**Argonaut vs. IPS: A Compare and Contrast between Two FHIR Implementation Guides**

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| Logical Observation Identifiers Names & Codes (LOINC) | Regenstrief Institute |
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# Abstract

This white paper describes the main similarities and differences between two implementation guides that detail how to use the FHIR standard to transfer patient data: the US-based Argonaut Data Query implementation guide (Argonaut) and the international-based International Patient summary implementation guide (IPS). This paper includes a detailed list of the differences between the two guides in terms of FHIR resources used, required elements, vocabularies, constraints, REST interactions and operations—and more.

# Introduction

FHIR (Fast Healthcare Interoperability Resources) is a standard for exchanging healthcare information electronically. FHIR is being developed by [HL7](http://www.hl7.org/) (Health Level Seven International), an organization dedicated to developing standards for exchanging, integrating, sharing, and retrieving electronic health information in support of its vision: “a world in which everyone can securely access and use the right health data when and where they need it.”

Achieving HL7’s global interoperability vision requires using the FHIR standard to transfer patient data between different entities and across jurisdictions—an ability that’s aided by effective implementation guides. This white paper examines the similarities and differences between two prominent FHIR implementation guides:

* U.S.-based Argonaut. The original [Argonaut Data Query implementation guide](http://www.fhir.org/guides/argonaut/r2/), i.e., Argonaut, profiles the FHIR DSTU2 specifications. The current version of Argonaut, the [US Core implementation guide](http://www.hl7.org/fhir/us/core/), profiles the FHIR STU3 and R4 specifications.
* International-based IPS. The original [International Patient Summary implementation guide](http://international-patient-summary.net/mediawiki/index.php?title=IPS_implementationguide_1), i.e., IPS, profiles the clinical document architecture (CDA) R2 specifications. The current version of [IPS](http://hl7.org/fhir/uv/ips/2018May/index.html), having been ported to the FHIR world, profiles the FHIR STU3 and R4 specifications.

This detailed compare-and-contrast paper documents key differences between [IPS version 0.1.0](http://www.hl7.org/fhir/uv/ips/2018May/) and [Argonaut 2.0.0](http://hl7.org/fhir/us/core/STU2/) (the most recent published versions that profile FHIR STU3), and [IPS version 0.2.0](http://www.hl7.org/fhir/uv/ips/2018Sep/) and [Argonaut 2.1.0](http://hl7.org/fhir/us/core/2019Jan/) (the most recent published versions that profile FHIR R4). This paper explains their differences in terms of goals, must-support elements, restrictiveness, negation, profiled data types, extensions, and more. (These differences are also captured in appendix A and an [Excel spreadsheet](https://gforge.hl7.org/gf/project/enhanceccdaimpl/docman/Compare%20IPS%20and%20Argonaut%20US%20Core%20IGs/IPS-Argonaut.xlsx).)

Overall, there are many differences between IPS and Argonaut, many of which can be traced back to their different goals.

# Goals: While IPS Is Strictly Clinical, Argonaut Casts a Wider Net

IPS’s goal is specific: “minimal and non-exhaustive patient summary dataset, specialty-agnostic, condition-independent, but readily usable by clinicians for the cross-border unscheduled care of a patient.” Argonaut’s goal is broad: “minimum conformance requirements for accessing patient data.”

This difference in goals is reflected in each guide’s choice of profiled resources: strictly clinical for IPS and both clinical and non-clinical (e.g., care plans) for Argonaut. IPS and Argonaut approach patient data from two different perspectives—their core differences, outlined throughout this paper, stem from these contrasting viewpoints.

# Document vs. API Approach to Data Transfer

On one hand, coming from the CDA world, IPS defines a FHIR document structure but doesn’t specify how the resulting documents are exchanged. Argonaut, on the other hand, explicitly defines the actors exchanging the data and specifies how the FHIR REST API can be used to query specific profiled resources.

While IPS requires a single document containing all the information (without the option to pick and choose for the recipient), REST-based Argonaut supports transferring specific resources; for example, a client (US core requestor) can request a single observation. The IPS document format lends itself to asynchronous or off-band transfer: email attachments, (S)FTP, and even thumb drives. The Argonaut API approach requires the recipient to have a direct network connection with the data source.

# Different Takes on “Must Support” Elements

Both IPS and Argonaut mark certain elements as “must support,” but their definitions are different:

* IPS’s [broad definition](http://hl7.org/fhir/uv/ips/2018May/general.html#profiling-approach-mustsupport): “flag the items that have to be supported to comply with the minimal data set, unconstraining all the others.”
* Argonaut’s [specific definition](http://hl7.org/fhir/us/core/STU2/guidance.html#must-support):
	+ US Core Responders SHALL be capable of including the data element as part of the query results as specified by the US Core Server Capability Statement.
	+ US Core Requestors SHALL be capable of processing resource instances containing the data elements without generating an error or causing the application to fail. In other words, US Core Requestors SHOULD be capable of displaying the data elements for human use or storing it for other purposes.
	+ In situations where information on a particular data element is not present and the reason for absence is unknown, US Core Responders SHALL NOT include the data elements in the resource instance returned as part of the query results.
	+ When querying US Core Responders, US Core Requestors SHALL interpret missing data elements within resource instances as data not present in the US Core Responder’s systems.
	+ In situations where information on a particular data element is missing and the US Core Responder knows the precise reason for the absence of data, US Core Responders SHALL send the reason for the missing information using values (such as nullFlavors) from the value set where they exist or using the dataAbsentReason extension.
	+ US Core Requestors SHALL be able to process resource instances containing data elements asserting missing information

This difference in definitions means that a “must support” element in IPS is somewhere between “optional” and “must support” in Argonaut. “Must support” elements are more likely to be missing or unused in IPS than in Argonaut.

# Restrictiveness

In general, IPS is more restrictive than Argonaut: elements that are required in IPS are often only “must support” or outright optional in Argonaut; for example, AllergyIntolerance.onsetDateTime, Condition.clinicalStatus, Condition.onsetDateTime, and Organization.type are all required in IPS but optional or “must support” in Argonaut.

This is not always the case, however; for example, Patient.identifier is optional in IPS but required in Argonaut. IPS also prohibits some elements, whereas Argonaut does not.

It is more likely that IPS-conformant data also conforms with Argonaut than vice versa—but there are no guarantees that this will be the case.

