



API User Guide

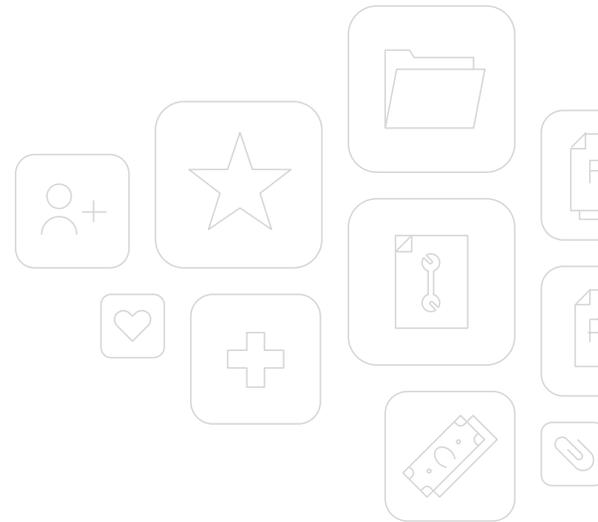
version 1.0

© 2017 Kareo, Inc. All rights reserved



Table of Contents

03	Introduction
04	API Terms of Use
10	General Concepts
12	Resources



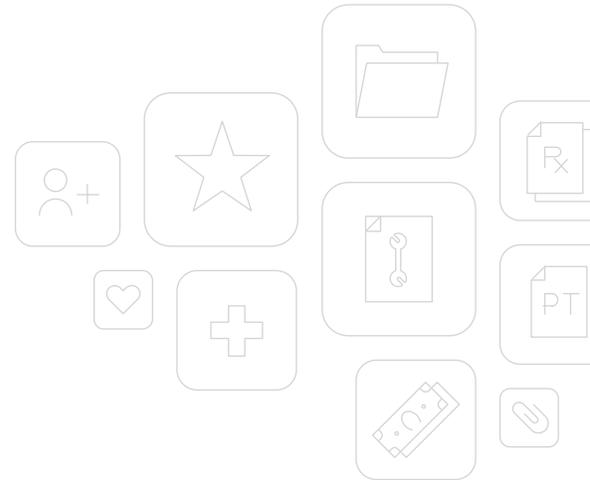
Introduction

This guide is written for third party developers or patients who are developing software applications for accessing Protected Health Information (PHI) of patients on the Kareo Platform. This documentation outlines the authentication details and methods to connect to the API to retrieve patient health information.



SECTION ONE

API Terms of Use



1) Acceptance of Terms

You must accept this Kareo Terms of Use (“Agreement”) in order to use the Kareo public Application Programming Interface (“API”). This Agreement describes your rights and your obligations if you use the Kareo API. It is important that you read the Agreement carefully because you will be legally bound to these terms and your use of the Kareo API is subject to this Agreement. By accepting this Agreement or by accessing or using the Kareo API, you agree to be bound by this Agreement.

If you are entering into this Agreement on behalf of a company or other legal entity (“Entity”), you represent that you have the authority to bind such Entity to this Agreement. In that case, the terms “you” or “your” shall also refer to such Entity. If you do not have such authority, or if the Entity does not agree to be bound by this Agreement, the Entity and you may not use the Kareo API. You acknowledge that this Agreement is a contract between you and Kareo, even though it is electronic and is not physically signed by you and Kareo.

2) API Definitions

a) **Application:** Any software application, website, or product you create, or service you offer, using the Kareo API; b) **API Documentation:** The documentation, data and information that Kareo provides regarding use of the Kareo API through the Developer Site; c) **Developer Site:** Kareo’s MACRA information and tools for developers is found at **www.kareo.com\macra** ; d) **Kareo API:** The publicly available Kareo Application Programming Interface (“API”) as well as the related API Documentation; e) **Kareo Brand:** The Kareo brand and brand assets, including names, logos, trade names and trademarks.

3) API License

Kareo hereby grants you a revocable, limited, personal, non-sublicensable, non-exclusive, and non-transferable license to use the API to develop, test, and support your Application, and to integrate the Kareo API with your Application. Your license is subject to the limitations set forth in Section 4 and Section 9 below.

