

Integra Connect EHR OAuth API

Integra Cloud v20.4

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Introduction

The Integra Connect API is an OAuth based implementation using HTTP and authorizes devices, APIs, servers and applications with access tokens.

This list includes all health IT products that have been certified to at least one of the following API Criteria:

- §170.315 (g)(7): Application Access - Patient Selection
- §170.315 (g)(8): Application Access - Data Category
- §170.315 (g)(9): Application Access - All Data Request

In this documentation we will list all the steps required to access protected health information based on the documentation of an open API.

Note: Patient data used in this document is test data and doesn't contain any PHI.

The Terms of Use of the Integra Connect EHR can be found here: [Terms Of Use](#)

Validate user and get access token

POST

Before accessing data via this API, a user account needs to be created in the IntegraConnect EHR. You can contact the Clinic to create a user account. Another way to get a user account created is to contact the IntegraConnect product support team at the email address ProductSupport@integraconnect.com. Once the user account is created, you will receive the login credentials for this API.

This API is used to validate the user and in return will give an access token along with other parameters. This access token will be used for all future API calls.

Input the username and password in the body of the POST request. An example is provided below with the username 'urodoctor' and the password 'h@pe51'.

The value for the input parameter 'grant_type' must be 'password', as shown below. Please do not change this fixed value.

Request (POST)

URL

[/authenticate](#)

PARAMETERS

Name	Required?	Value Type/Value
username	Yes	String
password	Yes	String
grant_type	Yes	"password"

HEADERS

Content-Type:application/x-www-form-urlencoded

BODY

username=urodoctor&password=h@pe51&grant_type=password

Response

RESPONSE CODE

200

HEADERS

Content-Type:application/json

BODY

```
{
  "access_token": "bf2ViqVtxQgSKOQ4Zah6wAlp_H6Oh-xmoydkZKentqqj-
wXQYfzmJ9GFxM-7kCNtc3eioSV19_JdgbCcXrJpg0SRHPooAFN4YHtgA_qEvNdxirOI_-
xn5mqQj2wsiS3US6j7nf8-
4svThxZIN4QS_s5oulY4ATwKKVDZBrEuBPCBvYMqvrFvP7u8NIJdoN4J2t3FuqMa5jGxX6_I
GqJWVPz9llx_NnkC29JhKPJhGdLLy6DDLqfCSJUOC1tcEFcfTWwOSiCSng_BSznPDtSDvjQt
A7aj0QzZTougmrD7xBhBpMpir0NeDcvtB2_DTLnWmZDYyJPvzf4rwCDgdWIT50ctZuNG9W
ErvWWwzs38RHkhnuY_tEj-K3dOsxEXZp",
  "token_type": "bearer",
  "expires_in": 86399
}
```

Search Patient

POST

This api is used to search for a patient. It will return a list of matching patients and their basic demographics.

The access token received in the previous api call should be used here. As can be seen in the example header section below, one needs to pass the access token in the header.

is the search parameters should be input in json format, as can be seen in the example body section below. Observe carefully here that the entire json input parameter is sent with blank name before '='.

Request (POST)

URL

</api/SearchPatient>

PARAMETERS

Name	Required?	Value Type/Value
firstname	Yes	String
lastname	Yes	String
gender	Yes	"M" or "F". M – Male, F - Female
dob	Yes	Date Format (MM/DD/YYYY)

		Example: If Date of Birth is 15 th August 2000, then dob should be passed as "08/15/2000"
--	--	--

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "firstname":"import2",  
  "lastname":"TEST",  
  "dob":"10/9/2017",  
  "gender":"M"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

```
[  
  {  
    "MRN": "1500BBB429",  
    "Id": "dcf626d8-a0f6-43db-b4da-a81500bbb429",  
    "FirstName": "import2",  
    "LastName": "test2",  
    "DoB": "10/9/2017",  
    "Gender": "Male",  
    "CommunityName": "Urology"  
  }  
]
```

Get Patient Encounters

POST

This api is used to get encounters for a patient. It will return a list of encounters within the date range specified. Note that the request must include a date and time value for the beginning and end of the date range.

The access token received in the previous api call should be used here. As can be seen in the headers section here, one needs to pass the access token in the header.

