

Integrating the Healthcare Enterprise



5

**IHE Eye Care
Technical Framework Supplement**

10

**Eye Care Summary Record
(EC-Summary)**

15

Rev. 1.2 - Trial Implementation

20

Date: September 15, 2017
Author: IHE Eye Care Technical Committee
Email: eyecare@ihe.net

25

Please verify you have the most recent version of this document. See [here](#) for Trial Implementation and Final Text versions and [here](#) for Public Comment versions.

Foreword

30 This is a supplement to the IHE Eye Care Technical Framework V4.0. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

This supplement is published on September 15, 2017 for trial implementation and may be available for testing at subsequent IHE Connectathons. The supplement may be amended based on the results of testing. Following successful testing it will be incorporated into the Eye Care
35 Technical Framework. Comments are invited and can be submitted at http://ihe.net/Eye_Care_Public_Comments.

This supplement describes changes to the existing technical framework documents and where indicated amends text by addition (**bold underline**) or removal (~~**bold strikethrough**~~), as well as addition of large new sections introduced by editor’s instructions to “add new text” or similar,
40 which for readability are not bolded or underlined.

“Boxed” instructions like the sample below indicate to the Volume Editor how to integrate the relevant section(s) into the relevant Technical Framework volume:

<i>Replace Section X.X by the following:</i>

45

General information about IHE can be found at www.ihe.net.

Information about the IHE Eye Care domain can be found at ihe.net/IHE_Domains.

Information about the organization of IHE Technical Frameworks and Supplements and the process used to create them can be found at http://ihe.net/IHE_Process and <http://ihe.net/Profiles>.

50 The current version of the IHE Eye Care Technical Framework can be found at http://ihe.net/Technical_Frameworks.

55 **CONTENTS**

	Introduction to this Supplement.....	5
	Open Issues and Questions	5
	Closed Issues	5
60	General Introduction	6
	Appendix A – Actor Summary Definitions	6
	Appendix B – Transaction Summary Definitions.....	6
	Glossary	6
	Volume 1 – Profiles	7
65	Copyright Licenses.....	7
	Domain-specific additions	7
	1.7 History of Annual Changes.....	7
	2.2.7 Eye Care Summary Record Content Profile	7
9	Eye Care Summary Record (EC-Summary) Content Profile	8
70	9.1 EC-Summary Actors, Transactions and Content Modules	8
	9.1.1 Actor Descriptions and Actor Profile Requirements.....	9
	9.1.1.1 Content Creator	9
	9.1.1.2 Content Consumer	10
	9.2 EC-Summary Actor Options	10
75	9.3 Required Groupings	10
	9.4 EC-Summary Overview.....	11
	9.4.1 Use Cases	11
	9.4.1.1 Use Case #1: Glaucoma.....	12
	9.4.1.1.1 Glaucoma Use Case Description	12
80	9.4.1.2 Use case #2: Complete Transfer of Patient Care.....	12
	9.4.1.2.1 Complete Transfer of Care Description.....	12
	9.4.1.3 Use Case #3: Provider or practice migrates to a new EHR	13
	9.4.1.3.1 Provider or practice migrates to new EHR Description	13
85	9.4.1.4 Use Case #4: Sending or receiving EHR is not able to create or import discrete data elements found in Eye Care CDAs	13
	9.4.1.4.1 Sending or receiving EHR is not able to create or import discrete data elements found in Eye Care CDAs Description	13
	9.5 EC-Summary Cross Profile Considerations.....	13
	Volume 2 – Transactions and Content Modules	14
90	6 Content Modules.....	15
	6.3 CDA Release 2 Content Modules	15
	6.3.1 CDA Document Content Modules	15
	6.3.1.1 General Eye Evaluation (GEE) C-CDA Progress Note Document Content Module) (1.3.6.1.4.1.19376.1.12.1.1.2).....	15
95	6.3.1.2 General Eye Evaluation (GEE) C-CDA Consultation Note Document Content Module) (1.3.6.1.4.1.19376.1.12.1.1.3).....	15

	6.3.1.3 Eye Care Summary Record (EC-Summary) Document Content Module	
	(1.3.6.1.4.1.19376.1.12.1.1. 4)	15
100	6.3.1.3.1 Parent Template	15
	6.3.1.3.2 Relationship to C-CDA.....	16
	6.3.1.3.3 XDS Metadata Extensions for EC-Summary	16
	6.3.1.3.4 Eye Care Summary Header Section	16
	6.3.1.3.5 Eye Care Summary Specification.....	17
105	6.3.2 CDA Section Content Modules.....	21
	6.3.2.20 Ocular Encounter Summary 1.3.6.1.4.1.19376.1.12.1.2.20	21

110

115

Introduction to this Supplement

120 The Eye Care Summary Record (EC-Summary) describes the structure of data that is collected for a patient’s eye care summary medical record, generally for the purpose of transfer or referral of care to another provider.