4) Use of APIs and Kareo Data

- 4.1 You may not use the Kareo API in a manner that accesses or uses any information beyond what Kareo allows under this Agreement or the API Documentation; that changes, breaks or circumvents any of Kareo's technical, administrative, process or security measures; that disrupts or degrades the performance of the Kareo API; or that tests the vulnerability of Kareo's systems or networks.
- 4.2 You may not transmit any viruses or other computer programming that may damage, detrimentally interfere with, surreptitiously intercept, or expropriate any system or data.
- 4.3 You may not attempt to reverse engineer or otherwise derive source code, trade secrets, or know-how in the Kareo API or any portion thereof;
- 4.4 You may not use the Kareo API to replicate or compete with core products or services offered by Kareo. You acknowledge and agree that Kareo has or may in the future offer products or services that are similar to your Application, and nothing will prevent Kareo from doing so;
- 4.5 You may charge for your Application. However, you may not sell, rent, lease, sublicense, redistribute, or syndicate access to the Kareo API.
- 4.6 You may place advertisements on and around your Application. However, you may not:
 - a) place any advertisements that resemble or are reasonably likely to confuse users as being a message from Kareo; or
 - b) use any content from Kareo in any advertisements or for purposes of targeting advertisements, in your Application or elsewhere.

- 4.7 You will not attempt to exceed or circumvent limitations on access, calls and use of the Kareo API, or otherwise use the Kareo API in a manner that exceeds reasonable request volume, constitutes excessive or abusive usage, or otherwise fails to comply or is inconsistent with any part of this Agreement or the Documentation.
- 4.8 You may not use the Kareo API in any Application that includes adult content, promotes gambling, involves the sale of tobacco or alcohol to persons under 21 years of age, or otherwise violates any applicable law or regulation.
- 4.9 You may not distribute or allow access to the Kareo API to anyone other than, if applicable, the Entity on whose behalf you entered into this Agreement.

5) Security Measures

- 5.1 The network, operating system and software of your web servers, databases, and computer systems (collectively, “Your Systems”) must be properly configured to securely operate your Application. Your Application must use reasonable security measures to protect your users’ information. You must not architect or select Your Systems in a manner to avoid the foregoing obligation.
- 5.2 You must promptly report any security deficiencies in, or intrusions to, your Systems to Kareo in writing via email to security@kareo.com or subsequent contact information posted on the Developer Site. You will work with Kareo to immediately correct any security deficiency, and will immediately disconnect any intrusions or intruder. In the event of any security deficiency or intrusion involving the Application, or the Kareo API, you will make no public statements regarding such deficiencies or intrusions (e.g., press, blogs, social media, bulletin boards, etc.) without prior written and express permission from Kareo in each instance.

6) Ownership

As between you and Kareo, Kareo owns all right, title, and interest, including all intellectual property rights, in and to, the Kareo API, Documentation, and all elements and components thereof (collectively, the “Kareo Materials”). Except for the express license granted in this Agreement, Kareo does not grant you any right, title, or interest in or to the Kareo Materials. If you provide any feedback (“Feedback” is defined as any

recommendations, enhancements, requests, suggestions or other similar activity) to Kareo regarding the Kareo API or Documentation, you hereby agree that Kareo will own any such Feedback and you hereby grant Kareo a perpetual, irrevocable, world-wide, and royalty-free license to use the Feedback for the purpose of improving and creating derivative works of Kareo's API and Documentation.

7) **Term and Termination**

7.1 This Agreement will go into effect on the date upon which you agree to them, by accessing or using the Kareo API, and will continue until terminated as set forth herein.

7.2 You may terminate this Agreement by discontinuing use of the Kareo API.

7.3 Upon termination of this Agreement:

7.3.1 All rights and licenses granted to you will terminate immediately.

7.3.2 You will promptly destroy Documentation and any other Kareo information in your possession or control that was received under this Agreement.

8) **Modifications to this Agreement**

Kareo may change, add to or delete any portion of this Agreement in its sole discretion. If Kareo does so, it will provide you with reasonable notice prior to the changes either by emailing the email address associated with your account or by posting a notice on the Developer Site. Your continued access or use of the Kareo API will mean that you agree to the changes.