Input here is in json format as can be seen in the body section. Observe carefully here, that the entire json input parameter is sent with blank name before '='.

Request (POST)

URL

</api/GetPatientEncounters>

PARAMETERS

Name	Required?	Value Type/Value
PatientId	Yes	Guid
ccdafromdatetime	Yes	DateTime (MM/DD/YYYY HH:MM AM/PM)
ccdatodatetime	Yes	DateTime (MM/DD/YYYY HH:MM AM/PM)

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientid":"dcf626d8-a0f6-43db-b4da-a81500bbb429",  
  "ccdafromdatetime": "06/22/2010 8:00 AM",  
  "ccdatodatetime": "12/31/2019 8:00 AM",  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

```
[  
  {  
    "PatientId": "dcf626d8-a0f6-43db-b4da-a81500bbb429",  
    "VisitBeginDateTime": "9/3/2019 8:30:00 AM",  
    "VisitEndDateTime": "9/3/2019 9:00:00 AM",  
    "ProviderFullName": "Urology Doctor"  
  },  
  {  
    "PatientId": "dcf626d8-a0f6-43db-b4da-a81500bbb429",  
    "VisitBeginDateTime": "",  
    "VisitEndDateTime": "",  
    "ProviderFullName": "Urology Doctor"  
  }  
]
```

```
{
  {
    "PatientId": "dcf626d8-a0f6-43db-b4da-a81500bbb429",
    "VisitBeginDateTime": "",
    "VisitEndDateTime": "",
    "ProviderFullName": "Urology Doctor"
  },
  {
    "PatientId": "dcf626d8-a0f6-43db-b4da-a81500bbb429",
    "VisitBeginDateTime": "10/12/2019 1:00:00 AM",
    "VisitEndDateTime": "10/12/2019 5:00:00 AM",
    "ProviderFullName": "Brian Edwards"
  }
}
```

Fetch Patient Data

POST

This api is used to retrieve data for a specific patient. It can return either a complete CCD A document for the patient or a subset of a CCD A document that contains one or more requested data categories for the patient.

The access token needs to be sent in the Headers section of this API call as well.

The other input parameters specify which section(s) of the CCD A document should be returned for the requested patient. These parameters must appear in the Body section of the API call and be in JSON format, as shown in the example sections below.

If an entire CCD A document should be returned, the parameter 'completeCCDA' should be set to 'true' and no additional data categories should be specified. If specific data categories should be returned, the parameter 'completeCCDA' should be set to 'false', and the desired data category parameter names should be set to 'true'. In this case, adate filters and other parameters specific to each data category may be or must be specified, as documented in the sections below

The requested sections of the CCD A document will be returned for the patient id that is sent in the input. Observe carefully here, that the entire JSON input parameter is sent with blank name before '='.

In all cases, the data returned from GetPatientData API calls will be CCD A document sections that are conformant to the CCD A R2.1 specification. Please refer this link at the HL7 website for more details about the CCD A R2.1 specification:

http://www.hl7.org/implement/standards/product_brief.cfm?product_id=492

This API can return results in 3 formats – XML, JSON, or HTML, as specified by the ‘returnformat’ parameter. If no return format is specified, the default format will be XML.

The table below provides a mapping between each specific category of data that can be requested by this API call (i.e., if the ‘completeCCDA’ parameter is set to ‘false’) and the structure of the data returned for that data category, which will conform to a section template specified in the CCDA R2.1 standards specification. If the return format ‘json’ is specified, the API will return a json-converted version of same CCDA section template, and if the return format ‘html’ is specified, the API will return the value of the <text> element within the CCDA section (the examples in the sections below show the returned html formatted per a default style sheet, but the API actually returns raw html data only).