This supplement is written as changes to the documents listed below. The reader should have already read and understood these documents:

- 125
1. [IHE Eye Care Technical Framework Volume 1, Integration Profiles](#)
 2. [IHE Eye Care Technical Framework Volume 2, Transactions](#)

This supplement also references other documents¹. The reader should have already read and understood these documents:

1. [IHE Eye Care C-CDA based General Eye Evaluation – Trial Implementation](#)
- 130 2. [IT Infrastructure Technical Framework Volume 1](#)
3. [IT Infrastructure Technical Framework Volume 2](#)
4. [IT Infrastructure Technical Framework Volume 3](#)
5. [IHE Patient Care Coordination Technical Framework Volume 1](#)
6. [IHE Patient Care Coordination Technical Framework Volume 2](#)
- 135 7. HL7^{®2} Implementation Guide for CDA^{®3} Release 2: IHE Health Story Consolidation, DSTU Release 1.1 (US Realm) Draft Standard for Trial Use July 2012
8. HL7 and other standards documents referenced in Volume 1 and Volume 2

Open Issues and Questions

None

140 Closed Issues

None

¹ The first six documents can be located on the IHE Website at http://ihe.net/Technical_Frameworks. The remaining documents can be obtained from their respective publishers.

² HL7 is the registered trademark of Health Level Seven International.

³ CDA is the registered trademark of Health Level Seven International.

General Introduction

Update the following Appendices to the General Introduction as indicated below. Note that these are not appendices to Volume 1.

145 **Appendix A – Actor Summary Definitions**

Add the following actors to the IHE Technical Frameworks General Introduction list of actors:

No new actors.

Appendix B – Transaction Summary Definitions

150 *Add the following transactions to the IHE Technical Frameworks General Introduction list of Transactions:*

No new transactions.

Glossary

Add the following glossary terms to the IHE Technical Frameworks General Introduction Glossary:

155 No new glossary terms.

Volume 1 – Profiles

Copyright Licenses

160 NA

Domain-specific additions

NA

Add the following to Section 1.7

165 1.7 History of Annual Changes

Added a Content Profile that defines the structure of the data that is collected to capture a patient’s eye care summary medical record.

- Eye Care Summary Record (EC-Summary)

170 *Add the following section to Section 2.2*

2.2.7 Eye Care Summary Record Content Profile

The Eye Care Summary Record (EC-Summary) consists of one content profile. This profile defines the structure of data that is collected for a patient’s eye care summary medical record, generally for the purpose of transfer or referral of care to another provider.

175 The United States Office of the National Coordinator for Health Information Technology (ONC) is the principal federal entity charged with coordination of nationwide efforts to implement and use the most advanced health information technology and the electronic exchange of health information. ONC HIT certification adopted the HL7 Consolidated CDA (C-CDA)

180 Implementation Guide to exchange clinical documents (i.e., patient’s summary of care record, consultation notes, progress notes, etc.). The C-CDA defines specifications for many “general” medical sections such as medications, allergies, chief complaint, problems, and more. The Eye Care Summary Record (EC-Summary) Content Profile specifies many of the same applicable general sections as defined by ONC and in addition includes sections specific to a patient’s eye care summary medical record.

185 IHE Eye Care has decided to create a content profile that is a superset of the summary based C-CDA specification selected for ONC. It is a superset of the C-CDA Continuity of Care (CCD⁴) document.

Add Section 9

190 **9 Eye Care Summary Record (EC-Summary) Content Profile**

The Eye Care Summary Record (EC-Summary) consists of one content profile. This profile defines the structure of data that is collected for a patient’s eye care summary medical record, generally for the purpose of transfer or referral of care to another provider.

195 The United States Office of the National Coordinator for Health Information Technology (ONC) is the principal federal entity charged with coordination of nationwide efforts to implement and use the most advanced health information technology and the electronic exchange of health information. ONC HIT certification adopted the HL7 Consolidated CDA (C-CDA)

200 Implementation Guide to exchange clinical documents (i.e., patient’s summary of care record, consultation notes, progress notes, etc.). The C-CDA defines specifications for many “general” medical sections such as medications, allergies, chief complaint, problems, and more. The Eye Care Summary Record (EC-Summary) Content Profile specifies many of the same applicable general sections as defined by ONC in addition to sections specific to eye care.