9) **Disclaimer of Warranties; Limitation of Liability; Indemnity**

9.1 **NO WARRANTIES.** THE KAREO API AND ALL RELATED COMPONENTS ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS WITHOUT ANY WARRANTIES OF ANY KIND, AND KAREO EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, TITLE, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. YOU ACKNOWLEDGE THAT KAREO DOES NOT WARRANT THAT THE KAREO API WILL BE UNINTERRUPTED, TIMELY, SECURE, ERROR-FREE OR VIRUS-FREE,

NOR DOES IT MAKE ANY WARRANTY AS TO THE RESULTS THAT MAY BE OBTAINED FROM USE OF THE KAREO API, AND NO INFORMATION, ADVICE OR SERVICES OBTAINED BY YOU FROM KAREO OR THROUGH THE DEVELOPER SITE SHALL CREATE ANY WARRANTY NOT EXPRESSLY STATED IN THIS AGREEMENT.

9.2 LIMITATION ON LIABILITY. UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY (WHETHER IN CONTRACT, TORT, OR OTHERWISE) SHALL KAREO BE LIABLE TO YOU OR ANY THIRD PARTY FOR (A) ANY INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING LOST PROFITS, LOST SALES OR BUSINESS, OR LOST DATA, OR (B) ANY MATTER BEYOND KAREO'S REASONABLE CONTROL. THE PROVISIONS OF THIS SECTION ALLOCATE THE RISKS UNDER THIS AGREEMENT BETWEEN THE PARTIES, AND THE PARTIES HAVE RELIED ON THESE LIMITATIONS IN DETERMINING WHETHER TO ENTER INTO THIS AGREEMENT. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR LIMITATION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHICH MEANS THAT SOME OF THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. IN THESE JURISDICTIONS, KAREO'S LIABILITY WILL BE LIMITED TO THE GREATEST EXTENT PERMITTED BY LAW.

9.3 Indemnity. You agree to defend, hold harmless and indemnify Kareo, and its subsidiaries, affiliates, officers, agents, employees, and suppliers, from and against any third party claim arising from or in any way related to your or your users' use of the Application or the Kareo API, or any violation of this Agreement, including any liability or expense arising from all claims, losses, damages (actual and consequential), suits, judgments, litigation costs and attorneys' fees, of every kind and nature. In such a case, we will provide you with written notice of such claim, suit, or action.

10) Dispute Resolution

Any claim, cause of action or dispute ("Claim") arising out of or related to this Agreement shall be governed by the laws of the state of California, United States, regardless of your country of origin or where you access the Kareo API, and notwithstanding any conflicts of law principles and the United Nations Convention for the International Sale of Goods. You and Kareo agree that all Claims arising out of or related to this Agreement must be resolved exclusively in the courts located in the county of Orange, California or the U.S. District Court for the Central District of California. You and Kareo agree to submit to the personal

jurisdiction of the courts located within the county of Orange, California or the Central District of California, and agree to waive any and all objections to the exercise of jurisdiction over the parties by such courts and to venue in such courts for the purpose of litigating all such Claims. Notwithstanding the above, you agree that Kareo shall still be allowed to apply for injunctive remedies in any jurisdiction.

11) General Legal Terms

- 11.1** If any provision of this Agreement is found to be illegal, void, or unenforceable, the unenforceable provision will be modified so as to render it enforceable to the maximum extent possible in order to effect the intention of the provision; if a term cannot be so modified, it will be severed and the remaining provisions of this Agreement will not be affected in any way.
- 11.2** You will comply with all applicable law, regulations and third-party rights (including, without limitation, HIPAA regulations and privacy laws).
- 11.3** Notice and Service of Process. We may notify you via postings on the Developer Site or via the email address associated with your Application. Kareo accepts service of process by mail or courier at the physical address set forth in Section 11.6 below. Any notices that you provide without compliance with this section shall have no legal effect.
- 11.4** This Agreement and the API Documentation, constitute the entire agreement between you and Kareo regarding the Kareo API and supersedes all prior agreements and understandings, whether written or oral, or whether established by custom, practice, policy or precedent, with respect to the subject matter of this Agreement.
- 11.5** Our failure to act with respect to a breach of this Agreement by you or others does not waive our right to act with respect to that breach or subsequent similar or other breaches.

API Key Revocation

At any point, the patient may revoke and thus invalidating their current generated API Key. If an existing API Key is revoked, all API requests using the revoked key will return a 403 (Forbidden) response.

Response**Content Type**

All API response content types are “application/json”.

