



MDGuidelines® API: Case Fit v3 Specification 1.4

Date: December 6, 2023

1 Overview

1.1 Purpose and Intended Audience

The purpose of this document is to provide detailed descriptions and specifications for the Case Fit API

The Case Fit API is intended to be used by MDGuidelines® customers and partners that have integrated MDGuidelines into their own products and wish to display predicted Case Durations within their application(s).

The Case Fit API is part of the MDGuidelines API product offering.

The version number of this document refers to the Specification version. See Section 2.3, Version Information, below for information related to the API version.

1.2 Description

The Case Fit end point accomplishes two pre-processing steps for using the predictive model in the Case API:

1. The Case Fit can be used to identify whether a Case Prediction is available for the given Primary Diagnosis, prior to having the integrated system end user fill out the other details for the case (such as age, sex, or program type).
2. The Case Fit also indicates which Comorbid Groups are relevant and significant to the requested Primary Diagnosis.

The Case Fit API requires a billable ICD-9-CM or ICD-10-CM medical diagnosis code. When a predicted duration is available, the response will provide all of the Comorbid Group data and an indicator for whether the given Comorbid Group code is significant for the supplied Primary Diagnosis.

The Comorbid Group data describes the relationship of other comorbidities to the Primary Diagnosis. If a particular comorbid condition is a member of a Comorbid Group, the Case duration calculation will require the use of the Comorbid Group code rather than the specific comorbidity medical code. More information about the calculation can be found in the *Case API* specification. To obtain the Comorbid Group Code that a given comorbidity belongs to, use *Medical Code Search API*.

Terminology

| Term | Definition |
|---------------|---|
| Case Duration | A prediction for the length of disability of a case, based on a mathematical predictive model using MDGuidelines' Population Database of disability claims. |

| Term | Definition |
|------------------------|--|
| Case Frequency | A categorization for how frequently the Primary Diagnosis Code occurs within MDGuidelines' population database. Values are High, Medium, or Low. Diagnoses with a Low Case Frequency will not have a predicted Case Duration. See the Duration Views Help Resource for more details. |
| Comorbid Group | A group of comorbidities defined by Quan et al (2005) (see Duration Views Help Resource), to simplify the implementation of comorbidities. For more information see Comorbid Groups , below. |
| Primary Diagnosis Code | The primary diagnosis for the patient's condition. The Case Duration supports the use of diagnosis codes in ICD-9-CM or ICD-10-CM. Two-digit procedural ICD-9-CM codes are not supported. |

2 API Specification

This section documents the technical usage of the Case Fit 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 Request Parameters](#), below).

2.1 Endpoint

The Case Fit API endpoint is: <https://api.mdguidelines.com/api/v3/durations/case/fit/>

2.2 Authentication

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

2.3 Version Information

The current version of this API is v3. Old versions are no longer supported, effective February 17, 2024.

2.4 Request Parameters

| Data Element | Data Type | Req? | Data Element Description | Default Value |
|--------------|-----------|------|--|---------------|
| medicalCode | String | Yes | The medical code is provided as part of the end point URI. Case fit accepts ICD-9-CM or ICD-10-CM diagnosis values. Example: <code>/api/v3/durations/case/fit/354.0</code> | N/A |

2.5 Response

Data can be returned as JSON or XML.

If using XML, the XSD may be found here: <https://api.mdguidelines.com/xsd/CaseFitV3.xsd>

| Data Element | Data Type | Req? | Data Element Description |
|--------------|-----------|------|--------------------------|
|--------------|-----------|------|--------------------------|

| | | | |
|------------------------|---------|-----|---|
| ComorbidGroupRelevance | Complex | Yes | A complex data element providing data for Comorbid Groups and their relevance to the Primary Diagnosis Code requested. Elements included: Code Tool Name Description Examples Relevant |
| code | String | Yes | A short code for the Comorbid Group. Code values are needed to request the Case Prediction using comorbidities. See Comorbid Groups for possible values. |
| tool Name | String | Yes | Short description for the Comorbid Group. This value is displayed as the label in the Duration Views Case View tab in the MDGuidelines website. |
| description | String | Yes | A longer description for the Comorbid Group. |
| examples | String | Yes | A short list of examples of specific comorbid conditions which belong to the Comorbid Group. This can be used to guide user selection of Comorbid Groups. |
| relevant | Boolean | Yes | Indicator specifying whether the Comorbid Group has a significant effect on the predicted Case Duration for the Primary Diagnosis. Comorbid Group codes with relevant = false will have no effect on the overall predicted Case Duration. Values: true false |

2.6 Comorbid Groups

Comorbid conditions have been grouped into categories to simplify the implementation and use within the Duration Views tool.