205 IHE Eye Care has decided to create a content profile that is a superset of the summary based C-CDA specification selected for ONC. It is a superset of the C-CDA Continuity of Care (CCD) document.

Note: Access to DICOM⁵ data (i.e., images, measurements, reports) is very important for the patient summary record. This capability is not defined in this content profile but IHE Eye Care highly recommends that a DICOM CD be available for the patient.

210 **9.1 EC-Summary Actors, Transactions and Content Modules**

This section defines the actors, transactions, and/or content modules in this profile. General definitions of actors are given in the Technical Frameworks General Introduction Appendix A at http://ihe.net/Technical_Frameworks/.

215 Figure 9.1-1 shows the actors directly involved in the EC-Summary Profile and the direction in which the content is exchanged.

⁴ CCD is the registered trademark of Health Level Seven International.

⁵ DICOM is the registered trademark of the National Electrical Manufacturers Association for its standards publications relating to digital communications of medical information.

A product implementation using this profile must group actors from this profile with actors from a workflow or transport profile to be functional. The grouping of the content module described in this profile to specific actors is described in more detail in the “Required Actor Groupings” section below.

220 There are two actors in this profile, the Content Creator and the Content Consumer. Content is created by a Content Creator and is consumed by a Content Consumer. The sharing or transmission of content from one actor to the other may be addressed by the appropriate use of IHE profiles described in the section on Content Bindings with XDS, XDM and XDR in PCC TF-2:4.1 and is out of scope of this profile.



225

Figure 9.1-1: Actor Diagram

Table 9.1-1 lists the content module(s) defined in the EC-Summary Profile. To claim support for this profile, an actor shall support all required content modules (labeled “R”) and may support optional content modules (labeled “O”).

230

Table 9.1-1: EC-Summary Profile - Actors and Content Modules

Actors	Content Modules	Optionality	Reference
Content Creator	Eye Care Summary Record 1.3.6.1.4.1.19376.1.12.1.1.4	R	EYECARE TF-3: 6.3.1.3
Content Consumer	Eye Care Summary Record 1.3.6.1.4.1.19376.1.12.1.1.4	R	EYECARE TF-3: 6.3.1.3

9.1.1 Actor Descriptions and Actor Profile Requirements

Most requirements are documented in Transactions (Volume 2) and Content Modules (Volume 3). This section documents any additional requirements for this profile’s actors.

235

9.1.1.1 Content Creator

1. A Content Creator shall be able to create an eye care patient summary document according to the Eye Care Summary Record Document (1.3.6.1.4.1.19376.1.12.1.1.4) that is found in EYECARE TF-3 6.3.1.3.

9.1.1.2 Content Consumer

- 240 1. A Content Consumer shall be able to consume (receive and process) the Eye Care Summary Record Document (1.3.6.1.4.1.19376.1.12.1.1.4) that is found in EYECARE TF-3: 6.3.1.3.
2. A Content Consumer shall implement the View Option or Discrete Data Import Option, or both.
- 245 a) For View Option, the Content Consumer shall conform to PCC TF-2: 3.1.1.
- b) For Discrete Data Import Option, the Content Consumer shall conform to PCC TF-2: 3.1.4.
3. A Content Consumer that implements the Section Import Option shall conform to PCC TF-2: 3.1.3.
- 250 4. A Content Consumer that implements the Discrete Data Import Option shall PCC TF-2: 3.1.2.

9.2 EC-Summary Actor Options

Options that may be selected for each actor in this profile, if any, are listed in the Table 9.2-1. Dependencies between options when applicable are specified in notes.

255

Table 9.2-1: Eye Care Summary Record Options

Actor	Option	Section
Content Consumer	View Option (See Section 9.1.1.2)	PCC TF-2: 3.1.1
	Document Import Option (See Section 9.1.1.2)	PCC TF-2: 3.1.2
	Section Import Option (See Section 9.1.1.2)	PCC TF-2: 3.1.3
	Discrete Data Import Option (See Section 9.1.1.2)	PCC TF-2: 3.1.4
Content Creator	Shall implement the Eye Care Summary Document (1.3.6.1.4.1.19376.1.12.1.1.4).	EYECARE TF-3: 6.3.1.3

9.3 Required Groupings

260 This section describes the behaviors expected of the Content Creator and Content Consumer Actors of this profile when grouped with actors of other IHE profiles. **No grouping rules are specified.**

IHE Eye Care recommends that the Content Creator and Content Consumer support actor(s) in at least one of the IHE and/or Direct Messaging exchange profiles.