General Response Codes

Code	Message	Description
400	<Specific validation error>	Any type of validation (e.g., parameters) errors. Example: “Start date can not be after end date”, etc.
401	API key is required	No API key was supplied
200	<Response content>	Request was processed successfully
500	An error occurred while processing your request	An unexpected exception occurred while processing request

Data Value Concepts

Value	Description	Example
null	A “null” value is returned for fields where a value is undefined	“endDate”: null

Parent Field	Field	Description
patient	gender	Type: String Possible Values: <ul style="list-style-type: none"> • “male” • “female” • “Undifferentiated” Patient’s gender
patient	ethnicity	Type: Array Patient’s ethnicities “Race & Ethnicity” - CDC code system OID: 2.16.840.1.113883.6.238
ethnicity	code	Type: String Ethnicity concept code
ethnicity	name	Type: String Ethnicity concept name
patient	ethnicityGroup	Type: Array
ethnicityGroup	code	Type: String
ethnicityGroup	name	Type: String
patient	race	Type: Array Patient’s races “Race & Ethnicity” - CDC code system OID: 2.16.840.1.113883.6.238
race	code	Type: String Race concept code
race	name	Type: String Race concept name
patient	raceGroup	Type: Array Patient’s race(s) roll-up categories OMB Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity, Statistical Policy Directive No. 15, as revised, October 30, 1997. “Race & Ethnicity” - CDC code system OID: 2.16.840.1.113883.6.238

continued on next page...

Parent Field	Field	Description
raceGroup	code	Type: String Patient's race(s) category concept code
raceGroup	name	Type: String Patient's race(s) category concept name
patient	communication	Type: Array Patient's communication
communication	language	Type: Element Patient's communication language
language	code	Type: String ISO 639-2 language code
language	name	Type: String ISO 639-2 language name
communication	preferred	Type: Boolean "True" if the indicated language is their preferred language, else "false".
patient	firstName	Type: String Patient's given name
patient	lastName	Type: String Patient's family name

Encounter

Encounter	Retrieve a list of relevant information regarding the visit, care team, health concerns associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/encounter		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter encounters based on date of services If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all encounter records are returned <p>and an end date is specified, then all encounter records prior to and including the end date are returned</p>	N	04-13-1977
endDate	<p>End date (inclusive) to filter encounters based on date of services If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all encounter records are returned and a start date is specified, then all encounter records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)

continued on next page...

Parent Field	Field	Description
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	encounter	Type: Array Encapsulates the patient assessments
encounter	participant	Type: Array List of participants in the care team
participant	name	Type: String Full name of the care team participant
encounter	period	Type: Element
period	endDate	Type: Date Date of the encounter ISO 8601 date (e.g., 2007-04-05)
encounter	location	Type: Element
location	identifier	Type: String Canonical textual representation of the service location UUID
location	name	Type: String Name of the location
location	address	Type: Element Address of the location
address	street	Type: String Street of the location
address	city	Type: String City of the location
address	state	Type: String 2-letter state code used by the United States Postal Service

continued on next page...

Parent Field	Field	Description
address	postalCode	Type: String 5 or 9 digit postal code
encounter	diagnosis	Type: Element
diagnosis	condition	Type: Element Encapsulate health concerns and other conditions
condition	text	Type: String Textual description of the condition

Example

```

{
  "meta":{
    "date":"2007-04-05T14:30Z"
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "encounter":[{
    "identifier":"43d1ac14-891b-6a4f-e053-c9371e0abd74",
    "participant":[{
      "name":"Dr. John Doe"
    },
    {
      "name":"Jane Doe"
    }
  ],
    "period":{
      "endDate":"2016-12-16"
    },
    "location":{
      "identifier":"c961e60d-178d-4f18-939b-e2e6e60ac94d",
      "name":"Johnson Clinic",
      "address":{
        "street":"100 S. Johnsonville Ave",
        "city":"Alhambra",
        "state":"CA",
        "postalCode":"91801-3166"
      }
    },
    "diagnosis":{
      "condition":{
        "text":"Chronic Sickness exhibited by patient"
      }
    }
  ]
}

```

Allergy Intolerance / Medication Allergy

Medical Allergy	Retrieve a list of medication allergies associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/allergyIntolerance/medicalAllergy		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter allergy records</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all allergy records are returned and an end date is specified, then all allergy records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter allergy records</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all allergy records are returned and a start date is specified, then all allergy records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	allergyIntolerance	Type: Element Encapsulates the patient allergy intolerances
allergyIntolerance	medicalAllergy	Type: Array Encapsulates the patient medical allergies
medicalAllergy	code	Type: String RxNorm code
medicalAllergy	allergen	Type: String Name of allergen
medicalAllergy	reaction	Type: Array Allergic reaction
reaction	code	Type: String SNOMED CT code for reaction
reaction	name	Type: String Name of reaction

continued on next page...

