



NextGen Office® Patient FHIR API Developer Guide

for NextGen® Office

Prepared by NextGen R&D
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Purpose of this document

This document is written for developers building client applications that connect to the NextGen Office YourHealthFile Patient API. These client applications give patients access to their health records in the application of their choosing, outside of access via YourHealthFile.com.

This document covers the following:

1. How to register as a client application and gain access credentials
2. A detailed walk-through of using the NextGen Office YourHealthFile Patient API

How to register your client application to access NextGen Office YourHealthFile Patient API

Send an email to nextgen-office-api@nextgen.com with the following information:

- Contact e-mail address
- Organization name
- Organization description
- Client application name
- Client application use-case description
- OAuth Callback URL
- The NextGen Office API team will issue client credentials and/or request additional information.

Detailed walk-through of using the NextGen Office YourHealthFile Patient API

The following instructions are from an internal validation of the NextGen Office YourHealthFile Patient Access API. This validation was performed on Sept. 17, 2020 by Jesse Dickson, API Community Leader – NextGen API Solution. These instructions exercise API authentication & data retrieval process as would a 3rd Party Developer whose application Callback URL had been registered by NextGen Office and had subsequently been issued the requisite application credentials (i.e. client_id & client_secret) and test patient credentials (i.e. NextGen Office YourHealthFile Patient API username & password).

- **Test Callback URL:** <https://www.getpostman.com/oauth2/callback>
- **Authorization URL:** <https://api.meditouchehr.com/oauth2/authorize>
- **Access Token URL:** https://api.meditouchehr.com/oauth2/access_token
- **Test Client ID:** fhir-postman-client
- **Test Client Secret:** s84zXNynZfTd1wo
- **Test Patient's NextGen Office YourHealthFile Patient API Credentials:**
 - UN: onc_aneuman
 - PW: onc_aneuman

Validation Process Steps

The steps below can be performed either manually with a tool like **curl** or using **Postman** that automates steps of OAuth token generation.

1. **Open Authorize URL in Browser:**


The expected Authorize URL components are:

- a. **Endpoint:** <https://api.meditouchehr.com/oauth2/authorize>
- b. **Parameters:**
 - i. [response_type=code](#)
 - ii. [client_id={CLIENT ID ASSIGNED TO DEVELOPER}](#)
 - iii. [redirect_uri={APP_REDIRECT_URL}](#)

Example Authorize URL Launched by 3rd Party App:

https://api.meditouchehr.com/oauth2/authorize?response_type=code&client_id=fhir-postman-client&redirect_uri=https://www.getpostman.com/oauth2/callback

2. **Patient Enters their NextGen Office YourHealthFile Patient API Credentials:**



YourHealthFile®

Authorize **FHIR Postman Client** to access your account by logging in below.

onc_anewman

.....

Sign in

3. **Authorization Code is returned in URL** upon successful authentication (Example: <https://app.getpostman.com/oauth2/callback?code={code}>)

4. Exchange Authorization Code for Token:

- a. The expected components of the request to the access_token route are:
 - i. **Method:** POST
 - ii. **Endpoint:** https://api.meditouchehr.com/oauth2/access_token
 - iii. **Parameters:**
 - 1. grant_type=authorization_code
 - 2. code={ISSUED AUTHORIZATION CODE}
 - 3. redirect_uri={APP_REDIRECT_URL}
 - iv. **Headers:**
 - 1. Content-Type=application/x-www-form-urlencoded
 - 2. A Basic Authorization header (Authorization=Basic {encoded_string}) using a base64 encoded representation of the following string: `client_id:client_secret`

Authorization Header Example:

Authorization=Basic {base64_encoded_representation_of_client_id:client_secret}

Example Request to /access_token (cURL Format):

```
curl -X POST \  
  
'https://api.meditouchehr.com/oauth2/access_token?grant_type=authorizati  
on_code&code={code}&redirect_uri=https://www.getpostman.com/oauth2/callb  
ack' \  
-H 'Authorization: Basic {base64_encoded_client_id:client_secret}' \  
-H 'Content-Type: application/x-www-form-urlencoded' \  

```

- b. A successful call to /access_token will produce a response that includes:
 - i. The access_token & refresh_token values;
 - ii. Expiry value (in seconds);
 - iii. Scope (Patient/.*)
 - iv. Resource & Resource ID Endpoint (to combine with Base URL in next call)
 - v. Practice ID

Example Response from /access_token

```
{  
  "access_token": "{access_token_value}",  
  "token_type": "bearer",  
  "refresh_token": "{refresh_token_value}",  
  "expires_in": 42949,  
  "scope": "patient/.*",  
  "resource": "Person/1513168",  
  "practice_id": 1578951  
}
```

