



# **MDGuidelines® API: Durations Population v2 Specification 1.3**

**Date: January 23, 2026**

# 1 Overview

## 1.1 Purpose and Intended Audience

The purpose of this document is to provide detailed descriptions and specifications for the Population v2 API.

The Durations Population API is intended to be used by MDGuidelines clients and partners who have integrated MDGuidelines into their own products and wish to display Population Durations within their application(s).

The Durations Population API is part of the MDGuidelines API product offering.

## 1.2 Description

Population Durations and other statistics may be obtained via the Durations Population API.

The Durations Population API accepts a diagnosis code returns several statistics from the MDGuidelines Population Database related to the supplied diagnosis.

### Terminology

| Term                 | Definition   |
|----------------------|--|
| Durations            | The number of calendar days elapsed between the start and end of an injury/illness episode. For disability claims purposes, the start and end date refer to the period of approved disability. |
| Population Durations | Statistics related to the duration and return to full duty outcomes based on a primary diagnosis.  |
| Mean Duration        | The arithmetic mean duration of the selected cases.  |

| Term                           | Definition  |
|--------------------------------|---|
| <p>Medical Code</p>            | <p>An alpha-numeric code representing a diagnosis, procedure, or other condition of a patient. For the purposes of this API, the following types of medical codes are supported: ICD-9-CM, ICD-10-CM, and CPT® (with additional license, see <a href="#">Section 2.3 Authorization</a>, below).</p> <p>Medical Codes are limited to the current edition from the code provider. Medical codes are updated annually in the January timeframe.</p> <ul style="list-style-type: none"> <li>• ICD-9-CM (2015, frozen)</li> <li>• ICD-10-CM</li> <li>• CPT®</li> </ul> |
| <p>Geometric Mean Duration</p> | <p>The geometric mean duration of the selected cases. A geometric mean reduces the effect of outlier values on the calculation, which can give a better indication of the “average” duration.</p>   |
| <p>Frequency Category</p>      | <p>An indication of how frequently the supplied primary diagnosis occurs with the MDGuidelines Population Database. For the purposes of Population Durations, only diagnoses with more than 20 cases are included.</p> <p>Low = 20 to 99 records<br/>           Medium = 100 – 499 records<br/>           High = 500+ records</p>   |
| <p>Percentile</p>              | <p>A number where a certain percentage of durations fall below that percentile. For example, the 5<sup>th</sup> Percentile value of 10 days means that 5 percent of the population has a duration of 10 days or fewer.</p>  |
| <p>Median Duration</p>         | <p>Median is another term for the 50<sup>th</sup> Percentile of a population, meaning that half of the population has a duration less than the Median Duration for a given diagnosis.</p> <p>MDGuidelines recommends using the Median Duration as a benchmark for measuring case management for optimizing return to activity.</p>  |

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## 2 API Specification

This section documents the technical usage of the Population v2 API. General information about any of the MDGuidelines APIs can be found at <https://api.mdguidelines.com/help>.

MDGuidelines APIs are RESTful.

Responses may be formatted as XML or JSON (see Section 2.4 Input Parameters, below).

### 2.1 Endpoint

The Population API endpoint is: <https://api.mdguidelines.com/api/v2/durations/population/>

### 2.2 Authentication

The Client’s API license key must be provided via the request headers as “RG-LICENSE-KEY”. This key will be provided by the Client’s MDGuidelines Account Executive.

### 2.3 Authorization

The Client’s MDGuidelines API license key provides access to all API end points without requiring additional configuration. Some of the APIs optionally include content related to CPT® treatment codes. To obtain use of APIs for CPT® content, an additional licensing agreement is required. Clients may obtain additional information and licensing through their MDGuidelines Account Executive.

### 2.4 Version Information

The current version of this API is v2.

### 2.5 Request Parameters

| Data Element | Data Type | Req? | Data Element Description  | Default Value |
|--------------|-----------|------|---|---------------|
| medicalCode  | String    | Yes  | <p>For the purposes of this API, a billable diagnosis code. Codes may be ICD-9-CM (diagnosis or procedure), ICD-10-CM (diagnosis), or CPT® (with additional license, see <a href="#">Section 2.3 Authorization</a>).</p> <p>Include the decimal, if applicable.</p> <p>The medical code is provided as part of the URL.</p> | N/A           |

|  |  |   |  |
|--|--|---|--|
|  |  | <p>Example of URI:<br/> <a href="https://api.mdguidelines.com/api/v2/durations/population/354.0">https://api.mdguidelines.com/api/v2/durations/population/354.0</a></p> <p>Examples of codes:<br/>           354.0<br/>           G56.01<br/>           G35<br/>           04.43<br/>           64721</p> <p>Note: Code type is not required. The system will detect the code type for the supplied code.</p> |  |
|--|--|---|--|

## 2.6 Response

Data can be returned as JSON or XML.