- IHE XDS, IHE XDR, IHE XDM
- XDR and XDM for Direct Messaging, Version 1, Finalized 9 March 2011

265 **9.4 EC-Summary Overview**

Change referenced section numbering when merged into technical framework

The Eye Care Summary Record (EC-Summary) consists of one content profile. This profile defines the structure of data that is collected for a patient’s eye care summary medical record.

270 EC-Summary is a customized extension of the C-CDA specifications chosen to align with the ONC Health IT Certification Program, as currently required within USA for MIPS. This facilitates:

- a. Increasing interoperability with systems that support the ONC program
- b. Reducing the burden on ONC-certified EHR systems that simultaneously support IHE Eye Care
- 275 c. Easing the burden for organizations incorporating eye care patient summary records into their EHRs

Although EC-Summary extends the C-CDA Continuity of Care document (CCD), IHE Eye Care does not specify or reference any ONC requirements extending the C-CDA standard. Vendors seeking to create documents simultaneously compliant with this IHE profile and ONC
280 certification criteria must evaluate compliance with ONC certification requirements separately from and in addition to compliance with this profile.

The potential benefit to the ophthalmologist or optometrist may be to satisfy CMS care coordination requirements such as for referrals and transitions of care under MIPS, while simultaneously providing (or receiving) sufficient eye care information so as to be useful to
285 another ophthalmologist or optometrist.

Furthermore, IHE EC-Summary is intended to support providing eye-care-specific structured data to specialized registries such as IRIS or MORE, or other quality registries or quality data warehouses of ACOs or other APM Entities.

9.4.1 Use Cases

290 *Change referenced section numbering when merged into technical framework*

Comprehensive eye care deals with a broad spectrum of subspecialty disciplines each with its own lexicon, examination techniques, and procedures. A patient presents for an examination and demographic data is created, retrieved from existing databases, or updated. The patient provides a chief complaint, general medical information, and historical information relevant to the eye,
295 and a partial or complete examination of the eye and visual system is performed. Multiple people may contribute to this process including receptionist, technician, and physician.

The American Academy of Ophthalmology Preferred Practice Pattern for a Comprehensive Adult Medical Eye Evaluation provides a roadmap for data collection. The nature of the data varies widely and may be discrete and defined by existing terminology standards (e.g., visual
300 acuity, intraocular pressure) or narrative and available only as free text (e.g., description of a lesion). After this data is collected the clinician will arrive at an assessment and management

305 plan. All of this must be recorded in a fashion that will allow subsequent transfer across diverse information platforms without loss of content or meaning using existing standards and protocols. IHE defines the General Eye Evaluation (GEE) Content Profile to document these patient encounters.

310 During the course of a patient’s care, services may be needed by a variety of subspecialty providers. The patient may need to move his/her care in part or whole to another provider. The safe and effective transfer or referral of an eye care patient to another provider requires an appropriate summary of the eye care record. IHE defines the Eye Care Summary Record (EC-Summary) Content Profile to document this summary record.

315 By its nature, this summary does not include all the details from each individual patient encounter (GEE). Therefore, if the organization providing healthcare services wishes to consume all the patient encounter information, the patient’s encounter documents (GEE) should be transferred as well as the patient’s summary (EC-Summary). The goal of this EC-Summary is to provide key historical data that will satisfy the needs of most eye care providers for care of a new patient. The data in this summary document is not exhaustive, and may not satisfy the needs of all specialty providers. Nevertheless, the clinical summary is an important clinical tool for continuity of care, whether or not it is accompanied by all detailed patient encounter documentation. Even in the setting of ongoing care of a patient by a single provider, a succinct
320 summary allows the provider to recognize in context important details that may otherwise be missed among the large volume of data in the medical record.

9.4.1.1 Use Case #1: Glaucoma

9.4.1.1.1 Glaucoma Use Case Description

325 Transfer of care for a glaucoma patient is especially dependent upon historical data. Determination of clinical targets for disease control requires careful review of multiple data points over time and in relationship to each other, such as intraocular pressure, cup/disc ratio, optic disc hemorrhages, visual field, retinal nerve fiber layer thickness, pachymetry, eye medications, adverse drug reactions, etc. Ability to quickly review of all of these data points in proper context would greatly facilitate patient safety and quality care by the receiving eye care
330 practitioner. The data points used in glaucoma management are especially important to include in a patient’s summary of care. Even if documentation of every past patient encounter is included in the transfer of records, these data points can be difficult to find and evaluate if a succinct summary is not provided.

9.4.1.2 Use case #2: Complete Transfer of Patient Care

9.4.1.2.1 Complete Transfer of Care Description

335 When circumstances require a complete transfer in care from one provider to another, continuity of care can be possible only with a complete transfer of the patient’s medical data. There is no substitute for a comprehensive transfer of all patient encounter content accumulated during the course of the patient’s care by the transferring provider. However, a succinct summary of this

340 information is still important to provide the receiving provider a proper understanding of the
patient’s key status and needs.