Data Category	Parameter Name	CCDA Section Mapping
Demographics	demographics	/ClinicalDocument/recordTarget/patientRole
Care Team	careteammembers	/ClinicalDocument/documentationOf
Encounter Diagnosis	encounter	/ClinicalDocument/component/structuredBody/component/section
Allergies	allergy	/ClinicalDocument/component/structuredBody/component/section
Functional Status	functionalStatus	/ClinicalDocument/component/structuredBody/component/section
Immunization	immunizations	/ClinicalDocument/component/structuredBody/component/section
Medical Equipment	udiforpatientdevices	/ClinicalDocument/component/structuredBody/component/section
Medication	medications	/ClinicalDocument/component/structuredBody/component/section
Lab Result	labresults	/ClinicalDocument/component/structuredBody/component/section
Vital Sign	vitalsigns	/ClinicalDocument/component/structuredBody/component/section
Procedure	procedures	/ClinicalDocument/component/structuredBody/component/section
Reason for referral	reasonForReferral	/ClinicalDocument/component/structuredBody/component/section
Plan of Treatment	planofTreatment	/ClinicalDocument/component/structuredBody/component/section
Goals	goals	/ClinicalDocument/component/structuredBody/component/section
Health Concerns	healthconcerns	/ClinicalDocument/component/structuredBody/component/section
Assessment	assessment	/ClinicalDocument/component/structuredBody/component/section
Problems	problems	/ClinicalDocument/component/structuredBody/component/section
Social History	socialhistory	/ClinicalDocument/component/structuredBody/component/section

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid

completeCCDA	Yes	"true" or "false" "true" – Complete CCDA will be returned as per requested parameter. "false" – Requested sections.
returnformat	No	"xml" or "html" or "json" xml – Response will be in xml html – Response will be in html json - Response will be in json default – 'xml'

All other parameters are optional. However, if one or more specific data categories are requested (i.e., 'completeCCDA' = 'false', 'encounter' = 'true', 'vitalsigns' = 'true'), other parameters specific to those data categories ('encounter' and 'vitalsigns' in this case) may be required, as documented in the sections below.

Note that it is possible to request multiple specific data categories in a single GetPatientData API call. The syntax for the API call in this case and the format of the returned data are described in the section "Fetch Multiple Category Data" below.

Patient Demographics Data

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
demographics	Yes	"true"

HEADERS

Content-Type:application/x-www-form-urlencoded
 Authorization:Bearer access_token