# Negation

IPS defines a way to specify that the patient does *not* have something:

* No allergy information (unknown); no allergies in general; or specifically no medication, environmental, or food allergies: using codes from the [absent-or-unknown-allergies](http://hl7.org/fhir/uv/ips/2018Sep/ValueSet-absent-or-unknown-allergies-uv-ips.html) value set in Allergy.code.
* Unknown or no known conditions (problems): using codes from the [absent-or-unknown-problems](http://hl7.org/fhir/uv/ips/2018Sep/ValueSet-absent-or-unknown-problems-uv-ips.html) values set in Condition.code.
* Unknown or no known vaccinations: using codes from the [absent-or-unknown-immunization](http://hl7.org/fhir/uv/ips/2018Sep/ValueSet-absent-or-unknown-immunization-uv-ips.html) value set in Immunization.vaccineCode.
* Unknown or no known medications: using codes from the [absent-or-unknown-medication](http://hl7.org/fhir/uv/ips/2018Sep/ValueSet-absent-or-unknown-medication-uv-ips.html) value set in MedicationStatement.medicationCodeableConcept.
* Unknown or no known procedures: using codes from the [absent-or-unknown-procedure](http://hl7.org/fhir/uv/ips/2018Sep/ValueSet-absent-or-unknown-procedures-uv-ips.html)s value set in Procedure.code.

Argonaut does not spell out how to express negation, but being a REST API, it typically will not return any resources in the “unknown” cases. It can use the SNOMED codes for “no known allergy,” “no known problems,” and “no known procedures,” and the CVX code for “no vaccine administered” to express negation for these resources.

Although IPS and Argonaut are more different than alike, they do share some similarities regarding main value sets.

# Main Value Sets

In both IPS and Argonaut, **allergies** and **conditions** are coded using **SNOMED** (as described in the previous section, IPS uses a custom value set to express negation).

In IPS, **procedures** are coded using **SNOMED** (IPS uses a custom value set to express negation). In Argonaut, procedures are coded using either **SNOMED** or **CPT**.

In both IPS and Argonaut, **observations** are coded using **LOINC**.

In IPS, **immunizations** (vaccines) and **medications** are coded according to the [identification of medicinal products](https://www.ema.europa.eu/en/human-regulatory/overview/data-medicines-iso-idmp-standards-overview) (IDMP) standard and the [WHO ATC classification](https://www.whocc.no/atc/structure_and_principles/) (using different coding elements for the various IDMP sub-standards and the WHO classification), plus a custom value set to express negation. In Argonaut, immunizations are coded using **CVX** and medications are coded using **RxNorm**.

There are a few additional notable differences between Argonaut and IPS:

* The patient name and identifier are optional in IPS but required in Argonaut.
* **MedicationStatement** can express the medication as a reference or CodeableConcept in Argonaut, but only as a reference in IPS (unless it’s a negation [unknown or no medication] case).
* The Reference.identifier element is generally prohibited in IPS but optional in Argonaut.
* IPS profiles **Observation** to convey pregnancy-related data (expected delivery date, status, outcome); there is no equivalent profiling in Argonaut, which can represent the same data with either **Condition** or **Observation.**
* IPS profiles Observation to describe patient alcohol use; there is no equivalent profiling in Argonaut.

# Profiled Data Types

IPS profiles **CodeableConcept** and **coding**, explicitly specifying the [translation extension](http://hl7.org/fhir/languages.html) for Coding.display. It is a standard extension, so Argonaut implementations can use it as well. IPS also profiles **Narrative**, adding an [IPS-specific extension](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-translateddiv-uv-ips.html) specifying translations for the narrative. This profiled narrative is used for Composition.section.text, for which there is no Argonaut correspondent.

IPS profiles **Quantity**, **Range**, and **Ratio**, requiring that a measurement unit is specified and uses [UCUM](http://unitsofmeasure.org/) units. Argonaut uses UCUM as well, but specifies it as an invariant, only for quantity and only if a measurement unit system is specified (i.e., not having a system is valid in Argonaut, but not in IPS).

Argonaut does not explicitly profile any data type but does define one extension that applies to the **ContactPoint** data type.

When it comes to extensions, there are differences between Argonaut and IPS.

# Extensions

Argonaut defines the following extensions, each with no IPS equivalent:

* us-core-[race](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-race.html) and us-core-[ethnicity](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-ethnicity.html), specifying a patient’s race and ethnicity respectively—two very US-centric pieces of data.
* us-core-[birthsex](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-birthsex.html), specifying a patient’s sex at birth as opposed to the administrative gender specified by the standard Patient.gender element.
* [us-core-direct](http://www.hl7.org/fhir/us/core/StructureDefinition-us-core-direct.html), specifying whether an email in Patient.telecom, Practitioner.telecom, or Organization.telecom (all **ContactPoint**) is a direct address.

IPS defines the following extensions, each with no Argonaut equivalent:

* [Translations](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-translateddiv-uv-ips.html) for a narrative, as described in the previous section about profiled data types.
* [Abatement date](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-abatement-dateTime-uv-ips.html) of an allergy.
* [Preferred practitioner or organization](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-participant-uv-ips.html) to be contacted for a patient (applies to the whole composition—not to the patient resource).
* [Details about a statement](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-statement-uv-ips.html) on a resource.

# Resources Profiled in Argonaut, but Not IPS

There are several FHIR resources that are profiled in Argonaut, but not IPS:

* **CarePlan**, **CareTeam**, **Goal**, **Encounter**, **Location**, and **PractitionerRole**: Since they aren’t strictly clinical data, they’re out of scope for IPS.
* **DocumentReference**—US Core DocumentReference Profile: Since this isn’t relevant in a summary, especially one that is delivered as a document, it’s out of scope for IPS.
* **DocumentReference**—[New US Core DocumentReference Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-new-us-core-documentreference.html) (clinical notes): IPS can use observation to represent clinical notes.
* **MedicationRequest**: IPS uses **MedicationStatement**, which conveys the same information (medication used by the patient) within a summary.
* **DiagnosticReport**—US Core Diagnostic Report Profile: IPS uses observation with children for the same purpose of grouping lab results.
* **DiagnosticReport**—[New US Core Diagnostic Report Profile for Report and Note exchange](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-new-us-core-diagnosticreport.html): IPS uses observation and ImagingStudy to represent textual and imaging reports.

# Resources Profiled in IPS, but Not Argonaut

There are several resources that are profiled in IPS, but not Argonaut:

* **DeviceUseStatement** (only for FHIR STU3): IPS makes the distinction between the statement that a device is being used and the device description itself (device resource). Argonaut only uses the device description.
* **Composition**: This does not apply to Argonaut because it is API-based.
* **ImagingStudy**: Argonaut represents imaging data using **DiagnosticReport** in FHIR R4; it does not profile imaging data for FHIR STU3.
* **Specimen**: this data is not profiled in Argonaut.

