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# Resource type: Medication

## Description

This resource is primarily used for the identification and definition of a medication for the purposes of prescribing, dispensing, and administering a medication as well as for making statements about medication use.

## Elements

|  |  |  |  |
| --- | --- | --- | --- |
| **Path** | **Short** | **Definition** | **Comments** |
|  | Definition of a Medication | This resource is primarily used for the identification and definition of a medication for the purposes of prescribing, dispensing, and administering a medication as well as for making statements about medication use. |  |
| code | Codes that identify this medication | A code (or set of codes) that specify this medication, or a textual description if no code is available. Usage note: This could be a standard medication code such as a code from RxNorm, SNOMED CT, IDMP etc. It could also be a national or local formulary code, optionally with translations to other code systems. | Depending on the context of use, the code that was actually selected by the user (prescriber, dispenser, etc.) will have the coding.userSelected set to true. As described in the coding datatype: "A coding may be marked as a "userSelected" if a user selected the particular coded value in a user interface (e.g. the user selects an item in a pick-list). If a user selected coding exists, it is the preferred choice for performing translations etc. Other codes can only be literal translations to alternative code systems, or codes at a lower level of granularity (e.g. a generic code for a vendor-specific primary one). |
| status | active | inactive | entered-in-error | A code to indicate if the medication is in active use. | This status is intended to identify if the medication in a local system is in active use within a drug database or inventory. For example, a pharmacy system may create a new drug file record for a compounded product "ABC Hospital Special Cream" with an active status. At some point in the future, it may be determined that the drug record was created with an error and the status is changed to "entered in error". This status is not intended to specify if a medication is part of a particular formulary. It is possible that the drug record may be referenced by multiple formularies or catalogues and each of those entries would have a separate status. |
| manufacturer | Manufacturer of the item | Describes the details of the manufacturer of the medication product. This is not intended to represent the distributor of a medication product. |  |
| form | powder | tablets | capsule + | Describes the form of the item. Powder; tablets; capsule. | When Medication is referenced from MedicationRequest, this is the ordered form. When Medication is referenced within MedicationDispense, this is the dispensed form. When Medication is referenced within MedicationAdministration, this is administered form. |
| amount | Amount of drug in package | Specific amount of the drug in the packaged product. For example, when specifying a product that has the same strength (For example, Insulin glargine 100 unit per mL solution for injection), this attribute provides additional clarification of the package amount (For example, 3 mL, 10mL, etc.). |  |
| ingredient | Active or inactive ingredient | Identifies a particular constituent of interest in the product. | The ingredients need not be a complete list. If an ingredient is not specified, this does not indicate whether an ingredient is present or absent. If an ingredient is specified it does not mean that all ingredients are specified. It is possible to specify both inactive and active ingredients. |
| ingredient.id | xml:id (or equivalent in JSON) | Unique id for the element within a resource (for internal references). This may be any string value that does not contain spaces. |  |
| ingredient.extension | Additional content defined by implementations | May be used to represent additional information that is not part of the basic definition of the element. In order to make the use of extensions safe and manageable, there is a strict set of governance applied to the definition and use of extensions. Though any implementer is allowed to define an extension, there is a set of requirements that SHALL be met as part of the definition of the extension. | There can be no stigma associated with the use of extensions by any application, project, or standard - regardless of the institution or jurisdiction that uses or defines the extensions. The use of extensions is what allows the FHIR specification to retain a core level of simplicity for everyone. |
| ingredient.modifierExtension | Extensions that cannot be ignored | May be used to represent additional information that is not part of the basic definition of the element, and that modifies the understanding of the element in which it is contained. Usually modifier elements provide negation or qualification. In order to make the use of extensions safe and manageable, there is a strict set of governance applied to the definition and use of extensions. Though any implementer is allowed to define an extension, there is a set of requirements that SHALL be met as part of the definition of the extension. Applications processing a resource are required to check for modifier extensions. | There can be no stigma associated with the use of extensions by any application, project, or standard - regardless of the institution or jurisdiction that uses or defines the extensions. The use of extensions is what allows the FHIR specification to retain a core level of simplicity for everyone. |
| ingredient.item[x] | The product contained | The actual ingredient - either a substance (simple ingredient) or another medication. |  |
| ingredient.isActive | Active ingredient indicator | Indication of whether this ingredient affects the therapeutic action of the drug. |  |
| ingredient.amount | Quantity of ingredient present | Specifies how many (or how much) of the items there are in this Medication. For example, 250 mg per tablet. This is expressed as a ratio where the numerator is 250mg and the denominator is 1 tablet. |  |
| batch | Details about packaged medications | Information that only applies to packages (not products). |  |
| batch.id | xml:id (or equivalent in JSON) | Unique id for the element within a resource (for internal references). This may be any string value that does not contain spaces. |  |
| batch.extension | Additional content defined by implementations | May be used to represent additional information that is not part of the basic definition of the element. In order to make the use of extensions safe and manageable, there is a strict set of governance applied to the definition and use of extensions. Though any implementer is allowed to define an extension, there is a set of requirements that SHALL be met as part of the definition of the extension. | There can be no stigma associated with the use of extensions by any application, project, or standard - regardless of the institution or jurisdiction that uses or defines the extensions. The use of extensions is what allows the FHIR specification to retain a core level of simplicity for everyone. |
| batch.modifierExtension | Extensions that cannot be ignored | May be used to represent additional information that is not part of the basic definition of the element, and that modifies the understanding of the element in which it is contained. Usually modifier elements provide negation or qualification. In order to make the use of extensions safe and manageable, there is a strict set of governance applied to the definition and use of extensions. Though any implementer is allowed to define an extension, there is a set of requirements that SHALL be met as part of the definition of the extension. Applications processing a resource are required to check for modifier extensions. | There can be no stigma associated with the use of extensions by any application, project, or standard - regardless of the institution or jurisdiction that uses or defines the extensions. The use of extensions is what allows the FHIR specification to retain a core level of simplicity for everyone. |
| batch.lotNumber | Identifier assigned to batch | The assigned lot number of a batch of the specified product. |  |
| batch.expirationDate | When batch will expire | When this specific batch of product will expire. |  |
| batch.serialNumber | Identifier assigned to a drug at the time of manufacture | An identifier assigned to a drug at the point of manufacturing and repackaging (at the package or pallet level), sufficient to facilitate the identification, validation, authentication, and tracking of drugs. |  |