BODY

= {

```
"patientId":"aa458693-e47b-4f54-8285-ab5100cf995b",  
"completeCCDA":"false",  
"demographics": "true",  
"returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

Patient	Carrot Test		
Date of birth	June 4, 1992	Sex	Female
Race	White	Ethnicity	Arabic
Preferred Language	()		
Contact info	Primary Home: 12, yes london, LA 12345, US Tel (Primary Home): 617-892-8889	Patient IDs	6F0091CB6F 2.16.840.1.113883.19.5.99999.1

CareTeamMember

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
careteammembers	Yes	"true"

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"aa458693-e47b-4f54-8285-ab5100cf995b",
```

```
"completeCCDA": "false",  
"careteammembers": "true",  
"returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type: application/json

BODY

Care provision	Annual Health Maintenance, History and Physical from June 4, 1992 to April 28, 2020
Performer (Primary Care Provider)	of Augusta - Wheeler
Performer (Referring Provider)	Automation Fax of Augusta - Wheeler
Performer (Additional Provider)	test test of Augusta - Wheeler
Encounter Date	From June 4, 1992 to April 28, 2020
Encounter Location	Augusta - Wheeler

Encounter Diagnosis

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
encounter	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
encounter_completedata	Yes	"true"	

encounter_specificdate	Yes	"true".	This parameter will not be used if "encounter_completedata" is passed.
encounter_specificdatevalue	Yes, if encounter_specificdate is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "encounter_specificdate" is passed.
encounter_daterange	Yes	"true".	This parameter will not be used if "encounter_completedata or encounter_specificdate" is passed.
encounter_startdate	Yes, if encounter_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "encounter_daterange" is passed.
encounter_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {
  "patientId": "451aabc3-6973-49f2-9031-ab5100763400",
  "completeCCDA": "false",
  "encounter": "true",
  "encounter_completedata": "true",
  "returnformat": "html"
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

ENCOUNTER DIAGNOSIS

Code	Code System	Description	Date
K50.90	ICD-10	Crohn's disease, unspecified, without complications	01/22/2020
K50.90	ICD-10	Crohn's disease, unspecified, without complications	12/19/2019
F43.0	ICD-10	Acute stress reaction	12/16/2019
F43.0	ICD-10	Acute stress reaction	12/16/2019
F43.0	ICD-10	Acute stress reaction	12/17/2019

Allergy

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
allergy	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
allergy_completedata	Yes	"true"	
allergy_specificdatedata	Yes	"true".	This parameter will not be used if "allergy_completedata" is passed.
allergy_specificdatevalue	Yes, if allergy_specificdatedata is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "allergy_specificdatedata" is passed.
allergy_daterange	Yes	"true".	This parameter will not be used if "allergy_completedata or allergy_specificdatedata" is passed.
allergy_startdate	Yes, if allergy_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "allergy_daterange" is passed.
allergy_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId": "451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA": "false",  
  "allergy": "true",  
  "allergy_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type: application/json

BODY

ALLERGIES, ADVERSE REACTIONS, ALERTS

Substance	Reaction	Severity	Status
Reconciled: Allergy, [Code: 70618]	Skin lesion	Mild	Active
Reconciled: Allergy, [Code: 70618]	Skin lesion	Mild	Active

Cognitive/Functional Status

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
functionalStatus	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
functionalStatus_completedata	Yes	"true"	
functionalStatus_specificdate data	Yes	"true".	This parameter will not be used if "functionalStatus_completedata" is passed.
functionalStatus_specificdate value	Yes, if functionalStatus_specificdate data is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "functionalStatus_specificdate data" is passed.
functionalStatus_daterange	Yes	"true".	This parameter will not be used if "functionalStatus_completedata" or "functionalStatus_specificdate data" is passed.
functionalStatus_startdate	Yes, if functionalStatus_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "functionalStatus_daterange" is passed.
functionalStatus_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA":"false",  
  "functionalStatus": "true",  
  "functionalStatus_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

COGNITIVE/FUNCTIONAL STATUS

No records

Immunizations

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
immunizations	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
immunizations_completedata	Yes	"true"	
immunizations_specifcdatedata	Yes	"true".	This parameter will not be used if "immunizations_completedata" is passed.
immunizations_specifcdatevalue	Yes, if immunizations_specifcdatedata is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "immunizations_specifcdatedata" is passed.
immunizations_daterange	Yes	"true".	This parameter will not be used if "immunizations_completedata" or "immunizations_specifcdatedata" is passed.
immunizations_startdate	Yes, if immunizations_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "immunizations_daterange" is passed.
immunizations_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"E48EAFFA-F443-4BFF-B85B-A88C014EEBA8",  
  "completeCCDA":"false",  
  "immunizations": "true",  
  "immunizations_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

IMMUNIZATIONS

Vaccine	Code	Code System	Date	Status
Flucelvax Quadrivalent	00	CVX	9/16/2019	Completed

Medical Equipment

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
udiforpatientdevices	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
udiforpatientdevices_complete data	Yes	"true"	
udiforpatientdevices_specified data	Yes	"true".	This parameter will not be used if "udiforpatientdevices_completedata" is passed.
udiforpatientdevices_specified atevalue	Yes, if udiforpatientdevices_specified aetedata is passed.	Date (MM/DD/YY YY).	This parameter is valid only if "udiforpatientdevices_specified atedata" is passed.
udiforpatientdevices_daterange	Yes	"true".	This parameter will not be used if "udiforpatientdevices_completedata" or "udiforpatientdevices_specified atedata" is passed.
udiforpatientdevices_startdate	Yes, if udiforpatientdevices_daterange is passed.	Date (MM/DD/YY YY).	This parameter is valid only if "udiforpatientdevices_daterange" is passed.
udiforpatientdevices_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"E48EAFFA-F443-4BFF-B85B-A88C014EEBA8",  
  "completeCCDA":"false",  
  "udiforpatientdevices": "true",  
  "udiforpatientdevices_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

MEDICAL EQUIPMENT
No records

Medications

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
medications	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
medications_completedata	Yes	"true"	
medications_specificdatedata	Yes	"true".	This parameter will not be used if "medications_completedata" is passed.
medications_specificdatevalue	Yes, if medications_specificdatedata is passed.	Date (MM/DD/YYYY)	This parameter is valid only if "medications_specificdatedata" is passed.
medications_daterange	Yes	"true".	This parameter will not be used if "medications_completedata" or "medications_specificdatedata" is passed.
medications_startdate	Yes, if medications_daterange is passed.	Date (MM/DD/YYYY)	This parameter is valid only if "medications_daterange" is passed.
medications_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA":"false",  
  "medications": "true",  
  "medications_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

MEDICATIONS

Name	Code	Code System	Strength	Directions	Start Date	Status	Prescriber
metoprolol tartrate	866924	RxNorm	25 mg	25 mg oral twice a day	6/4/2018	Suspended	Dleman Aawn MA
metoprolol tartrate	866924	RxNorm	25 mg	25 mg oral once a day	6/4/2018	Active	Dleman Aawn MA

Lab Results

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
labresults	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
labresults_completedata	Yes	"true"	
labresults_specificdatedata	Yes	"true".	This parameter will not be used if "labresults_completedata" is passed.
labresults_specificdatevalue	Yes, if labresults_specificdatedata is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "labresults_specificdatedata" is passed.
labresults_daterange	Yes	"true".	This parameter will not be used if "labresults_completedata or labresults_specificdatedata" is passed.
labresults_startdate	Yes, if labresults_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "labresults_daterange" is passed.
labresults_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded

Authorization: Bearer access_token

BODY