9.4.1.3 Use Case #3: Provider or practice migrates to a new EHR

9.4.1.3.1 Provider or practice migrates to new EHR Description

345 The ophthalmic community has a large installed user base of a wide variety of EHRs. For
reasons including evolving regulatory constraints, market influence, and personal preference
providers are frequently choosing to migrate from one eye care EHR to another. Ideally a
provider would want all of the data collected in his/her current EHR to migrate to the new one,
but this has proven to be difficult and costly even when similar data elements are being stored by
350 the various EHRs. The EC-Summary Profile provides a data migration option for conforming
eye care EHRs. The goal of this profile is to provide key data that will satisfy the needs of most
eye care providers for ongoing care of their patients. The data in this summary document is not
exhaustive, and may not satisfy the needs of all specialty providers when migrating from one
EHR system to another.

355 **9.4.1.4 Use Case #4: Sending or receiving EHR is not able to create or import
discrete data elements found in Eye Care CDAs**

9.4.1.4.1 Sending or receiving EHR is not able to create or import discrete data elements found in Eye Care CDAs Description

360 Various EHRs may conform to specifications for GEE or EC-Summary Profiles to different
degrees. Some may be able to create or import every data element specified, and some may only
be able to create or receive a viewable document. In the latter case the receiving EHR would
only be able to receive and display the document, and would not be able to import the discrete
data elements (e.g., intraocular pressure measurements over time) into the appropriate locations
in its own database.

9.5 EC-Summary Cross Profile Considerations

365 A Content Creator of EC-Summary might be grouped with a Content Creator of GEE so that it
has the ability to generate a patient’s encounter document.

A Content Consumer of EC-Summary might be grouped with a Content Consumer of GEE so
that it has the ability to consume a patient’s encounter document.

370

Volume 2 – Transactions and Content Modules

NA

375

Add to Section 5.1 IHE Format Codes

The table below lists the format codes, root template identifiers and media types used by the IHE Profiles specified in the Eye Care Technical Framework.

380

Note: The code system for these codes is **1.3.6.1.4.1.19376.1.2.3** as assigned by the ITI Domain for codes used for the purposes of cross-enterprise document sharing (XDS).

Profile	Format Code	Media Type	Template ID
<u>Eye Care Summary Record (EC-Summary)</u>	<u>urn:ihe:evicare:summary:2015</u>	<u>text/xml</u>	<u>1.3.6.1.4.1.19376.1.12.1.1.4</u>

385

Update Section 6

6 Content Modules

6.3 CDA Release 2 Content Modules

6.3.1 CDA Document Content Modules

390 **6.3.1.1 General Eye Evaluation (GEE) C-CDA Progress Note Document Content Module) (1.3.6.1.4.1.19376.1.12.1.1.2)**

.....

6.3.1.2 General Eye Evaluation (GEE) C-CDA Consultation Note Document Content Module) (1.3.6.1.4.1.19376.1.12.1.1.3)

395

6.3.1.3 Eye Care Summary Record (EC-Summary) Document Content Module (1.3.6.1.4.1.19376.1.12.1.1. 4)

400 The Eye Care Summary Record (EC-Summary) is a content profile that defines the structure of data that is contained in a patient’s eye care summary medical record. It is designed to be an extension to the C-CDA Continuity of Care (CCD) document.

1. The templateId/@root for conformance to this document SHALL be 1.3.1.4.1.19376.1.12.1.1.4 to assert conformance to this template.
2. The ClinicalDocument/code LOINC code for the document SHALL be 78512-1, “Ophthalmology Summary Note”.
- 405 3. The XDSDocumentEntry format code for this content SHALL be urn:ihe:eyecare:summary:2015.
4. The mapping of CDA header attributes to XDS metadata SHALL be identical to the XDS-MS mapping specified in PCC TF-2: 4.1.1. EC-Summary specific extensions are shown in Section 6.3.1.3.3.

410 Note: Although the LOINC organization created the document title code “78512-1, “Ophthalmology Summary Note”, this document is intended to be used by both ophthalmology and optometry.

6.3.1.3.1 Parent Template

The EC-Summary clinical document is an extension to the C-CDA Continuity of Care (CCD) document. Therefore, the parent of this document template shall be:

- 415 1. C-CDA Continuity of Care “2.16.840.1.113883.10.20.22.1.2”

Note: Implementations may support other parent templates in addition to the CCD.

