I-heal 2.0 Integration Framework
Data Request (CCDA) Services

Purpose

This document describes the transaction messages included in the i-heal integration API; these messages may be used by remote applications to interact with i-heal 2.0 using http web service request messages.

Scope

The i-heal integration API(s) defined in this document includes those used to retrieve clinical summary information for a given patient. Each API is described along with transaction request details, request parameters, response content, and possible error messages.

The clinical information is provided in *Consolidated Clinical Document Architecture* (C-CDA) format defined by Health Level Seven, International. This document does not describe the C-CDA format; refer to Health Level Seven documentation.

Other documents are available which describes each service

https://ihealintegrationapi.healogics.com/apidocs/api/v1/registrationhelp - describes registration process to gain access for i-heal integration api use.

https://ihealintegrationapi.healogics.com/apidocs/api/v1/authenticationhelp - describes api used for user authentication, password management, and facility authorization.

https://ihealintegrationapi.healogics.com/apidocs/api/v1/patientsearchhelp - describes api used for patient search and patient demographics access.

https://ihealintegrationapi.healogics.com/apidocs/api/v1/datarequesthelp - describes api used for accessing patient common data sets.

Terms of Use

Under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), Healogics, Inc. and its subsidiaries (Healogics, Inc.) are "Business Associates" of each Hospital to which they provide wound care management services and, as such, are statutorily and contractually obligated and liable for maintaining the privacy and security of the "protected health information" (known as "PHI") for all patients treated in the Hospital's Wound Healing Program (Program). Under the HIPAA "Privacy Rule", "Security Rule" "HITECH Rule", and under each Hospital management agreement, Healogics, Inc. is also required to have comprehensive policies and procedures for the use and disclosure of PHI and

"electronic PHI" (e-PHI). These policies and procedures can be located on the Healogics WebPortal within the Policy tab at https://www.dcswebportal.com.

As a part of your activities for the Program of the Hospital, you may have access to and use of PHI and/or e-PHI through the I-heal system. I-heal is a proprietary, web-based disease management and wound care outcome tracking system that documents patient progress and treatment outcomes for patients receiving treatment through the Program.

By using the i-heal integration API you acknowledge that: (1) your access to and use of I-heal is conditioned on your compliance with the below terms of use, (2) you agree to comply with HIPAA in connection with your Program activities and (3) you have read and agree to the below terms of use regarding your access to and use of the I-heal system. If you have any questions concerning our policies and procedures, please contact the Healogics, Inc. Compliance/Privacy Office at 904-446-3427, or e-mail us at: compliance@healogics.com.

1. My login ID is my own individual, personal code for gaining access into the I-heal system and I agree that I will not share my login ID and/or password with anyone or use another person's ID and/or password.
2. My login ID allows me to access only such information which I have been authorized to use to perform my job responsibilities and I agree that I will only use my computer access as appropriate in order to carry out my assigned duties.
3. When working in I-heal my login ID, electronic signature and initials, act as my personal signature, and are legally binding as my authorized personal signature.
4. The information I access through I-heal is privileged, and/or confidential, and should be used only in the performance of job-related or patient-related activities. I agree that I will not divulge PHI or other confidential information unless requested to do so by my supervisor or other authorized personnel in the performance of my job duties or as permitted or required by applicable law and regulation and policies and procedures of the Hospital.
5. It is a violation of Healogics, Inc.'s policies and the Hospital's policies to print PHI remotely using the I-heal system (e.g., at home, hotel, or any off-site printer) and I will not print such PHI remotely from the I-heal system.
6. I will notify Healogics's Compliance Officer if I believe a HIPAA breach has occurred or if I believe someone using I-heal has violated any of these terms of use.
7. I must log-off access to I-heal if I leave the computer terminal for any period of time. I understand that failure to log-off is a violation of these terms and Hospital policies.
8. I understand I am responsible for any information I input into the I-heal system.
9. I agree that no medical record or other document or information generated or maintained for the Hospital in connection with billing or medical recordkeeping for Program patients may be removed from the treatment center without Hospital written approval.

I understand that my failure to comply with the foregoing in the future may result in the discontinuation of my access to and use of I-heal and that any such breach may also be the basis for civil or criminal prosecution under state and/or federal law and that, if I am an employee or

contractor of the Hospital or Healogics, Inc., such relationship may subject me to disciplinary action including and up to possible termination.

Registration

Vendors seeking access to the i-heal integration API must register with Healogics, Inc. and obtain a private key used during request authentication in each API request. No API request may be issued without a valid private key issued by Net Health.

API Message Context

i-heal API services are RESTful API that allows runs on HTTPS which accepts requests and sends responses in JSON format contained in the body of the HTTPS message. Requests and responses use the javascript style camel case notations for property names.

Private Key

A private key (or API Key) is assigned to a caller which must be included in the JSON request packet under property name 'privateKey'. This key must match the key assigned to the caller or else the request packet will be discarded, and an error message will be returned. The private key is obtained from Net Health as described in the registration help instructions.