```
= {  
  "patientId": "451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA": "false",  
  "labresults": "true",  
  "labresults_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type: application/json

BODY

RESULTS

Name	Actual Result	Date
Cefoperazone [Susceptibility] by Minimum inhibitory concentration (MIC), [100-8]	156 (10*3/), Status: completed	1/9/2020

SOCIAL HISTORY

Vital Signs

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
vitalsigns	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
vitalsigns_completedata	Yes	"true"	
vitalsigns_specifcdatedata	Yes	"true".	This parameter will not be used if "vitalsigns_completedata" is passed.
vitalsigns_specificdatevalue	Yes, if vitalsigns_specificdaetedata is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "vitalsigns_specifcdatedata" is passed.
vitalsigns_daterange	Yes	"true".	This parameter will not be used if "vitalsigns_completedata or vitalsigns_specifcdatedata" is passed.
vitalsigns_startdate	Yes, if vitalsigns_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "vitalsigns_daterange" is passed.
vitalsigns_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded

Authorization: Bearer access_token

BODY

```
= {  
  "patientId": "451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA": "false",  
  "vitalsigns": "true",  
  "vitalsigns_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type: application/json

BODY

VITAL SIGNS

Vital	Value	Effective Date
Height	147.32 cm	6/23/2017
Body weight	39.01 kg	6/23/2017
BP Systolic	123 mmHg	6/23/2017
BP Diastolic	74 mmHg	6/23/2017
Respiratory Rate	18 bpm	6/23/2017
Heart Rate	75 bpm	6/23/2017
Body Temperature	98.00 Cel	6/23/2017
O2 % BldC Oximetry	98 %	6/23/2017

Procedures

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
procedures	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
procedures_completedata	Yes	"true"	
procedures_specificdatedata	Yes	"true".	This parameter will not be used if "procedures_completedata" is passed.
procedures_specificdatevalue	Yes, if procedures_specificdatedata is passed.	Date (MM/DD/YY YY).	This parameter is valid only if "procedures_specificdatedata" is passed.
procedures_daterange	Yes	"true".	This parameter will not be used if "procedures_completedata or procedures_specificdatedata" is passed.
procedures_startdate	Yes, if procedures_daterange is passed.	Date (MM/DD/YY YY).	This parameter is valid only if "procedures_daterange" is passed.
procedures_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA":"false",  
  "procedures": "true",  
  "procedures_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

PROCEDURES

Procedure	Code	Code System	Date
Procedure [SNOMED CT:]	85025	COMPLETE CBC W/AUTO DIFF WBC	6/28/2019
Procedure [SNOMED CT:]	80053	COMPREHEN METABOLIC PANEL	6/28/2019
Procedure [SNOMED CT:]	36415	ROUTINE VENIPUNCTURE	6/28/2019
Procedure [SNOMED CT:]	99213	OFFICE/OUTPATIENT VISIT, EST	7/3/2019
Procedure [SNOMED CT:]	85025	COMPLETE CBC W/AUTO DIFF WBC	11/14/2018
Procedure [SNOMED CT:]	80053	COMPREHEN METABOLIC PANEL	11/14/2018
Procedure [SNOMED CT:]	36415	ROUTINE VENIPUNCTURE	11/14/2018
Procedure [SNOMED CT:]	Q2036	Influenza virus vaccine	11/15/2018
Procedure [SNOMED CT:]	96401	CHEMO, ANTI-NEOPL, SQ/IM	11/15/2018
Procedure [SNOMED CT:]	99213	OFFICE/OUTPATIENT VISIT, EST	11/15/2018
Procedure [SNOMED CT:]	85025	COMPLETE CBC W/AUTO DIFF WBC	5/17/2018
Procedure [SNOMED CT:]	36415	ROUTINE VENIPUNCTURE	5/17/2018

Reason for Referral

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
reasonForReferral	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
reasonForReferral_completedata	Yes	"true"	
reasonForReferral_specificdatadata	Yes	"true".	This parameter will not be used if "reasonForReferral_completedata" is passed.
reasonForReferral_specificdatevalue	Yes, if reasonForReferral_specificdatadata is passed.	Date (MM/DD/YY YY).	This parameter is valid only if "reasonForReferral_specificdatadata" is passed.
reasonForReferral_daterange	Yes	"true".	This parameter will not be used if "reasonForReferral_completedata" or "reasonForReferral_specificdatadata" is passed.
reasonForReferral_startdate	Yes, if reasonForReferral_daterange is passed.	Date (MM/DD/YY YY).	This parameter is valid only if "reasonForReferral_daterange" is passed.
reasonForReferral_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA":"false",  
  "reasonForReferral": "true",  
  "reasonForReferral_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

REASON FOR REFERRAL

No records

Plan of Treatment

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
planoftreatment	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
planoftreatment_completedata	Yes	"true"	
planoftreatment_specificdate data	Yes	"true".	This parameter will not be used if "planoftreatment_completedata" is passed.
planoftreatment_specificdatevalue	Yes, if planoftreatment_specificdate data is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "planoftreatment_specificdate data" is passed.
planoftreatment_daterange	Yes	"true".	This parameter will not be used if "planoftreatment_completedata" or "planoftreatment_specificdate data" is passed.
planoftreatment_startdate	Yes, if planoftreatment_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "planoftreatment_daterange" is passed.
planoftreatment_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA":"false",  
  "planofreatment": "true",  
  "planofreatment_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

PLAN OF CARE

Planned Activity	Date
05/17/2018 - CBC - 1000	05/17/2018

Goals

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
goals	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
goals_completedata	Yes	"true"	
goals_specifcdatedata	Yes	"true".	This parameter will not be used if "goals_completedata" is passed.
goals_specificdatevalue	Yes, if goals_specificdaetedata is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "goals_specifcdatedata" is passed.
goals_daterange	Yes	"true".	This parameter will not be used if "goals_completedata" or goals_specifcdatedata" is passed.
goals_startdate	Yes, if goals_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "goals_daterange" is passed.
goals_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId": "451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA": "false",  
  "goals": "true",  
  "goals_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type: application/json

BODY

GOALS

