, spiritual advisory/clergy, and the like.

c) Explanation / Description

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.

d) Comments / Examples

Parent, immediate family, next of kin, relative, guardian, durable power, care giver, priest, minister, rabbi, iman, etc.

e) Required / Optional

Optional

f) No changes for Dental**L. 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.

1. eHR 9**2. Attributes****a) XML**

<Function>

b) Definition

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.

c) Explanation / Description

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.

d) Comments / Examples**e) Required / Optional**

Optional

f) No changes for Dental**3. Daughter Fields****a) <CCRDataObjectID>****(1) Definition**

All CCR data objects must have a unique data object ID.

(2) Explanation / Description

The <CCRDataObjectID> is of type xs:string.

(3) Comments / Examples

Any numeric or alphanumeric string.

(4) Required / Optional

Required if Functional Status Section/Object is included

b) <DateTime>

(1) Definition

Used to define dates and times relevant to the patient'sw <FunctionalStatus>

(2) Explanation / Description

This can be an exact DateTime, an age, an approximate DateTime, or a DateTime range.

(3) Comments / Examples

Date of Onset, From Date A____ To Date B____, Since Age____, etc.

(4) Required / Optional

Optional

c) <Type>

(1) Definition

Used to define the <FunctionalStatus> <Type>.

(2) Explanation / Description

This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

Ambulatory Status, Mental Status, Activities of Daily Living, Home/Living Situation, Ability to Care for Self.

(4) Required / Optional

Required if Functional Status Section/Object is included.

d) <Problem>

(1) Definition

Used when the <FunctionalStatus> is a problem, such as a clinical condition.

(2) Explanation / Description

See Problems

(3) Comments / Examples

(4) Required / Optional

Optional

e) <Result>**(1) Definition**

Used when the <FunctionalStatus> is a result such as a mini-mental status exam or functional assessment.

(2) Explanation / Description

See Results

(3) Comments / Examples**(4) Required / Optional**

Optional

f) <Description>**(1) Definition**

Used to express the <FunctionalStatus> *if and only if* the <FunctionalStatus> described is not a <Problem> or a <Result>.

(2) Explanation / Description

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.

(3) Comments / Examples

To be used only in the rare case where <FunctionalStatus> is not more appropriately described as a <Problem> or <Result>.

(4) Required / Optional

Optional

g) <Status>**(1) Definition**

Defines the <Status> of the <FunctionalStatus>.

(2) Explanation / Description

This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

Active, Chronic, Temporary, Resolved.

(4) Required / Optional

Required if Functional Status Section/Object is included

h) **<Source>****(1) Definition**

Used to define the person, system, or institution that is the <Source> of the <FunctionalStatus> data.

(2) Explanation / Description

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.

(3) Comments / Examples

Link to a healthcare provider, the patient, their parent, child, relative, guardian, durable power, a healthcare record, etc.

(4) Required / Optional

Required if Functional Status Section/Object is included

i) **<InternalCCRLink>****(1) Definition**

Used to link one CCRDataObject to another CCRDataObject.

(2) Explanation / Description

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

(3) Comments / Examples

<Function> to a specific <Problem>.

(4) Required / Optional

Optional

j) **<ReferenceID>****(1) Definition**

Used to link the <FunctionalStatus> to a <Reference>.

(2) Explanation / Description

This is a link to <Reference>. <Reference> under <FunctionalStatus> must be a child of <Source>.

(3) Comments / Examples

A link to a reference such as a healthcare document, assessment tool, or healthcare record that is a <Reference> for the <FunctionalStatus>.

(4) Required / Optional

Optional

k) <CommentID**(1) Definition**

Used to link to and support a free text or structured <Comment> for the <Functional Status>.

(2) Explanation / Description

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>.

(3) Comments / Examples

See Comments.

(4) Required / Optional

Optional

M. 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.

1. eHR 5**2. Attributes****a) XML**

<Problem>

b) Definition

This CCRDataObject lists and describes all relevant clinical problems, conditions, diagnoses, symptoms, findings, and complaints at the time the CCR is generated.

c) Explanation / Description

At a minimum, all pertinent current and historical problems should be listed. In the special case that the CCR is being created for a referral, each <Problem> should be ranked in order of importance for the referral purpose. Otherwise, reverse chronological order of onset should prevail.

d) Comments / Examples**e) Required / Optional**

Optional

f) No changes for Dental**3. Daughter fields****a) <CCRDataObjectID>****(1) Definition**

Defined above

(2) Explanation / Description

Required of all CCRDataObjects

(3) Comments / Examples**(4) Required / Optional**

Required if Problem Section/Object is included

b) <DateTime>**(1) Definition**

Used to define dates and times relevant to the patient's <Problem>.

(2) Explanation / Description

This can be an exact DateTime, an age, an approximate DateTime, or a DateTime range.

(3) Comments / Examples

Date of Onset, From Date A____ To Date B____, Since Age____, etc.

(4) Required / Optional

Optional

c) <IDs>**(1) Definition**

Instance of IDType, which includes child elements <Type>, <ID>, and <IssuedBy>.

(2) Explanation / Description

<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.

(3) Comments / Examples**(4) Required / Optional**

Optional

d) <Type>**(1) Definition**

Defines the <Problem> <Type>.