# IPS Resource Profiles with No Argonaut Correspondent

There are also many IPS resource profiles without a corresponding Argonaut profile:

* [Device-observer](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-device-observer-uv-ips.html): the device used to gather clinical data is not profiled in Argonaut. Argonaut only profiles implanted devices.
* [Device use statement](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-deviceusestatement-uv-ips.html) (only for FHIR R4): IPS makes the distinction between the statement that a device is being used and the device description itself. Argonaut only uses the device description.
* [Observation-attachment](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-attachment-uv-ips.html) (only for FHIR STU3): generic attachments like PDF or HTML go in DiagnosticReport.presentedForm in Argonaut.
* [Observation media](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-media-uv-ips.html) (only for FHIR R4): media attachments go in DiagnosticReport.presentedForm in Argonaut.
* [Observation-pathology](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-pathology-uv-ips.html), [Observation-member-pathology](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-member-pathology-uv-ips.html): expressed using lab observation in Argonaut.
* [Observation-member-laboratory](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-member-laboratory-uv-ips.html): equivalent to lab observation in Argonaut. IPS uses a parent observation to group lab results and Argonaut uses **DiagnosticReport**.
* [Observation-alcoholUse](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-alcoholuse-uv-ips.html): alcohol use is not explicitly profiled in Argonaut.
* [Observation-imaging](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-imaging-uv-ips.html), [Observation-member-imaging](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-member-imaging-uv-ips.html): imaging data is represented using **DiagnosticReport** in Argonaut for FHIR R4; it is not profiled in Argonaut for FHIR STU3.
* [Observation-pregnancy-edd](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-pregnancy-edd-uv-ips.html), [Observation-pregnancy-outcome](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-pregnancy-outcome-uv-ips.html), [Observation-pregnancy-status](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-pregnancy-status-uv-ips.html): pregnancy data is not profiled in Argonaut.

# Conclusion

IPS and Argonaut have the same broad objective—to support sharing healthcare data—but as things currently stand, their contrasting architecture and goals make them very different and incompatible. In particular, their document versus API approaches, dissimilar use of resources (e.g., Observation versus DiagnosticReport), and vocabulary differences (e.g., IDPM versus RxNorm) make interoperability between systems supporting the two implementation guides challenging.

# Appendix A: [IPS vs. Argonaut Spreadsheet](https://gforge.hl7.org/gf/project/enhanceccdaimpl/docman/Compare%20IPS%20and%20Argonaut%20US%20Core%20IGs/IPS-Argonaut.xlsx)

|  |  |  |  |
| --- | --- | --- | --- |
| **STU3** | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/profiles.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/) |  |
| **Resource** | **Profile** | **Profile** |   |
| AllergyIntolerance | [AllergyIntolerance-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-allergyintolerance-uv-ips.html) | [US Core AllergyIntolerance Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-allergyintolerance.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'AllergyIntolerance - STU3'!A1) |
| CarePlan |   | [US Core CarePlan Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-careplan.html) |   |
| CareTeam |   | [US Core CareTeam Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-careteam.html) |   |
| Composition | [Composition-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-composition-uv-ips.html) |   |   |
| Condition | [Condition-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-condition-uv-ips.html) | [US Core Condition (a.k.a Problem) Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-condition.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Condition - STU3'!A1) |
| Device | [device-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-device-uv-ips.html) | [US Core Device Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-device.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Device - STU3'!A1) |
|   | [Device-observer-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-device-observer-uv-ips.html) |   |   |
| DeviceUseStatement | [DeviceUseStatement-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-deviceusestatement-uv-ips.html) |   |   |
| DiagnosticReport |   | [US Core DiagnosticReport Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-diagnosticreport.html) |   |
| DocumentReference |   | [US Core DocumentReference Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-documentreference.html) |   |
| Encounter |   | [US Core Encounter Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-encounter.html) |   |
| Goal |   | [US Core Goal Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-goal.html) |   |
| ImagingStudy | [ImagingStudy-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-imagingstudy-uv-ips.html) |   |   |
| Immunization | [Immunization-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-immunization-uv-ips.html) | [US Core Immunization Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-immunization.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Immunization - STU3'!A1) |
| Location |   | [US Core Location Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-location.html) |   |
| Medication | [Medication-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-medication-uv-ips.html) | [US Core Medication Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-medication.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Medication - STU3'!A1) |
| MedicationRequest |   | [US Core MedicationRequest Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-medicationrequest.html) |   |
| MedicationStatement | [MedicationStatement-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-medicationstatement-uv-ips.html) | [US Core MedicationStatement Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-medicationstatement.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'MedicationStatement - STU3'!A1) |
| Observation | [Observation-attachment-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-attachment-uv-ips.html) |   |   |
|   | [Observation-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-uv-ips.html) | [Vitals Signs Profile](http://hl7.org/fhir/us/core/STU2/us-core-vitalsigns.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Observation (general) - STU3'!A1) |
|   | [Observation-laboratory-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-laboratory-uv-ips.html) | [US Core Results Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-observationresults.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Observation (labs) - STU3'!A1) |
|   | [Observation-member-pathology-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-member-pathology-uv-ips.html) |   |   |
|   | [Observation-member-laboratory-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-member-laboratory-uv-ips.html) |   |   |
|   | [Observation-pathology-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-pathology-uv-ips.html) |   |   |
|   | [Observation-alcoholUse-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-alcoholuse-uv-ips.html) |   |   |
|   | [Observation-imaging-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-imaging-uv-ips.html) |   |   |
|   | [Observation-member-imaging-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-member-imaging-uv-ips.html) |   |   |
|   | [Observation-pregnancy-edd-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-pregnancy-edd-uv-ips.html) |   |   |
|   | [Observation-pregnancy-outcome-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-pregnancy-outcome-uv-ips.html) |   |   |
|   | [Observation-pregnancy-status-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-pregnancy-status-uv-ips.html) |   |   |
|   | [Observation-tobaccoUse-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-tobaccouse-uv-ips.html) | [US Core Smoking Status Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-smokingstatus.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Observation (smoking) - STU3'!A1) |
| Organization | [organization-laboratory-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-organization-laboratory-uv-ips.html) | [US Core Organization Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-organization.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Organization - STU3'!A1) |
|   | [Organization-observation-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-organization-observation-uv-ips.html) |   |   |
| Patient | [Patient-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-patient-uv-ips.html) | [US Core Patient Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-patient.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Patient - STU3'!A1) |
| Practitioner | [Practitioner-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-practitioner-uv-ips.html) | [US Core Practitioner Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-practitioner.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Practitioner - STU3'!A1) |
| PractitionerRole |   | [US Core PractitionerRole Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-practitionerrole.html) |   |
| Procedure | [Procedure-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-procedure-uv-ips.html) | [US Core Procedure Profile](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-procedure.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Procedure - STU3'!A1) |
| Specimen | [specimen-uv-ips](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-specimen-uv-ips.html) |   |   |