Goal	Value	Date
After procedure completed	N/A	January 4, 2018
After procedure completed	N/A	January 4, 2018
Treatment Plan	N/A	January 4, 2018

Health Concerns

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
healthconcerns	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
healthconcerns_completedata	Yes	"true"	
healthconcerns_specificdata	Yes	"true".	This parameter will not be used if "healthconcerns_completedata" is passed.
healthconcerns_specificdatevalue	Yes, if healthconcerns_specificdata is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "healthconcerns_specificdata" is passed.
healthconcerns_daterange	Yes	"true".	This parameter will not be used if "healthconcerns_completedata" or "healthconcerns_specificdata" is passed.
healthconcerns_startdate	Yes, if healthconcerns_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "healthconcerns_daterange" is passed.
healthconcerns_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA":"false",  
  "healthconcerns": "true",  
  "healthconcerns_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

HEALTH CONCERNS

Name	Code	Code System	Effective Date	Status
Health Concern	75310-3	LOINC	11/04/2015	Active

Assessment

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
assessment	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
assessment_completedata	Yes	"true"	
assessment_specificdatedata	Yes	"true".	This parameter will not be used if "assessment_completedata" is passed.
assessment_specificdatevalue	Yes, if assessment_specificdatedata is passed.	Date (MM/DD/YYYY)	This parameter is valid only if "assessment_specificdatedata" is passed.
assessment_daterange	Yes	"true".	This parameter will not be used if "assessment_completedata" or "assessment_specificdatedata" is passed.
assessment_startdate	Yes, if assessment_daterange is passed.	Date (MM/DD/YYYY)	This parameter is valid only if "assessment_daterange" is passed.
assessment_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA":"false",  
  "assessment": "true",  
  "assessment_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

ASSESSMENTS

Assesments
I assess that this needs a bunch of work.

Problems

POST

Request (POST)

URL

</api/GetPatientData>

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
problems	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
problems_completedata	Yes	"true"	
problems_specificdatedata	Yes	"true".	This parameter will not be used if "problems_completedata" is passed.
problems_specificdatevalue	Yes, if problems_specificdatedata is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "problems_specificdatedata" is passed.
problems_daterange	Yes	"true".	This parameter will not be used if "problems_completedata or problems_specificdatedata" is passed.
problems_startdate	Yes, if problems_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "problems_daterange" is passed.
problems_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId": "451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA": "false",  
  "problems": "true",  
  "problems_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type: application/json

BODY

PROBLEMS

Problem	Effective Dates	Problem Status
Intraductal carcinoma in situ of right breast [Code: D05.11]	July 24, 2018	Unknown
Malignant neoplasm of descending colon [Code: C18.6]	July 26, 2018	Active
Acute erythroid leukemia, in relapse [Code: C94.02]	August 4, 2018	Unknown
Other fatigue [Code: R53.83]	November 11, 2018	Active
3-part fracture of surgical neck of right humerus, initial encounter for open fracture [Code: S42.231B]	February 13, 2019	Unknown
Nausea [Code: R11.0]	February 14, 2019	Active

Social History

POST

Request (POST)

URL

[/api/GetPatientData](#)

PARAMETERS

Name	Required?	Value Type/Value
patientid	Yes	Guid
completeCCDA	Yes	"false"
socialhistory	Yes	"true"

ADDITIONAL PARAMETERS (ANY ONE OF THE PARAMETERS FROM BELOW LIST IS REQUIRED TO GET DATA)

Name	Required?	Value Type/Value	
socialhistory_compledata	Yes	"true"	
socialhistory_specificdata	Yes	"true".	This parameter will not be used if "socialhistory_compledata" is passed.
socialhistory_specificdatevalue	Yes, if socialhistory_specificdata is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "socialhistory_specificdata" is passed.
socialhistory_daterange	Yes	"true".	This parameter will not be used if "socialhistory_compledata" or "socialhistory_specificdata" is passed.
socialhistory_startdate	Yes, if socialhistory_daterange is passed.	Date (MM/DD/YYYY).	This parameter is valid only if "socialhistory_daterange" is passed.
socialhistory_enddate			

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"451aabc3-6973-49f2-9031-ab5100763400",  
  "completeCCDA":"false",  
  "socialhistory": "true",  
  "socialhistory_completedata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

SOCIAL HISTORY

Element Description	Description	Effective Dates	Code	Code System
Smoking Status	Never smoker	5/15/2018	266919005	SNOMED CT

Fetch Complete Patient Data

If completeCCDA = "true"

Name	Required?	Value Type/Value
returnformat	No	"xml" or "html" or "json" xml – Response will be in xml html – Response will be in html json - Response will be in json default – 'xml'
ccdaspeticdate	No	date (MM/DD/YYYY) - SpecificDate CCDA Data will be returned.
ccdafromdate	No	date (MM/DD/YYYY) - CCDA Data from this date. Also, this parameter will not be valid, if you passed "ccdaspeticdate" parameter.
ccdatodate	No	date (MM/DD/YYYY) - CCDA Data till this date. Also, this parameter will not be valid, if you passed "ccdaspeticdate" parameter.

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"E48EAFFA-F443-4BFF-B85B-A88C014EEBA8",  
  "completeCCDA":"true",  
  "ccdafromdate": "01/01/2018",  
  "ccdafromdate": "01/01/2020",  
  "returnformat": "xml"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

This will return complete CCDA of the patient in XML format.

Fetch Multiple Category Data

For getting data for multiple categories for a patient, you can combine the parameters for each category in the request. The example below shows the request and response for Allergies and Problems for a patient in single request. Along with Required parameters, you can send the optional parameters also for filtering the data as mentioned in the corresponding sections.

POST

Request (POST)

URL

[/api/GetPatientData](#)

HEADERS

Content-Type:application/x-www-form-urlencoded
Authorization:Bearer access_token

BODY