6.3.1.3.2 Relationship to C-CDA

420 Some CDA sections and entries used within this EC-Summary document are based on the HL7 Implementation Guide for CDA Release 2: IHE Health Story Consolidation, Release 1 DSTU (C-CDA) section and entry definitions. Specifically, it is a superset of the C-CDA Continuity of Care.

425 If there are no new or modified constraints for a section or entry or if only the value sets are constrained, then the definition of the section or entry is considered unchanged from the C-CDA definition and the C-CDA template ID will be used. These unchanged sections/entries are referenced directly to the C-CDA specification and are not included in this specification.

6.3.1.3.3 XDS Metadata Extensions for EC-Summary

This section specifies extensions to the XDS metadata requirements defined by IHE ITI.

- 430 1. The XDSDocumentEntry classCode LOINC code for the class SHALL be 78512-1, “Ophthalmology Summary Note”.
2. The XDSDocumentEntry practiceSettingCode for this content SHALL be 394594003, SNOMED CT, “Ophthalmology”
3. The XDSDocumentEntry typeCode LOINC code for the typeCode SHALL be 28619-5, “Ophthalmology/Optomety Studies (set)”.
- 435 4. The XDSDocumentEntry typeCode code for the authorSpecialty SHALL use SNOMED CT to identify the specialty of the author.
 - a. The following codes are provided to express the scope of this attribute; additional SNOMED CT codes MAY be used.

440 Note: Although the LOINC organization created the document title code “78512-1, “Ophthalmology Summary Note”, this document is intended to be used by both ophthalmology and optometry.

SNOMED CT code
422234006, SNOMED CT, Ophthalmologist (occupation)
28229004, SNOMED CT, Optometrist (occupation)

6.3.1.3.4 Eye Care Summary Header Section

- 445 1. SHALL conform to the C-CDA Continuity of Care Header Constraints specified in Section 3.1.1 of the HL7 Implementation Guide for CDA Release 2: IHE Health Story Consolidation, DSTU Release 1.1 (US Realm) Draft Standard for Trial Use July 2012.

6.3.1.3.5 Eye Care Summary Specification

The following table defines the Document Content specification requirements. The OPT column is based upon the following criteria:

- 450 1. Specification based upon EC Summary is the main focus. The intent is that Content Creators are required to support the ability to generate almost all sections based upon EC Summary. For example R[0..1], means implementations must be able to generate the sections, however for a specific instance it may be omitted if not filled in by the “user” generating the document.
- 455 2. Specification based upon C-CDA is defined similar to the specific C-CDA CCD specification except for when it is required by GEE. For example, the section Encounters is optional in the C-CDA CCD, however, R[0..1] for this document because it is required by EC Summary.
- 460 3. Specification based upon the IRIS Registry is always defined as optional, except for when it is required by EC Summary and/or C-CDA CCD.

Table 6.3.1.3.5-1: Eye Care Summary Record Document Content Specification

Template Name	OPT	Template Id	Additional Requirements or Comments
CDA Header Modules	M [1..1]	See Section 6.3.1.3.4	
Advanced Directive (entries optional)	O[0..1]	2.16.840.1.113883.10.20.22.2.21	
Allergies (entries required)	R[1..1]	2.16.840.1.113883.10.20.22.2.6.1	
Encounters (entries optional)	O[0..1]	2.16.840.1.113883.10.20.22.2.22	
Encounters (entries required)	R[1..1]	2.16.840.1.113883.10.20.22.2.22.1	This section is not specified in the C-CDA CCD but required for EC-Summary.
Family History	R[0..1]	2.16.840.1.113883.10.20.22.2.15	This section is optional in the C-CDA CCD but required for EC-Summary.
Functional Status	R[0..1]	2.16.840.1.113883.10.20.22.2.14	This section is optional in the C-CDA CCD but required for EC-Summary.
Immunizations (entries optional)	O[0..1]	2.16.840.1.113883.10.20.22.2.2	
Medical Equipment	O[0..1]	2.16.840.1.113883.10.20.22.2.23	
Medications (entries required)	R[1..1]	2.16.840.1.113883.10.20.22.2.1.1	
Payers	O[0..1]	2.16.840.1.113883.10.20.22.2.18	
Plan of Care	O[0..1]	2.16.840.1.113883.10.20.22.2.10	
Problem (entries required)	R[1..1]	2.16.840.1.113883.10.20.22.2.5.1	
Procedure (entries required)*	R[0..1]	2.16.840.1.113883.10.20.22.2.7.1	Note: Intended use is to generate a coded list of systemic and ocular procedures.