(2) Explanation / Description

This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

Problem, Condition, Diagnosis, Symptom, Finding, Complaint, Functional Limitation

(4) Required / Optional

Optional

e) **<Description>**

(1) Definition

Used to express the <Problem>.

(2) Explanation / Description

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. It is recommended that, when possible, all problems be coded (ICD 9CM, ICD-10, and/or SNOMED/SNODENT).

(3) Comments / Examples

Myocardial Infarction, Nausea, Headache, Parkinson's Disease, non-vital tooth, etc.

(4) Required / Optional

Optional

f) **<Status>**

(1) Definition

Defines the <Status> of the <Problem>.

(2) Explanation / Description

This is a CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

Active, Inactive, Chronic, Intermittent, Recurrent, Rule Out, Ruled Out, Resolved.

(4) Required / Optional

Optional

g) **<Episodes>**

(1) Definition

Used to define one or more occurrences of a problem.

(2) Explanation / Description

Episodes should be listed for recurrent or repetitive problems, conditions, diagnoses, or symptoms, rather than listing a problem multiple times in the problem list. <Episodes> has children <Number>, <Frequency>, <Episode>, and <Duration>.

(3) Comments / Examples

(4) Required / Optional

Optional

h) **<HealthStatus>****(1) Definition**

Used to define the <HealthStatus> of the Actor to whom the problem applies (used more commonly in <Family History>).

(2) Explanation / Description

<HealthStatus> has children <DateTime>, <Description>, <CauseOfDeath>. <DateTime> can be an Exact DateTime, an age, an approximate DateTime, or a DateTime range. <Description> and <CauseOfDeath> are instances of CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

<Description> Alive And Well, In Remission, Symptom Free, Chronically Ill, Severely Ill, Disabled, Severely Disabled, Deceased; <CauseOfDeath> Yes, No, Unknown. Note that under <HealthStatus> the CCR can record the current health status relative to this problem as well as if the problem was or was not the <CauseOfDeath> and a Time Of Death as a <Type> under <DateTime>.

(4) Required / Optional

Optional

i) **<PatientKnowledge>****(1) Definition**

Used to define whether or not the patient is aware of a <Problem> and the <Reason> why they are or are not aware.

(2) Explanation / Description

<PatientAware> restricted to Yes, No, Unknown. <Reason> is a CodedDescriptionType with restricted content that must be one of the defined structured text values.

(3) Comments / Examples

<PatientAware> Yes, No, Unknown. <Reason> Patient Request Not To Know, Family Request For Patient Not To Know, Durable Power Request For Patient Not To Know.

(4) Required / Optional

Optional

j) **<Source>****(1) Definition**

Used to define the person, system, or institution that is the <Source> of the <Problem> data.

(2) Explanation / Description

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.

(3) Comments / Examples

Link to a healthcare provider, the patient, their parent, child, relative, guardian, durable power, a healthcare record, etc.

(4) Required / Optional

Required if Problem Section/ Object is included

k) <InternalCCRLink>

(1) Definition

Used to link one CCRDataObject to another CCRDataObject.

(2) Explanation / Description

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.

(3) Comments / Examples

Problem to a specific <History>, <Procedure>, <Product>, or <Encounter>, etc.

(4) Required / Optional

Optional

l) <ReferenceID>

(1) Definition

Used to link the <Problem> to a <Reference>.

(2) Explanation / Description

This is a link to <Reference>. <Reference> under <Problem> *must* be a child of <Source>.

(3) Comments / Examples

A <Reference> to a clinical note, discharge summary, or other documents or healthcare records that support the <Problem>.

(4) Required / Optional

Optional

m) <CommentID>

(1) Definition

Used to link to and support a free text or structured <Comment> for the <Problem>.

(2) Explanation / Description

This is restricted to legitimate comments only. It is NOT to be used to contain any data that correctly belong under <Description>, <Type>, <Status>, <Episodes>, <CurrentHealthStatus>, <PatientKnowledge>, <Source>, or <ReferenceID>. This is a link to <Comment>.

(3) Comments / Examples

See Comments.

(4) Required / Optional

Optional

N. Family History

Contains data defining the patient's blood or genetic relatives in terms of possible or relevant health risk factors.

1. eHR 1**2. Attributes****a) XML**

<FamilyProblemHistory>

b) Definition

This CCRDataObject contains data defining the patient's blood or genetic relatives in terms of possible or relevant risk factors.

c) Explanation / Description

At a minimum, all family history that has a potential impact on the patient's healthcare risk profile should be listed. Family history is a key risk factor of high predictive value in diagnosis and treatment for many healthcare conditions, and is often difficult to collect at each encounter and maintain between encounters. Inclusion of family <History> data in the CCR is important.

d) Comments / Examples**e) Required / Optional**

Optional

f) No changes for Dental**3. Daughter Fields****a) <CCRDataObjectID>****(1) Definition**

Defined above.

(2) Explanation / Description

Required of all CCRDataObjects.

(3) Comments / Examples**(4) Required / Optional**

Required if Family History Section/ Object is included

b) <DateTime>**(1) Definition**

Used to define dates and times relevant to the patient's family <History>.