Parent Field	Field	Description
medicalAllergy	severity	<p>Type: String Possible Values:</p> <ul style="list-style-type: none"> • “Fatal” • “Severe” • “Moderate to severe” • “Moderate” • “Mild to moderate” • “Mild” • “Unknown” <p>Severity of reaction</p>
medicalAllergy	startDate	<p>Type: Date Date of onset ISO 8601 date (e.g., 2007-04-05)</p>
medicalAllergy	status	<p>Type: String Possible Values:</p> <ul style="list-style-type: none"> • “Active” • “Not Active” <p>Status of allergy.</p>

Example

```

{
  "meta":{
    "date":"2007-04-05T14:30Z"
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "allergyIntolerance":{
    "medicalAllergy":[{
      "code": "253157",
      "name": "bee pollen",
      "reaction":[{
        "code": "49727002",
        "name": "cough"
      }
    ],
    "severity": "Mild",
    "startDate": "2017-08-02",
    "status": "Active"
  },
  {
    "code": "",
    "name": "penicillin",
    "reaction":[{
      "code": "190855004",
      "name": "hypomagnesemia"
    },
    {
      "code": "369546013",
      "name": "hives"
    }
  ],
    "severity": "Severe",
    "startDate": "1997-01-02",
    "status": "Not Active"
  }
  ]
}

```

Care Plan

Care Plan	Retrieve a list of care plan(s) and assessment(s) associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/carePlan		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter care plans based on encounter date of services</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all care plan records are returned and an end date is specified, then all care plan records with encounter dates of service prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter care plans based on encounter date of services</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all care plan records are returned and a start date is specified, then all care plan records with encounter dates of service after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	carePlan	Type: Array
carePlan	context	Type: Element
context	encounter	Type: Element
encounter	period	Type: Element
period	endDate	Type: Date Date of encounter ISO 8601 date (e.g., 2007-04-05)
carePlan	addresses	Type: Element Assessment that care plan addresses
addresses	text	Type: String
carePlan	activity	Type: Element Care plan activities
activity	detail	Type: Element
detail	description	Type: String

Example

```

{
  "meta":{
    "date":"2007-04-05T14:30Z",
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },

  "carePlan":[{
    "context":{
      "encounter":{
        "period":{
          "endDate":"2016-12-16"
        }
      }
    },
    "addresses":{
      "text":"The patient was found to have fever and is suspecting
Anemia based on the patient history. Asked the patient to closely monitor
the temperature and blood pressure if the fever does not subside within a
day."
    },
    "activity":{
      "detail":{
        "description":"Get an EKG done on 6/23/2015. ii. Get a Chest X-ray
done on 6/23/2015 showing the Lower Respiratory Tract Structure. iii. Take
Clindamycin 300mg three times a day as needed if pain does not subside."
      }
    }
  ]
}
}

```

Condition / Problem List

Problem List	Retrieve a list of problems associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/condition/problemList		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter problem records When filtering by date, records with undefined start dates are always included If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all problem records are returned and an end date is specified, then all problem records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter problem records If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all problem records are returned and a start date is specified, then all problem records with encounter dates of service after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	condition	Type: Element Encapsulates the patient conditions
condition	problemList	Type: Array List of patient problems
problemList	code	Type: String Identification of the problem SNOMED CT® OID: 2.16.840.1.113883.6.96
problemList	name	Type: String Textual representation of the problem
problemList	startDate	Type: Date Date of onset
problemList	endDate	Type: Date Date of resolution
problemList	status	Type: String Possible Values: <ul style="list-style-type: none"> • "ACTIVE" • "INACTIVE" • "RESOLVED"