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| **AllergyIntolerance - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-allergyintolerance-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-allergyintolerance.html) |
| clinicalStatus | Required | MustSupport |
| type | MustSupport | Optional |
| criticality | MustSupport | Optional |
| code | [preferred: allergy-intolerance-substance-condition-uv-ips](http://hl7.org/fhir/uv/ips/ValueSet/allergy-intolerance-substance-condition-uv-ips) | [extensible: us-core-substance](http://hl7.org/fhir/us/core/ValueSet/us-core-substance) |
| [codeableconcept-uv-ips](http://hl7.org/fhir/uv/ips/StructureDefinition/codeableconcept-uv-ips) | CodeableConcept |
|  .coding | [required: absent-or-unknown-allergies-uv-ips](http://hl7.org/fhir/uv/ips/ValueSet/absent-or-unknown-allergies-uv-ips) | [extensible: us-core-substance](http://hl7.org/fhir/us/core/ValueSet/us-core-substance) |
| Required | Optional |
| One | Many |
|  .system | Required | Optional |
|  .code | Required | Optional |
| patient.identifier | Prohibited | Optional |
| onsetDateTime | Required | Optional |
| recorder.identifier | Prohibited | Optional |
| asserter.identifier | Prohibited | Optional |
| reaction.manifestation | [codeableconcept-uv-ips](http://hl7.org/fhir/uv/ips/StructureDefinition/codeableconcept-uv-ips) | CodeableConcept |
| [preferred: allergy-reaction-uv-ips](http://hl7.org/fhir/uv/ips/ValueSet/allergy-reaction-uv-ips) | [example: clinical-findings](http://hl7.org/fhir/ValueSet/clinical-findings) |
|  .severity | MustSupport | Optional |
| extension: abatement-datetime-uv-ips | Optional | N/A |

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| **Condition - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-condition-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-condition.html) |
| identifier | One | Many |
| clinicalStatus | Required | MustSupport |
| category | [codeableconcept-uv-ips](http://hl7.org/fhir/uv/ips/StructureDefinition/codeableconcept-uv-ips) | CodeableConcept |
| MustSupport | Required |
| One | Many |
| [required: problem-type-uv-ips](http://hl7.org/fhir/uv/ips/ValueSet/problem-type-uv-ips) | [preferred: us-core-condition-category](http://hl7.org/fhir/us/core/ValueSet/us-core-condition-category) |
| severity | [codeableconcept-uv-ips](http://hl7.org/fhir/uv/ips/StructureDefinition/codeableconcept-uv-ips) | CodeableConcept |
| MustSupport | Optional |
| Many | One |
| [preferred: condition-severity-uv-ips](http://hl7.org/fhir/uv/ips/ValueSet/condition-severity-uv-ips) | [preferred: condition-severity](http://hl7.org/fhir/ValueSet/condition-severity) |
| code | [preferred: core-problem-list-disorders-uv-ips](http://hl7.org/fhir/uv/ips/ValueSet/core-problem-list-disorders-uv-ips) | [extensible: us-core-problem](http://hl7.org/fhir/us/core/ValueSet/us-core-problem) |
| [codeableconcept-uv-ips](http://hl7.org/fhir/uv/ips/StructureDefinition/codeableconcept-uv-ips) | CodeableConcept |
|  .coding | [required: absent-or-unknown-problems-uv-ips](http://hl7.org/fhir/uv/ips/ValueSet/absent-or-unknown-problems-uv-ips) | [extensible: us-core-problem](http://hl7.org/fhir/us/core/ValueSet/us-core-problem) |
| Required | Optional |
| One | Many |
|  .system | Required | Optional |
|  .code | Required | Optional |
| bodySite | [codeableconcept-uv-ips](http://hl7.org/fhir/uv/ips/StructureDefinition/codeableconcept-uv-ips) | CodeableConcept |
| [preferred: body-site](http://hl7.org/fhir/ValueSet/body-site) | [example: body-site](http://hl7.org/fhir/ValueSet/body-site) |
| subject.identifier | Prohibited | Optional |
| onsetDateTime | Required | Optional |
| abatement[x] | MustSupport | Optional |
| asserter.identifier | Prohibited | Optional |

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| **Device - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-device-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-device.html) |
| identifier | One | Many |
|  .use | Prohibited | Optional |
|  .type.coding.system | Prohibited | Optional |
|  .version | Prohibited | Optional |
|  .userSelected | Prohibited | Optional |
|  .text | Prohibited | Optional |
|  .system | Prohibited | Optional |
|  .period | Prohibited | Optional |
|  .assigner | Prohibited | Optional |
| type | Optional | Required |
| example: medical-devices-uv-ips | extensible: device-kind |
|  .coding | coding-uv-ips | Coding |
| type | Optional | Required |
| required: medical-devices-uv-ips | extensible: device-kind |
| type | Optional | Required |
| preferred: medical-devices-uv-ips | extensible: device-kind |
| owner | Prohibited | Optional |
| contact | Prohibited | Optional |
| location | Prohibited | Optional |
| url | Prohibited | Optional |
| note | Prohibited | Optional |
| safety | Prohibited | Optional |
| udi | Optional | Required |

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| **Immunization - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-immunization-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-immunization.html) |
| vaccineCode | example: vaccine-code | extensible: us-core-cvx |
|  .coding | coding-uv-ips | Coding |
|  .system | Fixed Value: http://hl7.org/fhir/sid/phpid-l1 | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
|  .system | Fixed Value: http://hl7.org/fhir/sid/phpid-l2 | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
|  .system | Fixed Value: http://hl7.org/fhir/sid/phpid-l3 | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
|  .system | Fixed Value: http://hl7.org/fhir/sid/phpid-l4 | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
|  .system | Fixed Value: http://hl7.org/fhir/sid/mpid | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
|  .system | Fixed Value: http://hl7.org/fhir/sid/pcid | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed Value: http://www.whocc.no/atc | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
| One | Many |
|  .system | Fixed value: absent-or-unknown-immunization-uv-ips | Optional |
|  .code | Required | Optional |
|  .text | MustSupport | Optional |
| patient.reference | MustSupport | Optional |
|  .identifier | Prohibited | Optional |
| manufacturer.identifier | Prohibited | Optional |
| site.coding | coding-uv-ips | Coding |
| preferred: target-site-uv-ips |   |
| route | required: medicine-route-of-administration | example: immunization-route |
|  .coding | coding-uv-ips | Coding |
| required: medicine-route-of-administration |   |
| practitioner | MustSupport | Optional |
| One | Many |
|  .actor.reference | MustSupport | Optional |
|  .identifier | Prohibited | Optional |
| explanation.reasonNotGiven | One | Many |
|  .coding | coding-uv-ips | Coding |
| vaccinationProtocol | Prohibited | Optional |
| extension: statement-uv-ips | Optional | N/A |
| extension: targetdiseases-immunization-uv-ips | MustSupport | N/A |

