



# **MDGuidelines® API: Case Fit v3 Specification 1.4**

**Date: January 12, 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 <a href="#">Duration Views Help Resource</a> for more details.
Comorbid Group	A group of comorbidities defined by Quan et al (2005) (see <a href="#">Duration Views Help Resource</a> ), to simplify the implementation of comorbidities. For more information see <a href="#">Comorbid Groups</a> , 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 stable version of this API is v3.

The currently supported version(s) of this API are:

Version	Support End Date
v3	N/A

API product enhancements providing new response elements will require customers to upgrade in order to take advantage of the new capabilities. However, additional request parameters and/or enhanced algorithms or data in the response elements will not require an upgrade. Changes to data responses will be communicated at least 30 days in advance of publication.

## 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 <a href="#">Comorbid Groups</a> 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"> <li>Invalid parameter specified: [<i>parameter name</i>]</li> <li>The following parameter is required: [<i>parameter name</i>]</li> </ul> <p>Note: Currently there are no required parameters.</p>
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>

Status Code	Cause(s)
404	<p>Message:</p> <ul style="list-style-type: none"> <li>Supplied medical code not found: [<i>medicalCode</i>]</li> </ul> <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> <li>Invalid medical code</li> <li>Medical code is of a non-supported type (e.g, CPT or ICD-10-PCS)</li> </ul>
406	<p>Message:</p> <ul style="list-style-type: none"> <li>Case prediction not available for [<i>medicalCode</i>] due to insufficient records or low return to work probability (&lt;75%).</li> </ul> <p>This response will be returned in the following scenarios:</p> <ul style="list-style-type: none"> <li>The primary diagnosis Case Frequency is less than Medium (i.e., &lt; 100 records).</li> <li>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.</li> </ul>
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

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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
1/2/2023	Minor Changes and Corrections	1.4