```
= {  
  "patientId":"26b343bf-9e7c-4ab1-a0f5-a8080019fd7d",  
  "completeCCDA":"false",  
  "allergy": "true",  
  "allergy_completdata": "true",  
  "problems": "true",  
  "problems_completdata": "true",  
  "returnformat": "html"  
}
```

RESPONSE

200

HEADERS

Content-Type:application/json

BODY

Table of Contents

- [ALLERGIES, ADVERSE REACTIONS, ALERTS](#)
- [PROBLEMS](#)

ALLERGIES, ADVERSE REACTIONS, ALERTS

Substance	Reaction	Severity	Status
Codeine, [Code: 2670]	Rash	Moderate	Active
egg, [Code: 60080006]	Agranulocytosis, Abdominal pain	Moderate	Active
Milk, [Code: 70813002]	Abdominal pain, Unconsciousness, red eyes, Wheezing	Mild to Moderate	Active

PROBLEMS

Name	Code	Code System	Effective Date	Status
Fever, unspecified	409702008	SNOMED CT	10/01/2021	Active

Error handling

The API Server handles the Errors & have valid Exception methods that provides a HTTP status code and a Meaningful message in JSON format.

Unauthorized HTTP response Code - 401

- If the access token used in the request is invalid, expired, or the user has not been authorized to access the requested Resource, the API will return messages indicated below:

If request is invalid/expired:

```
{
  "Message": "Authorization has been denied for this request."
}
```

Forbidden Request - HTTP Status Code - 403

- A user trying to access another users profile or data will be returned with a Forbidden Request Error. JSON response is returned from the Server for the forbidden request

Bad Request - HTTP Status Code - 400

- An invalid or a bad URL request to the server is returned with the message indicated below:

Could not get any response

There was an error connecting to <https://qa01.integracloud.com/hippoic/authenticate,,>

Why this might have happened:

- The server couldn't send a response: Ensure that the backend is working properly
- Self-signed SSL certificates are being blocked: Fix this by turning off 'SSL certificate verification' in *Settings > General*
- Proxy configured incorrectly Ensure that proxy is configured correctly in *Settings > Proxy*
- Request timeout: Change request timeout in *Settings > General*

- When username or password is incorrect

```
{
  "error": "invalid_grant",
  "error_description": "The user name or password is incorrect."
}
```

Response OK - HTTP Status Code - 200

- A valid request to the server is returned with a HTTP - 200 response and a JSON response is returned from the Server for the forbidden request. If there is an issue request parameter like any required parameter is missing, any data issue with data type etc, a custom message will be returned. Below are few examples.

- Send SearchPatient API request without LastName

```
"LastName is missing."
```

- Send SearchPatient API with invalid date of birth

```
"Invalid date, please provide a valid date in MM/dd/yyyy format."
```

- When sending GetPatientData for allergy with allergycomplete_ccda false and not giving specific dates like this

```
"allergy": "true",  
"allergy_completedata": "false",
```

```
Value of parameter allergy_completedata should be "true"
```

- Not specifying any data section with completeccda false like this.

```
= {  
  "patientId": "26b343bf-9e7c-4ab1-a0f5-a8080019fd7d",  
  "completeCCDA": "false",  
  "allergy_specificdatedata": "true",  
  "returnformat": "xml"  
}
```

```
Please provide any of the following parameters.
```

```
demographics  
careteammembers  
medications  
allergy  
labresults  
vitalsigns  
procedures  
immunizations  
udidforpatientdevices  
planoftreatment  
goals  
healthconcerns  
assessment  
problems  
encounter  
functionalStatus  
socialHistory  
reasonForReferral
```

- Not specifying the date when specific date data is required, such as for "allergy_specificdatevalue": "true",

Parameter allergy_specificdatevalue is missing

- Not specifying the date start or end value(s) when data for a specific date range is required, such as for "allergy_daterange": "true",

Parameter allergy_startdate is missing