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| **Medication - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-medication-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-medication.html) |
| code | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Required |
| example: medication-codes | extensible: us-core-medication-codes |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed Value: http://hl7.org/fhir/sid/phpid-l1 | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed Value: http://hl7.org/fhir/sid/phpid-l2 | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed Value: http://hl7.org/fhir/sid/phpid-l3 | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed Value: http://hl7.org/fhir/sid/phpid-l4 | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed Value: http://hl7.org/fhir/sid/mpid | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed Value: http://hl7.org/fhir/sid/pcid | Optional |
|  .code | Required | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
| extensible: whoatc-uv-ips |   |
|  .system | Fixed Value: http://www.whocc.no/atc | Optional |
|  .code | Required | Optional |
|  .text | MustSupport | Optional |
| status | Prohibited | Optional |
| isBrand | Prohibited | Optional |
| isOverTheCounter | Prohibited | Optional |
| manufacturer | Prohibited | Optional |
| form | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Optional |
| Many | One |
| example: medicine-doseform | example: medication-form-codes |
|  .coding.system | Optional | N/A |
| ingredient | MustSupport | Optional |
|  .itemCodeableConcept | Optional | Optional |
|  .coding | MustSupport | Optional |
|  .text | MustSupport | Optional |
|  .isActive | Prohibited | Optional |
|  .amount | ratio-uv-ips | Ratio |
| MustSupport | Optional |
| Many | One |
| package | Prohibited | Optional |

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| **MedicationStatement - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-medicationstatement-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-medicationstatement.html) |
| basedOn.identifier | Prohibited | Optional |
| partOf.identifier | Prohibited | Optional |
| context.identifier | Prohibited | Optional |
| category | codeableconcept-uv-ips | CodeableConcept |
| Many | One |
| medicationCodeableConcept | codeableconcept-uv-ips | CodeableConcept |
| required: absent-or-unknown-medication-uv-ips | extensible: us-core-medication-codes |
| informationSource.identifier | Prohibited | Optional |
| subject.identifier | Prohibited | Optional |
| derivedFrom | Optional | MustSupport |
|  .identifier | Prohibited | Optional |
| reasonNotTaken | codeableconcept-uv-ips | CodeableConcept |
| reasonCode | codeableconcept-uv-ips | CodeableConcept |
| reasonReference.identifier | Prohibited | Optional |
| dosage | MustSupport | Optional |
|  .text | MustSupport | Optional |
|  .additionalInstruction | codeableconcept-uv-ips | CodeableConcept |
|  .patientInstruction | MustSupport | Optional |
|  .timing | MustSupport | Optional |
|  .repeat.bounds[x] | Duration, Range-uv-ips, Period | Duration, Range, Period |
|  .code | codeableconcept-uv-ips | CodeableConcept |
| example: valueset-event-timing | preferred: TimingAbbreviation |
|  .site | codeableconcept-uv-ips | CodeableConcept |
| Many | One |
|  .route | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Optional |
|   | Many | One |
|  .method | codeableconcept-uv-ips | CodeableConcept |
| Many | One |
|  .maxDosePerPeriod | Prohibited | Optional |
|  .maxDosePerAdministration | quantity-uv-ips | SimpleQuantity |
| Prohibited | Optional |
|  .comparator | Prohibited | Optional |
|  .maxDosePerLifetime | quantity-uv-ips | SimpleQuantity |
| Prohibited | Optional |
|  .comparator | Prohibited | Optional |
|  .rateQuantity | Prohibited | Optional |
| dateAsserted | Optional | Required |
| [extension: data-absent-reason](http://hl7.org/fhir/StructureDefinition/data-absent-reason) | MustSupport | N/A |

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| **Observation (labs) - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-laboratory-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-observationresults.html) |
| basedOn | Prohibited | Optional |
| category | codeableconcept-uv-ips | CodeableConcept |
| One | Many |
| code | codeableconcept-uv-ips | CodeableConcept |
|   | extensible: laboratory-tests-and-panels-uv-ips | extensible: LOINC |
| subject.identifier | Prohibited | Optional |
| context.identifier | Prohibited | Optional |
| effective[x] | Required | MustSupport |
| performer | Required | Optional |
| One | Many |
|  .identifier | Prohibited | Optional |
| value[x] | string, Range, Ratio, time, dateTime, Period, CodeableConcept-uv-ips - extensible: lab-result-coded-value-uv-ips, quantity-uv-ips | string, Range, Ratio, time, dateTime, Period, CodeableConcept - preferred: SNOMED-CT, Quantity - required: UCUM units, boolean, SampledData Attachment |
| dataAbsentReason | Prohibited | MustSupport |
| interpretation.coding | coding-uv-ips | Coding |
| bodySite | Prohibited | Optional |
| method.coding | coding-uv-ips | Coding |
| specimen.identifier | Prohibited | Optional |
| device.identifier | Prohibited | Optional |
| referenceRange.type | codeableconcept-uv-ips | CodeableConcept |
| Required | Optional |
| related | Optional | Optional |
|  .type | Fixed Value: has-member | Optional |
|  .target.identifier | Prohibited | Optional |
|  .type | Fixed Value: derived-from | Optional |
|  .target.identifier | Prohibited | Optional |
| component | Prohibited | Optional |

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| **Observation (smoking) - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-tobaccouse-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-smokingstatus.html) |
| code | codeableconcept-uv-ips | CodeableConcept |
| subject.identifier | Prohibited | Optional |
| effective[x] | Required | Optional |
| valueCodeableConcept | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Required |
| Many | One |
| required: current-smoking-status-uv-ips | extensible: us-core-observation-ccdasmokingstatus |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
| issued | Optional | Required |