Template Name	OPT	Template Id	Additional Requirements or Comments
Results (entries required)	R[0..1]	2.16.840.1.113883.10.20.22.2.3.1	
Social History	R[0..1]	2.16.840.1.113883.10.20.22.2.17	This section is optional in the C-CDA CCD but required for EC-Summary.
Vital Signs (entries optional)	O[0..1]	2.16.840.1.113883.10.20.22.2.4	
Procedures (entries optional)	R[0..1]	2.16.840.1.113883.10.20.22.2.7	This section is expected to be an accumulated list (free text) of systemic and ocular procedures.
Ocular History*	R[0..1]	1.3.6.1.4.1.19376.1.12.1.2.3	Note: Able to include a narrative description and coded Ocular Surgeries/Procedures, with dates, etc.
Ocular Encounters Summary	R[1..*]	1.3.6.1.4.1.19376.1.12.1.2.20	

*It is recommended that Content Consumers present the information from both Procedure Sections. It is also recommended that the Ocular History be presented separately from the Procedure Sections.

465 **Example XML Code**

```

470 ClinicalDocument xmlns='urn:hl7-org:v3' >
    <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>
    <templateId root='2.16.840.1.113883.10.20.22.1.2'/>
475 <templateId root='1.3.6.1.4.1.19376.1.12.1.1.4'/>
    <id root=' ' extension=' '/>
    <code code='68887-9' displayName='General eye evaluation'
        codeSystem='2.16.840.1.113883.6.1' codeSystemName='LOINC'/>
    <title> Ophthalmology Summary Note</title>
    <effectiveTime value='20151004012005'/>
480 <confidentialityCode code='N' displayName='Normal'
        codeSystem='2.16.840.1.113883.5.25' codeSystemName='Confidentiality' />
    <languageCode code='en-US'/>
    :
    <component>
485 <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.21'/>
        <!-- Optional Advanced Directive Section content -->
    </section>
    </component>

```

```

490 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.6.1' />
        <!-- Required Allergies Section content -->
    </section>
</component>

495 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.22' />
        <!-- Optional Encounters Section content -->
    </section>
</component>

500 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.22.1' />
        <!-- Required Encounters Section content -->
    </section>
505 </component>

510 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.15' />
        <!-- Required if known Family History Section content -->
    </section>
</component>

515 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.14' />
        <!-- Required if known Functional Status Section content -->
    </section>
520 </component>

525 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.2' />
        <!-- Optional Immunizations Section content -->
    </section>
</component>

530 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.23' />
        <!-- Optional Medical Equipment Section content -->
    </section>
</component>

535 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.1.1' />
        <!-- Required Medications Section content -->
    </section>
540 </component>

545 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.18' />
        <!-- Optional Payers Section content -->
    </section>
</component>

```

```
550 <component>
    <section>
      <templateId root='2.16.840.1.113883.10.20.22.2.10' />
      <!-- Optional Plan of Care Section content -->
    </section>
  </component>
555 <component>
    <section>
      <templateId root='2.16.840.1.113883.10.20.22.2.5.1' />
      <!-- Required Problems Section content -->
560 </section>
  </component>
    <section>
      <templateId root='2.16.840.1.113883.10.20.22.2.7.1' />
      <!-- Required if Known Procedure Section content -->
565 </section>
  </component>
    <section>
      <templateId root='2.16.840.1.113883.10.20.22.2.3.1' />
      <!-- Required if Known Results Section content -->
570 </section>
  </component>
575 <component>
    <section>
      <templateId root='2.16.840.1.113883.10.20.22.2.17' />
      <!-- Required if known Social History Section content -->
580 </section>
  </component>
    <section>
      <templateId root='2.16.840.1.113883.10.20.22.2.4' />
      <!-- Optional Vital Signs Section content -->
585 </section>
  </component>
590 <component>
    <section>
      <templateId root='2.16.840.1.113883.10.20.22.2.7' />
      <!-- Required if known Procedure (entries optional) Section content -->
595 </section>
  </component>
    <section>
      <templateId root='1.3.6.1.4.1.19376.1.12.1.2.3' />
      <!-- Required if known Ocular History Section content -->
600 </section>
  </component>
605 <component>
    <section>
      <templateId root='1.3.6.1.4.1.19376.1.12.1.2.20' />
      <!-- Required Ocular Encounters Summary Section content -->
610 </section>
  </component>
```

```
</structuredBody></component>
</ClinicalDocument>
```

615

6.3.2 CDA Section Content Modules

.....