API Message Errors

Successful API requests for all i-heal API return an HTTP 200 response; error conditions may return using HTTP response in 400 or 500 range. An error response message may be returned with the following data encoded in the message body.
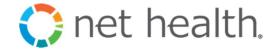
Table 1 Error response body

errorCode	numeric	Required	Error code; see below
errorMessage	String; alpha-numeric	Required	error message; detailed user-friendly message
errors	Array of Object; Table 2 Error detail	Optional	May be empty array;
warnings	Array of Object; Table 2 Error detail	Optional	Non-fatal messages; May be empty array;
requestId	Guid	Required	Message requestId

Table 2 Error detail

fieldname	string	Required	Field associated with following messages
errors	Array of String; alpha-numeric	Required	Error message; detailed user-friendly message

Table 3 Error codes

errorCode	ErrorMessage

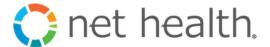|	
1	Login failed
2	Invalid private key
3	Invalid token
4	Authentication failed
7	Authorization failed
10	Account locked out
11	Password expired
12	Token expired
13	Invalid user Id
14	Invalid input field
15	Unknown error
16	Accept Terms required
40	User must change password
41	User must accept Terms of Use
42	User password expired in facility
43	User not authorized in facility
44	User not authorized in location
45	Invalid token for event
46	Could not reset password

Sample Response Body

```
{
    "errorCode": 2,
    "errorMessage": "The supplied private key is invalid for this service",
    "errors": null,
    "warnings": null,
    "requestId": "e6683367-b1fa-48c0-b566-61b518a89b68"
}
```

CCDA Services Overview

The CCDA service API may be used to retrieve Common Clinical Data for each visit associated with a specified patient. A user must be authenticated prior to subsequent calls to other i-heal API to ensure authorized access and log user activity.

- The *CCDAGet* API may be used to retrieve the Common Clinical Data for each visit associated with a specified patient. The request may be filtered by date of service start and end range and include all or select Common Clinical Data parts. The clinical data is provided in C-CCDA format defined by Health Level Seven, International.

CCDA Services API

CcdaGet– returns a list of C-CDA formatted objects containing Common Clinical Data Set for each visit associated with the specified patientId. The request may be filtered by startVisitDate and endVisitDate. The response only contains elements defined by ccdaParts.

The C-CDA payload and XSLT stylesheet are returned using Base64 encoding and must be decoded before use.

HTTP POST
URL: https://ihealintegrationapi.healogics.com/CCDAService/api/v1/CCDAGet
HEADER:
Content-Type   application/json

Table 4 CCDAGet request body

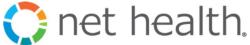|			
privateKey	String; alpha-numeric	Required	Assigned to vendor at registration
masterToken	String; alpha-numeric	Required	Token obtained via Authenticate API; used in all subsequent API calls
userId	Numeric	Required	userId of the authenticated user obtained via Authenticate API
eventDateTime	Datetime	Optional	"yyyy-mm-ddThh:mm:ss"
facilityId	Numeric	Required	
patientId	Numeric	Required	PatientId from *PatientSearch* API
visitStartDate	Date only	Required	"yyyy-mm-dd"; date of first encounter to retrieve.
visitEndDate	Date only	Optional	Date of last encounter to retrieve. Same as visitStartDate if not provided
ccdaParts	Object	Optional	CCDA contains all parts if not provided; object defined below Table 5 CCDA Generation Data Parts object

Table 5 CCDA Generation Data Parts object

includeAllergies	boolean	Optional	"false" – do not include; "true" – include; default "false"
includeEncounters	boolean	Optional	"
includeFunctionalStatus	boolean	Optional	"
includeImmunizations	boolean	Optional	"
includeImplantableDevices	boolean	Optional	"
includeInstructions	boolean	Optional	"
includeMedications	boolean	Optional	"
includePlanOfTreatment	boolean	Optional	"
includeProblemList	boolean	Optional	"
includeProcedures	boolean	Optional	"
includeReasonForReferral	boolean	Optional	"
includeResults	boolean	Optional	"
includeSocialHistory	boolean	Optional	"
includeVitalSigns	boolean	Optional	"
includeGoalsSection	boolean	Optional	"
includeHealthConcerns	boolean	Optional	"

Table 6 CCDAGet response body

visitStartDate	Date only	Required	Same as request
visitEndDate	Date only	Required	Same as request
patientId	Numeric	Required	Same as request
ccda	Array of string	Required	Array of string containing C-CDA formatted payload for each patient visit; may be empty array. C-CDA is Base64 encoded and must be decoded before use.
xsltStypesheet	String	Optional	Xslt stylesheet used to show C-CCDA in human readable form. Xslt is Base64 encoded and must be decoded before use.

Sample Request Body (all parts)

{
        "privateKey" : "ABCDEF0123456789abcdef",

        "masterToken":
"EO7MkxpIAL/ZtJ6nSeTS8MpckFTPSnyw2DBHaBIx5cFu3EW/CNzwjA",
        "userId": 674861,
        "facilityId": 8921,
        "patientId": 2583653,
        "visitStartDate": "2018-07-07",
        "visitEndDate": "2018-07-21",
        "codeParts": null
}

Sample Request Body (select parts)

{
        "privateKey" : "ABCDEF0123456789abcdef"
        "masterToken": "EO7MkxpIAL/ZtJ6nSeTS8MpckFTPSnyw2DBHaBIx5cFu3EW/CNzwjA",
        "userId": 674861,
        "facilityId": 8921,
        "patientId": 2583653,
        "visitStartDate": "2018-07-07",
        "visitEndDate": "2018-07-21",
        "codeParts":
        {
                "includeImmunizations": true,
                "includeProcedures": true
        }
}

Sample Response Body

{
        "patientId": 2583653,
        "visitStartDate": "2018-07-07",
        "visitEndDate": "2018-07-21",
        "ccda": [
                "PD94bWwtc3R5bGVzaGVldCB0eXBlPSJ0ZXh0L3hzbCIgaHJlZj0iQ0RBLnhzbC…",
                "PD94bWwtc3R5bGVzaGVldCB0eXBlPSJ0ZXh0L3hzbCIgaHJlZj0iQ0RBLnhzbC…"
        ],
        "xsltStypesheet": "PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTg…"
        "errorCode": 0,
        "errorMessage": "The operation completed successfully",
        "errors": [],

    "warnings": [],
    "requestId": "42b76af7-297a-456c-8699-7e484464adf8"
}