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| **Observation (general / vitals) - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-observation-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/us-core-vitalsigns.html) |
| identifier | MustSupport | Optional |
| category | Optional | Required |
| code | example: observation-codes | extensible: observation-vitalsignresult |
| subject | Optional | Required |
| effective[x] | Optional | Required |
| value[x] | Quantity, CodeableConcept, string, boolean, Range, Ratio, SampledData, Attachment, time, dateTime, Period | Quantity - required: UCUM units |
| Optional | MustSupport |
|  .value | Optional | Required |
|  .unit | Optional | Required |
|  .system | Optional | Required |
|  .code | Optional | Required |
| dataAbsentReason | Optional | MustSupport |
| related | Optional | MustSupport |
|  .type | Optional | Required |
| component | Optional | MustSupport |
|  .code | example: observation-codes | extensible: observation-vitalsignresult |
|  .valueQuantity | Optional | MustSupport |
|  .value | Optional | Required |
|  .unit | Optional | Required |
|  .system | Optional | Required |
|  .code | Optional | Required |
|  .dataAbsentReason | Optional | MustSupport |

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| **Organization - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-organization-laboratory-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-organization.html) |
| active | Prohibited | Required |
| type | Required | Optional |
| One | Many |
|  .coding | coding-uv-ips | Coding |
| Required | Optional |
| One | Many |
| extensible: performing-organization-type |   |
| alias | Prohibited | Optional |
| One | Many |
| partOf | Prohibited | Optional |
| endpoint | Prohibited | MustSupport |
| One | Many |
| identifier | Optional | Required |
|  .system | Optional | Required |
| telecom | Optional | Required |
| address | Optional | Required |
|  .line | Optional | MustSupport |
|  .city | Optional | MustSupport |
|  .state | Optional | MustSupport |
|   | required: usps-state |
|  .postalCode | Optional | MustSupport |

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| **Patient - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-patient-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-patient.html) |
| identifier | Optional | Required |
|  .system | Optional | Required |
|  .value | Optional | Required |
| name | MustSupport | Required |
|  .given | One | Many |
| telecom | MustSupport | Optional |
| birthDate | Required | MustSupport |
| address | MustSupport | Optional |
|  .line | MustSupport | Optional |
|  .city | MustSupport | Optional |
|  .state | MustSupport | Optional |
|  .postalCode | MustSupport | Optional |
|  .country | MustSupport | Optional |
| contact | MustSupport | Optional |
|  .relationship | [codeableconcept-uv-ips](http://hl7.org/fhir/uv/ips/StructureDefinition/codeableconcept-uv-ips) | CodeableConcept |
| MustSupport | Optional |
| [required: personal-relationship-uv-ips](http://hl7.org/fhir/uv/ips/ValueSet/personal-relationship-uv-ips) | [extensible: v2-0131](http://hl7.org/fhir/ValueSet/v2-0131) |
|  .name | MustSupport | Optional |
|  .family | MustSupport | Optional |
|  .given | MustSupport | Optional |
|  .telecom | MustSupport | Optional |
|  .address | MustSupport | Optional |
|  .line | MustSupport | Optional |
|  .city | MustSupport | Optional |
|  .state | MustSupport | Optional |
|  .country | MustSupport | Optional |
|  .organization | MustSupport | Optional |
|  .identifier | Prohibited | Optional |
|  .language | [extensible: languages](http://hl7.org/fhir/ValueSet/languages) | [extensible: simple-language](http://hl7.org/fhir/us/core/ValueSet/simple-language) |
| generalPractitioner | MustSupport | Optional |
|  .identifier | Prohibited | Optional |
| [extension: us-core-race](http://hl7.org/fhir/us/core/StructureDefinition/us-core-race) | N/A | MustSupport |
| [extension: us-core-ethnicity](http://hl7.org/fhir/us/core/StructureDefinition/us-core-ethnicity) | N/A | MustSupport |
| [extension: us-core-birthsex](http://hl7.org/fhir/us/core/StructureDefinition/us-core-birthsex) | N/A | MustSupport |

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| **Practitioner - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-practitioner-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-practitioner.html) |
| identifier | Optional | Required |
|  .system | Optional | Required |
|  .value | Optional | Required |
| active | Prohibited | Optional |
| name | Optional | Required |
| Many | One |
|  .family | Optional | Required |
|  .text | Prohibited | Optional |
|  .period | Prohibited | Optional |
| telecom.period | Prohibited | Optional |
| address.period | Prohibited | Optional |
| gender | Prohibited | Optional |
| birthDate | Prohibited | Optional |
| photo | Prohibited | Optional |
| One | Many |
| qualification | Prohibited | Optional |
| One | Many |
| communication | Prohibited | Optional |
| One | Many |

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| **Procedure - STU3** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018May/StructureDefinition-procedure-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/STU2/StructureDefinition-us-core-procedure.html) |
| code | preferred: procedures-uv-ips | extensible: us-core-procedure-code |
| codeableconcept-uv-ips | CodeableConcept |
| code | required: absent-or-unknown-procedures-uv-ips | extensible: us-core-procedure-code |
| codeableconcept-uv-ips | CodeableConcept |
| subject.identifier | Prohibited | Optional |
| performer.actor | device-observer-uv-ips | Reference |
| bodySite | MustSupport | Optional |
| example: target-site-uv-ips | example: body-site |
| [extension: statement-uv-ips](http://hl7.org/fhir/uv/ips/StructureDefinition/statement-uv-ips) | Optional | N/A |
|  .extension | Prohibited | Optional |