## Scope and Usage

Representing medications in the majority of healthcare settings is a matter of identifying an item from a list and then conveying a reference for the item selected either into a patient-related resource or to other applications. Additional information about the medication is frequently provided for human verification, but a full representation of the details of composition and efficacy of the medicine is conveyed by referring to drug dictionaries by means of the codes they define. There are some occasions where it is necessary to identify slightly more detail, such as when dispensing a package containing a particular medication requires identification both of the medicine and the package at once. There are also some occasions (e.g. custom formulations) where the composition of a medicine must be represented. In these cases the ingredients of the medicine have to be specified together with the amount contained, though the Medication resource does not provide full details.

The Medication resource allows for medications to be characterized by the form of the drug and the ingredient (or ingredients) as well as how it is packaged. The medication will include the ingredient(s) and their strength(s) and the package can include the amount (for example, number of tablets, volume, etc.) that is contained in a particular container (for example, 100 capsules of Amoxicillin 500mg per bottle).

The Medication resource can be used to describe a compounded (aka extemporaneous or magistral) product that is manufactured by the pharmacy at the time of dispensing. In this case there will be multiple ingredients which are typically base chemicals (for example, hydrocortisone powder) and there may be other ingredients that are manufactured products (for example, Glaxal Base).

When a medication includes a package, further details about the composition can be provided. A package has a container (vacuum packed box, jar, etc.) and a list of the products or other packages that are in the package.

## Best practices for using 'Medication'

Medication does not have a status. If Medication was used to support a formulary use case, then an extension can be used to convey formulary statuses, such as active (e.g. the medication can be ordered) or inactive (e.g. the medication can be documented, but not ordered). Pharmacy is evaluating formulary use cases. Feedback is encouraged to the Pharmacy working group.

## Search Parameters

|  |  |  |
| --- | --- | --- |
| code | Multiple Resources: \* [Medication](medication.html): Codes that identify this medication \* [MedicationRequest](medicationrequest.html): Return prescriptions of this medication code \* [MedicationAdministration](medicationadministration.html): Return administrations of this medication code \* [MedicationStatement](medicationstatement.html): Return statements of this medication code \* [MedicationDispense](medicationdispense.html): Return dispenses of this medicine code  | Medication.code | MedicationRequest.medication.as(CodeableConcept) | MedicationAdministration.medication.as(CodeableConcept) | MedicationStatement.medication.as(CodeableConcept) | MedicationDispense.medication.as(CodeableConcept) |
|  |  |  |
| expiration-date | When batch will expire | Medication.batch.expirationDate |
|  |  |  |
| form | powder | tablets | capsule + | Medication.form |
|  |  |  |
| ingredient | The product contained | Medication.ingredient.item.as(Reference) |
|  |  |  |
| ingredient-code | The product contained | Medication.ingredient.item.as(CodeableConcept) |
|  |  |  |
| lot-number | Identifier assigned to batch | Medication.batch.lotNumber |
|  |  |  |
| manufacturer | Manufacturer of the item | Medication.manufacturer |
|  |  |  |
| serial-number | Identifier assigned to a drug at the time of manufacture | Medication.batch.serialNumber |
|  |  |  |
| status | active | inactive | entered-in-error | Medication.status |
|  |  |  |

## Extension Definitions

*These are extension definitions for this resource defined by the specification.*