Example

```
{
  "meta":{
    "date":"2007-04-05T14:30Z"
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "condition":{
    "problemList":[{
      "code": "59621000",
      "name": "Essential hypertension (Disorder)",
      "startDate": "10/5/2011",
      "status": "ACTIVE"
    },
    {
      "code": "83986005",
      "name": "Severe Hypothyroidism (Disorder)",
      "startDate": "10/5/206",
      "endDate": "6/1/2007",
      "status": "RESOLVED"
    }
  ]
}
```

Device

Device	Retrieve a list of unique device identifier(s) for a patient's implantable device(s) associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/device		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter device records</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all device records are returned and an end date is specified, then all device records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter device records</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all device records are returned and a start date is specified, then all device records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	device	Type: Element Encapsulates the patient devices
device	udi	Type: Array
udi	deviceIdentifier	Type: String FDA device identifier
udi	carrierHRF	Type: String FDA barcode in Human Readable Format
udi	name	Type: String Global Medical Device Nomenclature (GMDN)
udi	note	Type: String Comments associated with device entry

Example

```

{
  "meta":{
    "date":"2007-04-05T14:30Z"
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "device":{
    "udi":[{
      "deviceIdentifier":"00643169007222",
      "carrierHRF":"(01)00643169007222(17)160128(21)BLC200461H",
      "name":"Cardiac resynchronization therapy implantable
defibrillator"
    },
    {
      "deviceIdentifier":"00836559004745",
      "carrierHRF":"(01)00836559004745(17)160128(21)ABC200461H",
      "name":"Pacing/defibrillation lead electrical adaptor"
    }
  ]
}

```

Procedure

Procedure	Retrieve a list of procedures associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/procedure		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter procedures</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all procedure records are returned and an end date is specified, then all procedure records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter encounters based on date of services</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all procedure records are returned and a start date is specified, then all procedure records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	procedure	Type: Array Encapsulates the patient procedures
procedure	code	Type: String CPT code
procedure	name	Type: String CPT procedure name
procedure	date	Type: Date Date of procedure ISO 8601 date (e.g., 2007-04-05)
procedure	status	Type: String Possible Values: <ul style="list-style-type: none"> • "Completed" • "Active" • "Aborted" • "Cancelled" • "Scheduled" Status

Example

```
{
  "meta":{
    "date":"2007-04-05T14:30Z"
  },
  "patient":{
    "patientId":"1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "procedure":[
    {
      "code":"92100",
      "name":"Serial tonometry (sep proc) multiple measure, extended
period, time, w/interpret & report, same day",
      "date":"2017-08-01",
      "status":"Completed"
    },
    {
      "code":"92314",
      "name":"Prescription/fitting contact lens w/medical supervision,
independent tech; cornea, non-aphakia",
      "date":"2017-08-04",
      "status":"Scheduled"
    }
  ]
}
```

Goal

Goal	Retrieve a list of goals associated with the patient encounters		
Request	https://api.kareo.com/clinical/v1/api/patient/goal		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter goals based on encounter date of service If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all goal records are returned and an end date is specified, then all goals records with encounter dates of service prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter goals based on encounter date of service If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all section records are returned and a start date is specified, then all goals records with encounter dates of service after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	goal	Type: Array Encapsulates the patient goals
goal	statusDate	Type: Date Date of service for the corresponding encounter. ISO 8601 date (e.g., 2007-04-05)
goal	description	Type: String Textual description of the goal

Example

```

{
  "meta":{
    "date":"2007-04-05T14:30Z",
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "goal":[{
    "statusDate":"2012-03-02"
    "description":"Stop smoking"
  },
  {
    "statusDate":"2012-03-14"
    "description":"Stop smoking"
  },
  {
    "statusDate":"2012-03-15"
    "description":"Target weight is 160 to 180 lbs."
  },
  {
    "statusDate":"2012-04-15"
    "description":"Patient wants to defer weight loss until after
honeymoon."
  }
]
}

```

Observation / Vital Signs

Vital Signs	Retrieve a list of vital signs associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/observation/vitalSigns		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter vital sign records</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all vital sign records are returned and an end date is specified, then all vital sign records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter vital sign records</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all vital sign records are returned and a start date is specified, then all vital sign records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	observation	Type: Array Encapsulates the patient observations
observation	vitalSign	Type: Array Encapsulates the patient observation vitals
vitalSign	code	Type: String LOINC code
vitalSign	name	Type: String Textual name of the vital sign
vitalSign	date	Type: Date Date vital recorded ISO 8601 date (e.g., 2007-04-05)
vitalSign	value	Type: Double Value of the vital sign
vitalSign	unit	Type: String Unit of measurement.