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| **R4** | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/profiles.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/) |  |
| **Resource** | **Profile** | **Profile** |   |
| AllergyIntolerance | [Allergy Intolerance](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-allergyintolerance-uv-ips.html) | [US Core AllergyIntolerance Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-allergyintolerance.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'AllergyIntolerance - R4'!A1) |
| CarePlan |   | [US Core CarePlan Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-careplan.html) |   |
| CareTeam |   | [US Core CareTeam Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-careteam.html) |   |
| Composition | [Composition (IPS)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-composition-uv-ips.html) |   |   |
| Condition | [Condition](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-condition-uv-ips.html) | [US Core Condition Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-condition.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Condition - R4'!A1) |
| Device | [Device](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-device-uv-ips.html) | [US Core Device Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-device.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Device - R4'!A1) |
|   | [Device (use statement)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-deviceusestatement-uv-ips.html) |   |   |
|   | [Device-observer-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-device-observer-uv-ips.html) |   |   |
| DiagnosticReport |   | [US Core DiagnosticReport Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-diagnosticreport.html) |   |
|   |   | [New US Core Diagnostic Report Profile for Report and Note exchange](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-new-us-core-diagnosticreport.html) |   |
| DocumentReference |   | [US Core DocumentReference Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-documentreference.html) |   |
|   |   | [New US Core DocumentReference Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-new-us-core-documentreference.html) |   |
| Encounter |   | [US Core Encounter Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-encounter.html) |   |
| Goal |   | [US Core Goal Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-goal.html) |   |
| ImagingStudy | [ImagingStudy-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-imagingstudy-uv-ips.html) |   |   |
| Immunization | [Immunization](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-immunization-uv-ips.html) | [US Core Immunization Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-immunization.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Immunization - R4'!A1) |
| Location |   | [US Core Location Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-location.html) |   |
| Medication | [Medication](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-medication-uv-ips.html) | [US Core Medication Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-medication.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Medication - R4'!A1) |
| MedicationRequest |   | [US Core MedicationRequest Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-medicationrequest.html) |   |
| MedicationStatement | [Medication Statement](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-medicationstatement-uv-ips.html) | [US Core MedicationStatement Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-medicationstatement.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'MedicationStatement - R4'!A1) |
| Observation | [Observation (generic result)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-uv-ips.html) | [Vital Signs Profile](http://build.fhir.org/observation-vitalsigns.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Observation (general) - R4'!A1) |
|   | [Observation (laboratory result)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-laboratory-uv-ips.html) | [US Core Result Observation Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-observationresults.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Observation (labs) - R4'!A1) |
|   | [Observation (media)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-media-uv-ips.html) |   |   |
|   | [Observation (member pathology)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-member-pathology-uv-ips.html) |   |   |
|   | [Observation (member)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-member-laboratory-uv-ips.html) |   |   |
|   | [Observation (pathology result)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-pathology-uv-ips.html) |   |   |
|   | [Observation-alcoholUse-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-alcoholuse-uv-ips.html) |   |   |
|   | [Observation-imaging-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-imaging-uv-ips.html) |   |   |
|   | [Observation-member-imaging-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-member-imaging-uv-ips.html) |   |   |
|   | [Observation-pregnancy-edd-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-pregnancy-edd-uv-ips.html) |   |   |
|   | [Observation-pregnancy-outcome-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-pregnancy-outcome-uv-ips.html) |   |   |
|   | [Observation-pregnancy-status-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-pregnancy-status-uv-ips.html) |   |   |
|   | [Observation-tobaccoUse-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-tobaccouse-uv-ips.html) | [US Core Smoking Status Observation Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-smokingstatus.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Observation (smoking) - R4'!A1) |
| Organization | [Organization (laboratory)](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-organization-laboratory-uv-ips.html) | [US Core Organization Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-organization.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Organization - R4'!A1) |
|   | [Organization-observation-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-organization-observation-uv-ips.html) |   |   |
| Patient | [Patient-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-patient-uv-ips.html) | [US Core Patient Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-patient.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Patient - R4'!A1) |
| Practitioner | [Practitioner-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-practitioner-uv-ips.html) | [US Core Practitioner Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-practitioner.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Practitioner - R4'!A1) |
| PractitionerRole |   | [US Core PractitionerRole Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-practitionerrole.html) |   |
| Procedure | [Procedure-uv-ips](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-procedure-uv-ips.html) | [US Core Procedure Profile](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-procedure.html) | [→](file:///C%3A%5CUsers%5Clauren%5CDownloads%5CIPS-Argonaut.xlsx#'Procedure - R4'!A1) |
| Specimen | [Specimen](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-specimen-uv-ips.html) |   |   |

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| **AllergyIntolerance - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-allergyintolerance-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-allergyintolerance.html) |
| verificationStatus | MustSupport | Required |
| type | MustSupport | Optional |
| criticality | MustSupport | Optional |
| code | preferred: allergy-intolerance-substance-condition-uv-ips | extensible: 2.16.840.1.113762.1.4.1186.8 |
|  .coding | Required | Optional |
| coding-uv-ips | Coding |
| required: absent-or-unknown-allergies-uv-ips |   |
|  .system | Required | Optional |
|  .code | Required | Optional |
| patient.identifier | Prohibited | Optional |
| onsetDateTime | Required | Optional |
| reaction | MustSupport | Optional |
|  .manifestation | codeableconcept-uv-ips | CodeableConcept |
| preferred: allergy-reaction-uv-ips | example: clinical-findings |
|  .severity | MustSupport | Optional |
| extension: abatement-datetime-uv-ips | Optional | N/A |

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| **Condition - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-condition-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-condition.html) |
| identifier | One | Many |
| clinicalStatus | Required | MustSupport |
| category | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Required |
| One | Many |
| required: problem-type-uv-ips | preferred: us-core-condition-category |
| severity | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Optional |
| preferred: condition-severity-uv-ips | preferred: condition-severity |
| code | preferred: core-problem-list-disorders-uv-ips | extensible: us-core-problem |
|  .coding | coding-uv-ips | Coding |
| Required | Optional |
| One | Many |
| required: absent-or-unknown-problems-uv-ips |   |
| bodySite | codeableconcept-uv-ips | CodeableConcept |
| subject.identifier | Prohibited | Optional |
| onsetDateTime | Required | Optional |
| abatement[x] | MustSupport | Optional |
| asserter.identifier | Prohibited | Optional |

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| **Device - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-device-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-device.html) |
| identifier | One | Many |
|  .use | Prohibited | Optional |
|  .type.coding.text | Prohibited | Optional |
|  .system | Prohibited | Optional |
|  .period | Prohibited | Optional |
|  .assigner | Prohibited | Optional |
| type | Optional | Required |
| preferred: medical-devices-uv-ips | extensible: device-kind |
|  .coding | coding-uv-ips | Coding |
| required: medical-devices-uv-ips |   |
|  .system | Required | Optional |
|  .code | Required | Optional |
| owner | Prohibited | Optional |
| contact | Prohibited | Optional |
| location | Prohibited | Optional |
| url | Prohibited | Optional |
| note | Prohibited | Optional |
| safety | Prohibited | Optional |
| udiCarrier | Optional | Required |
|   | Many | One |