5. Use Token & Resource Endpoint to Request FHIR Patient {id}

- a. **Method:** GET
- b. **Endpoint:** <https://fhir.meditouchehr.com/api/fhir/{resource}>
- c. **Header:** An OAuth2 Authorization header with a value of Bearer {access_token}

Authorization Header Example:

Authorization=Bearer {access_token}

Example Request (using /Person/1513168 as {resource})

```
curl -X GET \  
  https://fhir.meditouchehr.com/api/fhir/Person/1513168 \  
  -H 'Authorization: Bearer {access_token_value}' \  
  \
```

Example Response from /Person/{resource}

```
<Person xmlns="http://hl7.org/fhir">  
  <id value="1513168"/>  
  <link>  
    <target>  
      <reference  
value="https://fhir.meditouchehr.com/api/fhir/Patient/168766159"/>  
    </target>  
  </link>  
</Person>
```

6. Request FHIR Resource: /Patient/{id}

Using the “Reference Value” URL from the prior request, obtain FHIR resource data from the /Patient/{id} endpoint.

- a. **Method:** GET
- b. **Base URL + Endpoint:** <https://fhir.meditouchehr.com/api/fhir/Patient/{id}>
- c. **Use URL from prior request <reference value>:** /.../Patient/{id}
- d. **Header:** An OAuth2 Authorization header with a value of Bearer {access_token}

e. Example Request to /Patient/{id}:

```
curl -X GET \  
  https://fhir.meditouchehr.com/api/fhir/Patient/168766159 \  
  -H 'Authorization: Bearer {access_token}' \  
  \
```

f. Response from /Patient/{id}: (continued on next page)


```

<Patient xmlns="http://hl7.org/fhir">
  <id value="168766159"/>
  <extension url="http://hl7.org/fhir/us/core/StructureDefinition/us-core-race">
    <extension url="ombCategory">
      <valueCoding>
        <system value="urn:oid:2.16.840.1.113883.6.238"/>
        <code value="2106-3"/>
        <display value="White"/>
      </valueCoding>
    </extension>
    <extension url="detailed">
      <valueCoding>
        <system value="urn:oid:2.16.840.1.113883.6.238"/>
        <code value="2108-9"/>
        <display value="European"/>
      </valueCoding>
    </extension>
    <extension url="text">
      <valueString value="mixed"/>
    </extension>
  </extension>
  <extension url="http://hl7.org/fhir/us/core/StructureDefinition/us-core-ethnicity">
    <extension url="ombCategory">
      <valueCoding>
        <system value="urn:oid:2.16.840.1.113883.6.238"/>
        <code value="2186-5"/>
        <display value="Not Hispanic or Latino"/>
      </valueCoding>
    </extension>
    <extension url="text">
      <valueString value="Not Hispanic or Latino"/>
    </extension>
  </extension>
  <identifier>
    <use value="official"/>
    <type>
      <coding>
        <system value="http://hl7.org/fhir/v2/0203"/>
        <version value="1.0"/>
        <code value="MR"/>
        <display value="Medical record number"/>
      </coding>
      <text value="Unique Id for EHR"/>
    </type>
    <system value="urn:iETF:rfc:3986"/>
    <value value="urn:168766159"/>
    <assigner>
      <reference value="urn:1578951"/>
    </assigner>
  </identifier>
  <active value="true"/>
  <name>
    <family value="NEWMAN"/>
    <given value="ALICE"/>
  </name>
  <telecom>
    <system value="phone"/>
    <value value="5557231544"/>
  </telecom>
  <gender value="female"/>
  <birthDate value="1970-05-01"/>
  <address>
    <line value="1357, AMBER DR"/>
    <city value="BEAVERTON"/>
    <state value="OR"/>
    <postalCode value="97006"/>
  </address>

```

```
    </address>
  <communication>
    <language>
      <coding>
        <system value="urn:ietf:bcp:47"/>
        <code value="en"/>
        <display value="English"/>
      </coding>
    </language>
    <preferred value="true"/>
  </communication>
</Patient>
```

7. Request Additional FHIR Resources

Please consult the full documentation at <https://petstore.swagger.io/?url=https://hfstatic.s3.amazonaws.com/swagger/fhir-swagger.yaml> to obtain the full set of available endpoints and details for calling those additional NextGen Office Patient Access API routes using the obtained Patient {id}.

- a. **Method:** GET
- b. **Base URL + Endpoint:** `https://fhir.meditouchehr.com/api/fhir/{endpoint}/{id}`
- c. **Header:** An OAuth2 Authorization header with a value of Bearer {access_token}