Example

```

{
  "meta":{
    "date":"2007-04-05T14:30Z"
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "observation":{
    "vitalSigns":[{
      "code": "3141-9",
      "name": "Weight",
      "date": "2013-03-02",
      "value": "100",
      "unit": "lbs"
    },
    {
      "code": "8462-4",
      "name": "BloodPressure (Diastolic)",
      "date": "2013-03-02",
      "value": "66",
      "unit": "mmHg"
    },
    {
      "code": "8480-6",
      "name": "BloodPressure (Systolic)",
      "date": "2013-03-02",
      "value": "122",
      "unit": "mmHg"
    }
  ]
}

```

Observation / Smoking Status

Device	Retrieve the smoking status of a patient
Request	https://api.kareo.com/clinical/v1/api/patient/observation/socialHistory/smokingStatus
Method	GET
Parameters	None

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	observation	Type: Element Encapsulates the patient observations
observation	socialHistory	Type: Element Encapsulates the patient observation social histories
socialHistory	smokingStatus	Type: Array
smokingStatus	code	Type: String SNOMED code § 170.207(h) Smoking Status

Example

```
{
  "meta":{
    "date":"2007-04-05T14:30Z"
  },
  "patient":{
    "patientId":"1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "observation":{
    "socialHistory":{
      "smokingStatus":[{
        "code":"449868002"
      }
    ]
  }
}
```

Diagnostic Report

Device	Retrieve a list of laboratory tests, laboratory values/results associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/diagnosticReport		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter laboratory tests and results</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all laboratory test and result records are returned and an end date is specified, then all laboratory test and result records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter laboratory tests and results</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all laboratory test and result records are returned and a start date is specified, then all laboratory test and result records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	diagnosticReport	Type: Array Encapsulates the patient diagnostic reports
diagnosticReport	issued	Type: Date Date this report was released ISO 8601 date (e.g., 2007-04-05)
diagnosticReport	status	Type: String
diagnosticReport	observation	Type: Element
observation	status	Type: String
observation	issued	Type: Date ISO 8601 date (e.g., 2007-04-05)
observation	code	Type: Element
code	code	Type: String LOINC code
code	text	Type: String Textual description of the result

continued on next page...

Parent Field	Field	Description
observation	value	Type: Element
value	valueQuantity	Type: Element
valueQuantity	value	Type: Numeric
valueQuantity	unit	Type: String
observation	interpretation	Type: Element
interpretation	text	Type: String
observation	referenceRange	Type: Element
referenceRange	text	Type: String Textual value of the reference range
observation	comment	Type: String

Example

```
{
  "meta":{
    "date":"2007-04-05T14:30Z",
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "diagnosticReport":[{
    "issued":"2013-10-20",
    "status":"final",
    "observation":[{
      "status":"final",
      "issued":"2013-10-20"
      "code":{
        "code":"6690-2",
        "text":"WHITE BLOOD CELL COUNT"
      },
      "value":{
```

continued on next page..

```

        "valueQuantity":{
            "value":8.2,
            "unit":"Thousand/uL"
        }
    },
    "interpretation":{
        "text":"Normal"
    },
    "referenceRange":{
        "text":"3.8-10.8",
    },
    "comment":"No further comment"
},
{
    "status":"final",
    "issued":"2013-10-20"
    "code":{
        "code":"789-8",
        "text":"RED BLOOD CELL COUNT"
    },
    "value":{
        "valueQuantity":{
            "value":3.66,
            "unit":"Million/uL"
        }
    },
    "interpretation":{
        "text":"Low"
    },
    "referenceRange":{
        "text":"3.80-5.10",
    },
    "comment":"No further comment"
}
]
}
]
}

```

Immunization

Immunization	Retrieve a list of immunizations associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/immunization		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter immunization records</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all immunization records are returned and an end date is specified, then all immunization records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter immunization records</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all immunization records are returned and a start date is specified, then all immunization records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	immunization	Type: Array Encapsulates the patient immunizations
immunization	code	Type: String CVX code of the vaccine
immunization	name	Type: String Textual representation of vaccine name
immunization	date	Type: Date Recording date ISO 8601 date (e.g., 2007-04-05)
immunization	status	Type: String Possible Values: <ul style="list-style-type: none"> • "Administered" • "NonAdministered" • "History" • "Order"
immunization	lotNumber	Type: String Vaccine lot number
immunization	manufacturer	Type: String Vaccine manufacturer
immunization	notes	Type: String Vaccination notes