If using XML, the XSD may be found here: <https://api.mdguidelines.com/xsd/DurationsPopulationV2.xsd>

| Data Element                | Data Type | Req? | Data Element Description  |
|-----------------------------|-----------|------|---|
| MedicalCode                 | String    | Yes  | The supplied medical code from the request.                                       |
| medicalCodeType             | String    | Yes  | Indicator of medical code type.<br><br>Valid values:<br>ICD9CM<br>ICD10CM<br>CPT® |
| MedicalCodeShortDescription | String    | Yes  | The short description for the medical code.                                       |
| MedicalCodeLongDescription  | String    | Yes  | The long description for the medical code.  |
| publishDate                 | Date      | Yes  | The effective date of the Population statistics.                                  |

| Data Element                  | Data Type | Req? | Data Element Description   |
|-------------------------------|-----------|------|--|
| FrequencyCategory             | String    | Yes  | The Frequency Category for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)  |
| MeanDurationInDays            | Integer   | Yes  | The Mean Duration for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)   |
| GeometricMeanDurationInDays   | Integer   | Yes  | The Geometric Mean Duration for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)   |
| MedianDurationInDays          | Integer   | Yes  | The Median Duration for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)   |
| ReturnToWorkProbability       | Decimal   | Yes  | The percentage of claims which return to full duty work for the supplied medical code.   |
| _5thPercentileDurationInDays  | Integer   | No   | The 5 <sup>th</sup> Percentile duration for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)<br><br>Note: A value of -1 means that the duration at that percentile of the population is “Indefinite” and the patient may not return to work.   |
| _25thPercentileDurationInDays | Integer   | No   | The 25 <sup>th</sup> Percentile duration for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)<br><br>Note: A value of -1 means that the duration at that percentile of the population is “Indefinite” and the patient may not return to work.  |
| _50thPercentileDurationInDays | Integer   | No   | The 50 <sup>th</sup> Percentile duration for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)<br><br>Notes<br>This value is identical to the MedianDurationInDays.<br>A value of -1 means that the duration at that percentile of the population is “Indefinite” and the patient may not return to work. |
| _75thPercentileDurationInDays | Integer   | No   | The 75 <sup>th</sup> Percentile duration for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)<br><br>Note: A value of -1 means that the duration at that percentile of the population is “Indefinite” and the patient may not return to work.  |
| _95thPercentileDurationInDays | Integer   | No   | The 95 <sup>th</sup> Percentile duration for the supplied medical code. (See additional details and definition in <a href="#">Terminology</a> section above.)<br><br>Note: A value of -1 means that the duration at that percentile of the population is “Indefinite” and the patient may not return to work.  |

## 2.7 Exception Conditions and Troubleshooting

The service may provide response codes, for success or errors. The common response codes implemented in the MDGuidelines® API are documented at <https://api.mdguidelines.com/help>.

### Response Status

| Status Code | Cause(s)  |
|-------------|---|
| 204         | <p>Message:</p> <ul style="list-style-type: none"> <li>Insufficient data for the supplied code.</li> </ul> <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> <li>The MedicalCodeType parameter is missing</li> <li>The MedicalCodeType is a mismatch for all requested codes.</li> </ul> |
| 400         | <p>Message:</p> <ul style="list-style-type: none"> <li>The following parameter is required: [medicalCodes]</li> </ul> <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> <li>The medicalCode value is missing from the URI</li> </ul>   |
| 401         | <p>Message:</p> <ul style="list-style-type: none"> <li>License code not authorized.</li> </ul> <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> <li>License key is expired</li> <li>License key is missing</li> <li>License key is otherwise invalid</li> </ul>                         |
| 404         | <p>Message:</p> <ul style="list-style-type: none"> <li>Entered medical code was not found.</li> </ul> <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> <li>The supplied medical code is not found in billable ICD-9-CM, ICD-10-CM, or CPT® codes.</li> </ul>                            |
| 406         | <p>Message:</p> <ul style="list-style-type: none"> <li>Medical code must be billable to retrieve population data.</li> </ul> <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> <li>The supplied medical code is valid but non-billable.</li> </ul>                                       |

| Status Code | Cause(s)  |
|-------------|---|
| 500         | <p>Server error.</p> <p>If the server, API site, or this service failed, the response will be a 500 Server error.</p> |

## 2.8 Testing

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MDGuidelines offers a test harness for integration testing:

<https://api.mdguidelines.com/help/durationsPopulation-v2.html>

Note: use of the test harness requires production license key configuration (RG-LICENSE-KEY).

## 2.9 Sample Code

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### JQUERY

```

var uri = "https://api.mdguidelines.com/api/v2/durations/population/";
uri += "354.0";

$.ajax({
  url: uri,
  type: 'GET',
  dataType: 'json',
  headers: { 'RG-LICENSE-KEY': 'XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX', },
  success: function (data) { handleData(data) },
  error: function (xhr, status, error) { handleError(xhr, status, error) }
})

```

## Document Revision History

| Date       | Reason For Changes   | Document Version |
|------------|--|------------------|
| 06/22/2017 | Initial Version  | 1.0              |
| 08/03/2017 | Minor clarification: <ul style="list-style-type: none"> <li>• Clarified that ICD-9-CM primary diagnosis may include diagnosis or procedure codes.</li> </ul> | 1.1              |
| 10/13/2017 | Added Medical Code version information (Section 1.2, Terminology), update to CPT® copyright text.<br><br>Fixed other typographical errors.                   | 1.2              |
| 1/16/2024  | Minor Changes and Corrections  | 1.3              |
| 1/23/2026  | Updated copyright dates  | 1.3.1            |