| Tool Name | Description | Examples | Code |
|---------------------|---|---|--------------|
| AIDS/HIV | AIDS/HIV | Human immunodeficiency virus [HIV] disease | HIV |
| Alcohol Abuse | Alcohol abuse | Alcohol Dependence; Alcohol-induced persisting dementia; Alcohol induced sleep disorders | Alcohol |
| Arrhythmia | Cardiac arrhythmias | Atrioventricular block; Ventricular fibrillation and flutter; Atrial Fibrillation; Premature Beats | Arrhythmia |
| Blood Loss Anemia | Blood loss anemia | Iron deficiency anemia secondary to blood loss (chronic) | BloodLoss |
| CHF | Congestive heart failure | Rheumatic heart failure; Malignant hypertensive heart disease with heart failure | CHF |
| Coagulopathy | Coagulopathy | Coagulation defects; Primary thrombocytopenia | Coagulopathy |
| Deficiency Anemia | Deficiency anemia | Iron deficiency anemia secondary to inadequate dietary iron intake; Folate-deficiency anemia | Anemia |
| Depression | Depression | Major depressive disorder single episode; Adjustment reaction | Depression |
| DM | Diabetes, uncomplicated | Diabetes mellitus without mention of complication; Diabetes with ketoacidosis | DM |
| DM Complicated | Diabetes, complicated | Diabetes with renal manifestations; Diabetes with peripheral circulatory disorders | DMcx |
| Drug Abuse | Drug abuse | Drug dependence; Drug-induced mental disorders | Drugs |
| Fluid Disorder | Fluid and electrolyte disorders | Disorders of fluid electrolyte and acid-base balance; Disorders of neurohypophysis (posterior pituitary) | FluidsLytes |
| GI Ulcer | Peptic ulcer disease excluding bleeding | Chronic gastric ulcer without mention of hemorrhage or perforation; Chronic peptic ulcer of unspecified site without mention of hemorrhage or perforation | PUD |
| Heart Valve Disease | Cardiac valvular disease | Rheumatic aortic stenosis; Mitral stenosis | Valvular |
| HTN Complicated | Hypertension, complicated | Malignant hypertensive heart disease with heart failure; Malignant secondary hypertension | HTNcx |
| HTN Pulmonary | Pulmonary circulation disorders | Chronic pulmonary embolism; Aneurysm of pulmonary artery | PHTN |
| HTN Uncomplicated | Hypertension, uncomplicated | Malignant essential hypertension; Benign essential hypertension | HTN |
| Hypothyroid | Hypothyroidism | Congenital hypothyroidism; Iodine hypothyroidism | Hypothyroid |
| Liver Disease | Liver disease | Acute and subacute necrosis of liver; Chronic hepatitis | Liver |
| Lymphoma | Lymphoma | Lymphosarcoma and reticulosarcoma; Hodgkin disease; Non-Hodgkin Lymphoma | Lymphoma |
| Metastatic Cancer | Metastatic cancer | Secondary and unspecified malignant neoplasm of lymph nodes; Secondary malignant neoplasm of ovary | Mets |

| Tool Name | Description | Examples | Code |
|-------------------|--|--|------------|
| Obesity | Obesity | Obesity; Overweight | Obesity |
| Other Neuro | Other neurological disorders | Parkinson disease; Cerebral degeneration | NeuroOther |
| Paralysis | Paralysis | Flaccid hemiplegia; Quadriplegia and quadraparesis | Paralysis |
| Psychoses | Psychoses | Schizophrenic disorders; Delusional disorders | Psychoses |
| Pulmonary Disease | Chronic pulmonary disease | Chronic pulmonary heart disease; Asthma; Chronic Obstructive Pulmonary Disease (COPD). | Pulmonary |
| PVD | Peripheral vascular disorders | Atherosclerosis of aorta; Thoracic aneurysm | PVD |
| Renal Failure | Renal failure | Chronic kidney disease; Renal osteodystrophy | Renal |
| Rheumatologic | Rheumatoid arthritis/ collagen vascular diseases | Rheumatoid Arthritis; Polymyalgia rheumatica; Arthropathy in behcet syndrome | Rheumatic |
| Tumor | Solid tumor without metastasis | Malignant neoplasm of larynx; Malignant melanoma of skin | Tumor |
| Weight Loss | Weight loss | Protein-calorie malnutrition; Nutritional marasmus | WeightLoss |

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) |
|-------------|---|
| 400 | <p>Messages:</p> <ul style="list-style-type: none"> Invalid parameter specified: [<i>parameter name</i>] The following parameter is required: [<i>parameter name</i>] <p>Note: Currently there are no required parameters.</p> |
| 401 | <p>Message:</p> <ul style="list-style-type: none"> License code not authorized. <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> License key is expired License key is missing License key is otherwise invalid |

| Status Code | Cause(s) |
|-------------|---|
| 404 | <p>Message:</p> <ul style="list-style-type: none"> Supplied medical code not found: [<i>medicalCode</i>] <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> Invalid medical code Medical code is of a non-supported type (e.g, CPT or ICD-10-PCS) |
| 406 | <p>Message:</p> <ul style="list-style-type: none"> Case prediction not available for [<i>medicalCode</i>] due to insufficient records or low return to work probability (<75%). <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> The primary diagnosis Case Frequency is less than Medium (i.e., < 100 records). The primary diagnosis has a Medium or High Case Frequency, however the population statistic for probability that the case returns to full duty is less than 75%. In this case a prediction would be unreliable because of the significant number of cases not returning to full duty. |
| 500 | If the server, API site, or this service failed, the response will be a 500 Server error. |

2.8 Testing

MDGuidelines offers a test harness for integration testing:

<https://api.mdguidelines.com/help/durationsCaseFit-v3.html>

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

2.9 Sample Code

JQUERY

```
var uri = "https://api.mdguidelines.com/api/v3/durations/case/fit/";
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 |
|------------|-----------------------------------|------------------|
| 4/18/2017 | Initial Version | 1.0 |
| 05/22/2017 | Fixed UAT end point URL. | 1.1 |
| 06/08/2017 | Removed DRAFT status; no changes. | 1.2 |
| 08/23/2017 | Updated link to help page. | 1.3 |
| 12/6/2023 | Minor Changes and Corrections | 1.4 |