Example

```

{
  "meta":{
    "date":"2007-04-05T14:30Z",
  },
  "patient":{
    "patientId": "1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "immunization":[{
    "code":"106",
    "name":"Tetanus and diphtheria toxoids",
    "date":"2012-01-04",
    "status":"Administered",
    "lotNumber":"2",
    "manufacturer":"Immuno Inc.",
    "notes":"N/A"
  },
  {
    "code":"166",
    "name":"influenza, intradermal, quadrivalent, preservative free",
    "date":"2015-06-22",
    "status":"Administered",
    "lotNumber":"No lot number",
    "manufacturer":"Immuno Inc.",
    "notes":"Immunization not given"
  },
  {
    "code":"104",
    "name":"Hepatitis A",
    "date":"2013-02-03",
    "status":"NonAdministered",
  }
]
}

```

Medication Statement

Medications	Retrieve a list of medications associated with the patient		
Request	https://api.kareo.com/clinical/v1/api/patient/medicationStatement		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter medication records</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all medication records are returned and an end date is specified, then all medication records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter medication records</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all medication records are returned and a start date is specified, then all medication records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	patient	Type: Element Encapsulates patient records
patient	patientId	Type: String Canonical textual representation of the patient's UUID
N/A	medication-Statement	Type: Array Encapsulates the patient medications
medication-Statement	medication	Type: Element Encapsulates the medication information
medication	code	Type: String RxNorm code
medication	name	Type: String
medication-Statement	dosage	Type: Element Encapsulates the medication dosage information
dosage	sig	Type: String Free text dosage information
medication-Statement	startDate	Type: Date ISO 8601 date (e.g., 2007-04-05)
medication-Statement	endDate	Type: Date ISO 8601 date (e.g., 2007-04-05)

Example

```

{
  "meta":{
    "date":"2007-04-05T14:30Z"
  },
  "patient":{
    "patientId":"1fc15e44-c6b3-44b7-94ad-d992fbe1c550"
  },
  "medicationStatement":[
    {
      "medication":{
        "code":"308177",
        "name":"amoxicillin 125 mg oral tablet, chewable"
      },
      "dosage":{
        "sig":"1 tab(s) orally once a day"
      },
      "startDate":"2017-08-23",
      "endDate":null
    },
    {
      "medication":{
        "code":"863538",
        "name":"penicillin G potassium 5,000,000 units injection"
      },
      "dosage":{
        "sig":"One inject per day"
      },
      "startDate":"2017-08-22",
      "endDate":"2017-08-30"
    }
  ]
}

```

Binary / Summary

Summary	Retrieves a CCDA 2.1 document containing the data elements defined by the Common Clinical Data Set (CCDS)		
Request	https://api.kareo.com/clinical/v1/api/patient/binary/summary		
Method	GET		
Parameters	Description	Required	Example
startdate	<p>Start date (inclusive) to filter the various sections of the CCDA</p> <p>If no start date is specified:</p> <ul style="list-style-type: none"> and no end date is specified, then all section records are returned and an end date is specified, then all section records prior to and including the end date are returned 	N	04-13-1977
endDate	<p>End date (inclusive) to filter various sections of the CCDA</p> <p>If no end date is specified:</p> <ul style="list-style-type: none"> and no start date is specified, then all section records are returned and a start date is specified, then all section records after and including the start date are returned 	N	04-13-2004

Response Fields

Parent Field	Field	Description
N/A	meta	Type: Element Encapsulates the meta data of the result
meta	date	Type: Date Date and time the response was generated UTC ISO 8601 datetime with time zone in extended notation (e.g., 2007-04-05T14:30Z)
N/A	contentType	Type: String MIME type of the content
N/A	content	Type: String Base64 encoded CCDA 2.1 document

Example

```
{
  "meta":{
    "date":"2007-04-05T14:30Z",
  },
  "contentType":"application/xml",
  "content":"[Actual value omitted for example brevity]"
}
```