



Access Application

Email: support@braintreemd.com

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Access Application API

This guide is written for Health IT Data Holders who would like to enable public Application Access APIs so that 3rd parties can access their clinical data. Data Holders connect to BrainTreeMD's Interoperability Engine using the HTTP protocol. The HTTP protocol enables an EHR or other health information Data Holder to respond to queries made by 3rd party applications through JSON public API. Interoperability Engine routes the queries from a public production API endpoint to the corresponding connected Data Holder. Third parties wishing to query the public - facing API must review documentation and terms posted at the public URLs provided by the BrainTreeMD with which they wish to communicate.

FAQs:

1. [How do 3rd party developers access public API resources to access?](#)
When you onboard a new BrainTreeMD for Application Access APIs in production, a unique public API URL will be activated. Each clinical data source accessible through the public API will have a unique URL.
2. [How do client applications and their users authenticate to the public API?](#)
The public API is designed to support existing EHR credentials via OAuth 2.0. UserAccessToken will be generated by BrainTreeMD team on request from client at support@braintreemd.com
3. [What data is available through the public API?](#)
The public API will return all data provided by a connected Data Holder in response to a submitted query. BrainTreeMD may have its own policies and/or security best practices that will dictate what data can be sent and when data is considered complete and/or ready to be sent. Ultimately, meeting the data requirements specified in the final rule is the responsibility of the Data Holder.
4. [What libraries are required to use the Access Application?](#)
There is no specific library to access API. User must have knowledge of posting JSON request and parsing JSON response.

General Concepts

a. [Application Access Requests](#)

The public API is a read-only RESTful. All data access requests from 3rd party applications to the public API will be in the JSON format. Request URL for access application will be provided once the BAA document is signed off.

- [Connecting to Application](#)

HTTP protocol is used connect with application. Request is posted to given API in JSON format.

Authentication – How obtain an Access Token

Client authentication to public APIs can be performed using a UserAccessToken provided by BrainTreeMD. BrainTreeMD may reuse existing patient portal credentials for this purpose, in which case the organization maps each authenticated token to a unique patient portal user on their side. Each authentication request is up to the Data Holder to authorize or not authorize, based on information that is passed from the client application.

The trust framework for Application Access is still evolving, and we expect patient engagement will become more frictionless over time. Please check back with us for updates to this documentation which will include more information about authorization as it becomes available.

All requests transmitted to the public API by the 3rd party client application must include the access token in the UserAccessToken header of the HTTP request. If the access token is missing, expired, or otherwise not valid for the requested operation, the public API will return an error response.

5. What are request parameters?

Client application needs to send UserAccessToken and Content-Type in headers.

PHP:

```
$curl =  
curl_init("https://develop.braintreemd.com/saad_dev_56/modules/access/index.php");  
curl_setopt($curl, CURLOPT_HEADER, false);  
curl_setopt($curl, CURLOPT_RETURNTRANSFER, true);  
curl_setopt($curl, CURLOPT_HTTPHEADER,  
    array(  
        "UserAccessToken: 123456",  
        "Content-type: application/json"  
    )  
);
```

What are search Parameters?

To access the API you will be required to pass through some basic search parameters. Please note that these need to be sent as a JSON string.

a- patient_id:

Its data type is String or Integer. It is optional parameter if first_name and last name are not given.

b- first_name:

Its data type is String. Its required parameter if patient_id is not given.

c- last_name:

Its data type is String. Its required parameter if patient_id is not given.

d- date_of_birth:

Its data type is Date. Its required parameter.

e- phone_number:

Its data type is String. Its optional parameter.

f- returns:

Its data type is Array.

- i. "get_patient_name"
- ii. "get_patient_name"
- iii. "get_patient_sex"
- iv. "get_date_birth"
- v. "get_race"
- vi. "get_ethnicity"
- vii. "get_preferred_language"
- viii. "get_smoking_status"
- ix. "get_problems"
- x. "get_medications"
- xi. "get_medication_allergies"
- xii. "get_laboratory_tests"
- xiii. "get_laboratory_results"
- xiv. "get_vital_signs"
- xv. "get_procedures"
- xvi. "get_care_team_member"
- xvii. "get_immunizations"
- xviii. "get_health_concernse"
- xix. "get_all"
- xx. "start_date"
- xxi. "end_date"

At least one of "returns" function is mandatory.

PHP:

```
$request_array = array(  
    "patient_id" => "12456",  
    "first_name" => "patient name",  
    "last_name" => "patient name",  
    "date_of_birth" => "MM/DD/YYYY",  
    "phone_number" => "patient phone number",  
    "returns" => array(  
        "get_patient_name",
```

```

        "get_patient_sex",
        "get_date_birth",
        "get_race",
        "get_ethnicity",
        "get_preferred_language",
        "get_smoking_status",
        "get_problems",
        "get_medications",
        "get_medication_allergies",
        "get_laboratory_tests",
        "get_laboratory_results",
        "get_vital_signs",
        "get_procedures",
        "get_care_team_member",
        "get_immunizations",
        "get_health_concernse",
        "get_all"
    )
);
$json_content = json_encode($request_array);
$curl =
curl_init("https://develop.braintreemd.com/saad_dev_56/modules/access/index.php");
curl_setopt($curl, CURLOPT_HEADER, false);
curl_setopt($curl, CURLOPT_RETURNTRANSFER, true);
curl_setopt($curl, CURLOPT_HTTPHEADER,
    array(
        "UserAccessToken: 123456",
        "Content-type: application/json"
    )
);
curl_setopt($curl, CURLOPT_POST, true);
curl_setopt($curl, CURLOPT_POSTFIELDS, $json_content);
$json_response = curl_exec($curl);

```

7. What is response errors?

Errors will be thrown back by response JSON.

JSON:

```

{
    "ack": 0,
    "error": "First name is required"
}

```

a- ack:

If its value is "0" then request is not full filled. If its value is "1" then request is successful.

b- error:

It has message or error

8. What is successful response?

Response of API is JSON format.

JSON:

```
{
  "ack": 1,
  "patient_name": { "lastname": "", "middlename": "", "firstname": "MU"},
  "patient_sex": {"M"},
  "date_birth": {"01-01-1947"},
  "race": {"American"},
  "ethnicity": {"Declined"},
  "preferred_language": {"English"},
  "smoking_status": <XML>,
  "problems": <XML>,
  "medications": <XML>,
  "medication_allergies": <XML>,
  "laboratory_tests": <XML>,
  "procedures": <XML>,
  "care_team_member": <XML>,
  "immunizations": <XML>,
  "health_concernse": <XML>,
  "all":<XML>
}
```