IntegraConnect

FHIR Patient Resource API Guide

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Patient

Reference: https://www.hl7.org/FHIR/R4/patient.html

The Patient resource contains demographics and other administrative information about an individual receiving care or other health-related services at a health organization.

API endpoints

Action	Method	URL
Save	POST	https://portal.minerva.integracloud.com/minerva/fhir/r4/Patient
Update	PUT	https://portal.minerva.integracloud.com/minerva/fhir/r4/Patient/<id>
Read	GET	https://portal.minerva.integracloud.com/minerva/fhir/r4/Patient/<id>
Search	GET	https://portal.minerva.integracloud.com/minerva/fhir/r4/Patient?<key>=<value>

Headers

Key	Value	Description	Required
Content-Type	application/json	The format in which the data is requested. Default – application/json	Optional
Authorization	Bearer 96pkcpldem1vgejr	The Minerva X-auth-token. Format – Bearer <minerva-auth-token>	Required

API structure table

This table shows the resource as a tree structure with the following columns:

Column	Content
Name	The name of the element in the resource. If names ends with "[x]", then the type will be a list of data type options. "[x]" is replaced with the title-cased name of the type that is used.
Cardinality*	The lower and upper bounds on how many times this element can appear in the resource.
Type	The type of the element. If the element has children, then the element has an anonymous type that specializes the given type.
Description	A description of the element, and details about constraints that are applied to it. Particularly, for coded elements, information about which codes can be used.

Cardinality	Means	Where
0 – 1	Can occur once or not at all	• 0 indicates that the specified node does not necessarily occur.
		• 1 indicates that if the specified node does occur, it can occur only once.
0 – ¬	Can occur many times or not at all	• 0 indicates that the specified node does not necessarily occur.
		• ¬ indicates that if the specified node does occur, it can occur up to n times • where n is a positive integer that is defined via a Map.

Cardinality	Means	Where
1 – 1	Must occur once and only once	• The first 1 indicates that the specified node must occur.
		• The second 1 indicates that the specified node can occur only once.
1 – ¬	Must occur at least once but can occur many times	• 1 indicates that the specified node must occur at least once.
		• ¬ indicates that the specified node can occur up to n times, where n is a positive integer that is defined using a Map.

Tree structure

Element Name		Cardinality	Type	Description
identifier		0..*	Identifier	An identifier for this patient
active		0..1	boolean	Whether this patient's record is in active use
name		0..*	HumanName	A name associated with the patient
telecom		0..*	ContactPoint	A contact detail for the individual
gender		0..1	code	male | female | other | unknown AdministrativeGender
birthDate		0..1	date	The date of birth for the individual
deceased[x]		0..1		Indicates if the individual is deceased or not
	deceasedBoolean		boolean	
	deceasedDateTime		dateTime	
address		0..*	Address	An address for the individual
maritalStatus		0..1	CodeableConcept	Marital (civil) status of a patient MaritalStatus
multipleBirth[x]		0..1		Whether patient is part of a multiple birth
	multipleBirthBoolean		boolean	
	multipleBirthInteger		integer	
photo		0..*	Attachment	Image of the patient
contact		0..*	BackboneElement	A contact party (e.g. guardian, partner, friend) for the patient
	relationship	0..*	CodeableConcept	The kind of relationship Patient Contact Relationship
	name	0..1	HumanName	A name associated with the contact person
	telecom	0..*	ContactPoint	A contact detail for the person
	address	0..1	Address	Address for the contact person
	gender	0..1	code	male | female | other | unknown AdministrativeGender
	organization	0..1	Reference(Organization)	Organization that is associated with the contact
	period	0..1	Period	The period during which this contact person or organization is valid to be contacted relating to this patient

Element Name		Cardinality	Type	Description
communication		0..*	BackboneElement	A language which may be used to communicate with the patient about his or her health
	language	1..1	CodeableConcept	The language which can be used to communicate with the patient about his or her health
	preferred	0..1	boolean	Language preference indicator
generalPractitioner		0..*	Reference (Organization | Practitioner | PractitionerRole)	Patient's nominated primary care provider
managingOrganization		0..1	Reference(Organization)	Organization that is the custodian of the patient record
link		0..*	BackboneElement	Link to another patient resource that concerns the same actual person
	other	1..1	Reference (Patient | RelatedPerson)	The other patient or related person resource that the link refers to
	type	1..1	code	replaced-by | replaces | refer | see also LinkType

Note: For more information on data elements, please see the FHIR R4 Data Elements guide.