6.3.2.20 Ocular Encounter Summary 1.3.6.1.4.1.19376.1.12.1.2.20

Template ID	1.3.6.1.4.1.19376.1.12.1.2.20			
Parent Template				
General Description	The ocular encounter section shall contain summary information from patient’s eye care encounters.			
Section Code	78513-9, LOINC, “Ophthalmology Summary of encounters note”			
Opt	Data Element or Section Name	Template ID	Specification Document	Constraint
Subsections				
C[1..1]	Assessment and Plan	2.16.840.1.113883.10.20.22.2.9	HL7 C-CDA	Shall include an Assessment and Plan Section or an Assessment Section and a Plan Section.
C[1..1]	Assessment	2.16.840.1.113883.10.20.22.2.8	HL7 C-CDA	Shall include an Assessment and Plan Section or an Assessment Section and a Plan Section.
C[1..1]	Plan of Care	2.16.840.1.113883.10.20.22.2.10	HL7 C-CDA	Shall include an Assessment and Plan Section or an Assessment Section and a Plan Section.
R[0..1]	Intraocular Pressure	1.3.6.1.4.1.19376.1.12.1.2.2	EYECARE TF-2: 6.3.2.11	
R[0..1]	Refractive Measurements	1.3.6.1.4.1.19376.1.12.1.2.9	EYECARE TF-2: 6.3.2.9	
R[0..1]	Lensometry Measurements	1.3.6.1.4.1.19376.1.12.1.2.10	EYECARE TF-2: 6.3.2.10	
R[0..1]	Ophthalmic Medications	1.3.6.1.4.1.19376.1.12.1.2.4	EYECARE TF-2: 6.3.2.4	
R[0..1]	Visual Acuity	1.3.6.1.4.1.19376.1.12.1.2.7	EYECARE TF-2: 6.3.2.8	If Known, shall contain one set of Visual Acuity fields based upon the following observation/code priority list: 1 – 419775003, SNOMED CT, Best Corrected Visual Acuity 2 - 111686, DCM, Habitual Visual Acuity 3- 420050001, SNOMED CT, Uncorrected Visual Acuity If the observation/code is not one of the above codes, this section shall not be included.

R[0..1]	Posterior Segment	1.3.6.1.4.1.19376.1.12.1.2.18	EYECARE TF-2: 6.3.2.17	If known, shall be included if the observation/code contains one or more of the following values: 637369018, SNOMED CT, Optic cup/disc ratio observable, 370937003, SNOMED CT, Vertical cup/disc ratio observable, 370938008, SNOMED CT, Horizontal cup/disc ratio observable
---------	-------------------	-------------------------------	---------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

620 **Example XML Code**

```

625 <component>
    <section>
        <templateId root='1.3.6.1.4.1.19376.1.12.1.2.20' />
        <id root=' ' extension=' ' />
        <code code='78513-9' displayName='Ophthalmology Summary of encounters note'
635         codeSystem='2.16.840.1.113883.6.1' codeSystemName='LOINC' />
        <text>
            Text as described above
        </text>
630
        <component>
            <section>
                <templateId root='2.16.840.1.113883.10.20.22.2.9' />
                <!-- Conditional Assessment and Plan Section content -->
635            </section>
        </component>

        <component>
            <section>
                <templateId root='2.16.840.1.113883.10.20.22.2.8' />
                <!-- Conditional Assessment Section content -->
640            </section>
        </component>
    
```

```
645 <component>
    <section>
        <templateId root='2.16.840.1.113883.10.20.22.2.10' />
        <!-- Conditional Plan of Care Section content -->
    </section>
650 </component>

    <component>
        <section>
        655 <templateId root='1.3.6.1.4.1.19376.1.12.1.2.2' />
            <!--Required if Known Intraocular Pressure Section content -->
        </section>
    </component>

    <component>
        <section>
        660 <templateId root='1.3.6.1.4.1.19376.1.12.1.2.9' />
            <!--Required if Known Refractive Measurements Section content -->
        </section>
    </component>

    <component>
        <section>
        665 <templateId root='1.3.6.1.4.1.19376.1.12.1.2.10' />
            <!--Required if Known Lensometry Measurements Section content -->
        </section>
    </component>

    <component>
        <section>
        670 <templateId root='1.3.6.1.4.1.19376.1.12.1.2.4' />
            <!--Required if Known Ophthalmic Medications Section content -->
        </section>
    </component>

    <component>
        <section>
        675 <templateId root='1.3.6.1.4.1.19376.1.12.1.2.7' />
            <!--Required if Known Visual Acuity Section content -->
        </section>
    </component>

    <component>
        <section>
        680 <templateId root='1.3.6.1.4.1.19376.1.12.1.2.18' />
            <!--Required if Known Posterior Segment Section content -->
        </section>
    </component>
685 </section>
690 </component>
695 </component>
```