Sample JSON

```
{
  "resourceType": "Patient",
  "id": "1",
  "identifier": [
    {
      "use": "usual",
      "system": "urn:oid:2.16.840.1.113883.2.4.6.3",
      "type": {
        "coding": [
          {
            "code": "MR"
          }
        ],
        "text": "MRN"
      },
      "value": "738472983"
    }
  ],
  "active": true,
  "name": [
    {
      "use": "usual",
      "family": "van de Heuvel",
      "given": [
        "Pieter"
      ],
      "suffix": [
        "MSc"
      ]
    }
  ],
  "telecom": [
    {
      "system": "phone",
      "value": "0648352638",
      "use": "mobile"
    },
    {
      "system": "email",
      "value": "p.heuvel@gmail.com",
      "use": "home"
```

```
    }
  ],
  "gender": "male",
  "birthDate": "1944-11-17",
  "deceasedBoolean": false,
  "address": [
    {
      "use": "home",
      "line": [
        "Van Egmondkade 23"
      ],
      "city": "Amsterdam",
      "postalCode": "1024 RJ",
      "country": "NLD"
    }
  ],
  "maritalStatus": {
    "coding": [
      {
        "system": "http://terminology.hl7.org/CodeSystem/v3-MaritalStatus",
        "code": "M",
        "display": "Married"
      }
    ],
    "text": "Getrouwd"
  },
  "multipleBirthBoolean": true,
  "contact": [
    {
      "relationship": [
        {
          "coding": [
            {
              "system": "http://terminology.hl7.org/CodeSystem/v2-0131",
              "code": "C"
            }
          ],
          "text": "Emergency Contact"
        }
      ],
      "name": {
        "use": "usual",
        "family": "Abels",
        "given": [
          "Sarah"
        ]
      },
      "telecom": [
        {
          "system": "phone",
          "value": "0690383372",
          "use": "mobile"
        }
      ]
    }
  ],
  "communication": [
    {
      "language": {
        "coding": [
          {
            "system": "urn:ietf:bcp:47",
            "code": "en-us",
            "display": "American English"
          }
        ],
        "text": "American English"
      },
      "preferred": true
    }
  ],
  "managingOrganization": {
    "reference": "Organization/1"
  }
}
```

Query parameters

This section lists the search parameters for this resource. The common parameters also apply.

Please see the FHIR R4 Search Guide for more detail on usage of query parameters.

Name (Key)	Type	Description	Expression
active	token	Whether the patient record is active	Patient.active
birthdate	date	The patient's date of birth	Patient.birthDate
death-date	date	The date of death has been provided and satisfies this search value	(Patient.deceased as dateTime)
deceased	token	This patient has been marked as deceased, or as a death date entered	Patient.deceased.exists() and Patient.deceased != false
email	token	A value in an email contact	Patient.telecom.where (system='email')
family	string	A portion of the family name of the patient	Patient.name.family
gender	token	Gender of the patient	Patient.gender
general-practitioner	reference	Patient's nominated general practitioner, not the organization that manages the record	Patient.generalPractitioner (Practitioner, Organization, PractitionerRole)
phone	token	A value in a phone contact.	Patient.telecom.where (system='phone')
given	string	A portion of the given name of the patient	Patient.name.given
identifier	token	A patient identifier	Patient.identifier
language	token	Language code (irrespective of use value)	Patient.communication.language
link	reference	All patients linked to the given patient	Patient.link.other (Patient, RelatedPerson)
name	string	A server defined search that match text	Patient.name
organization	reference	The organization that is the custodian of the patient record	Patient.managingOrganization (Organization)
phone	token	A value in a phone contact	Patient.telecom.where (system='phone')
telecom	token	The value in any kind of telecom details of the patient	Patient.telecom

Note: Here **Expression** refers to the key in the API structure where the search will be performed.

_include parameters

_include parameter is used to request the engine to return resources related to the search results.

Name (Key)	Expression
general-practitioner	Patient.generalPractitioner (Practitioner, Organization, PractitionerRole)
link	Patient.link.other (Patient, RelatedPerson)
organization	Patient.managingOrganization (Organization)

Service Base URL

Following are the publicly accessible URL that consists a list of all the service base URLs and related organizational details that can be used by the patients to access their electronic health information. All the FHIR resources supported are listed here.

Description	URL
USCORE Service Base URL	https://portal.minerva.integracloud.com/minerva/fhir/r4/us-core/bundle
R4 Service Base URL	https://portal.minerva.integracloud.com/minerva/fhir/r4/bundle