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| **Immunization - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-immunization-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-immunization.html) |
| vaccineCode | preferred: vaccines-uv-ips | extensible: us-core-cvx |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
|  .coding | coding-uv-ips | Coding |
| example: phpid-lvl1-uv-ips | extensible: us-core-cvx |
|  .coding | coding-uv-ips | Coding |
| example: phpid-lvl2-uv-ips | extensible: us-core-cvx |
|  .coding | coding-uv-ips | Coding |
| example: phpid-lvl3-uv-ips | extensible: us-core-cvx |
|  .coding | coding-uv-ips | Coding |
| example: phpid-lvl4-uv-ips | extensible: us-core-cvx |
|  .display | MustSupport | Optional |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
| example: mpid-uv-ips | extensible: us-core-cvx |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
| example: pcid-uv-ips | extensible: us-core-cvx |
|  .coding | coding-uv-ips | Coding |
|  .system | Fixed value: whoatc-uv-ips | Optional |
|  .display | MustSupport | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed value: absent-or-unknown-immunization-uv-ips | Optional |
|  .code | Required | Optional |
|  .text | MustSupport | Optional |
| patient.reference | MustSupport | Optional |
| site.coding | coding-uv-ips | Coding |
| preferred: target-site-uv-ips | example: immunization-site |
| route.coding | coding-uv-ips | Coding |
| required: medicine-route-of-administration | example: immunization-route |
| performer | MustSupport | Optional |
| One | Many |
|  .actor.reference | MustSupport | Optional |
| statusReason | Optional | MustSupport |
| primarySource | Optional | Required |
| extension: statement-uv-ips | Optional | N/A |

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| **Medication - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-medication-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-medication.html) |
| code | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Required |
| example: medication-codes | extensible: us-core-medication-codes |
|  .coding | coding-uv-ips | Coding |
| example: phpid-lvl1-uv-ips | extensible: us-core-medication-codes |
|  .coding | coding-uv-ips | Coding |
| example: phpid-lvl2-uv-ips | extensible: us-core-medication-codes |
|  .coding | coding-uv-ips | Coding |
| example: phpid-lvl3-uv-ips | extensible: us-core-medication-codes |
|  .coding | coding-uv-ips | Coding |
| example: phpid-lvl4-uv-ips | extensible: us-core-medication-codes |
|  .display | MustSupport | Optional |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
| example: mpid-uv-ips | extensible: us-core-medication-codes |
|  .coding | coding-uv-ips | Coding |
| MustSupport | Optional |
| example: pcid-uv-ips | extensible: us-core-medication-codes |
|  .display | MustSupport | Optional |
|  .coding | coding-uv-ips | Coding |
| One | Many |
|  .system | Fixed value: whoatc-uv-ips | Optional |
|  .code | Required | Optional |
|  .text | MustSupport | Optional |
| status | Prohibited | Optional |
| manufacturer | Prohibited | Optional |
| form | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Optional |
| example: medicine-doseform | example: medication-form-codes |
| ingredient | MustSupport | Optional |
|  .itemCodeableConcept | Required | Optional |
|  .coding | MustSupport | Optional |
|  .text | MustSupport | Optional |
|  .isActive | Prohibited | Optional |
|  .amount | MustSupport | Optional |

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| **MedicationStatement - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-medicationstatement-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-medicationstatement.html) |
| basedOn.identifier | Prohibited | Optional |
| partOf.identifier | Prohibited | Optional |
| category | codeableconcept-uv-ips | CodeableConcept |
| medicationCodeableConcept | codeableconcept-uv-ips | CodeableConcept |
| required: absent-or-unknown-medication-uv-ips | extensible: us-core-medication-codes |
| subject.identifier | Prohibited | Optional |
| context.identifier | Prohibited | Optional |
| informationSource.identifier | Prohibited | Optional |
| derivedFrom | Optional | MustSupport |
|  .identifier | Prohibited | Optional |
| reasonCode | codeableconcept-uv-ips | CodeableConcept |
| reasonReference.identifier | Prohibited | Optional |
| dosage | MustSupport | Optional |
|  .text | MustSupport | Optional |
|  .additionalInstruction | codeableconcept-uv-ips | CodeableConcept |
|  .patientInstruction | MustSupport | Optional |
|  .timing | MustSupport | Optional |
|  .site | codeableconcept-uv-ips | CodeableConcept |
|  .route | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Optional |
|  .method | codeableconcept-uv-ips | CodeableConcept |
|  .doseAndRate.rateQuantity | Prohibited | Optional |
|  .maxDosePerPeriod | Prohibited | Optional |
|  .maxDosePerAdministration | quantity-uv-ips | SimpleQuantity |
| Prohibited | Optional |
|  .comparator | Prohibited | Optional |
|  .maxDosePerLifetime | quantity-uv-ips | SimpleQuantity |
| Prohibited | Optional |
|  .comparator | Prohibited | Optional |
| dateAsserted | Optional | Required |
| extension: data-absent-reason | MustSupport | N/A |

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| **Observation (labs) - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-laboratory-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-observationresults.html) |
| basedOn | Prohibited | Optional |
| category | codeableconcept-uv-ips | CodeableConcept |
| One | Many |
| code | codeableconcept-uv-ips | CodeableConcept |
|   | extensible: laboratory-tests-and-panels-uv-ips | extensible: LOINC |
| subject.identifier | Prohibited | Optional |
| encounter.identifier | Prohibited | Optional |
| effective[x] | Required | MustSupport |
| performer | Required | Optional |
| One | Many |
|  .identifier | Prohibited | Optional |
| value[x] | string, Range, Ratio, time, dateTime, Period, CodeableConcept-uv-ips - extensible: lab-result-coded-value-uv-ips, quantity-uv-ips | string, Range, Ratio, time, dateTime, Period, CodeableConcept - preferred: SNOMED-CT, Quantity - required: UCUM units, boolean, SampledData Attachment |
| extensible: lab-result-coded-value-uv-ips |   |
| dataAbsentReason | Prohibited | MustSupport |
| interpretation.coding | coding-uv-ips | Coding |
| bodySite | Prohibited | Optional |
| method.coding | coding-uv-ips | Coding |
| specimen.identifier | Prohibited | Optional |
| device.identifier | Prohibited | Optional |
| referenceRange.type | codeableconcept-uv-ips | CodeableConcept |
| Required | Optional |
| hasMember | MustSupport | Optional |
|  .identifier | Prohibited | Optional |
| derivedFrom.identifier | Prohibited | Optional |
| component | Prohibited | Optional |

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| **Observation (smoking) - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-tobaccouse-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-smokingstatus.html) |
| code | codeableconcept-uv-ips | CodeableConcept |
| effective[x] | Required | Optional |
| valueCodeableConcept | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Required |
| required: current-smoking-status-uv-ips | extensible: us-core-observation-ccdasmokingstatus |
| issued | Optional | Required |

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| **Observation (general / vitals) - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-observation-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/R4/observation-vitalsigns.html) |
| identifier | MustSupport | Optional |
| basedOn | Prohibited | Optional |
| One | Many |
| status | required: observation-status | required: observation-status|4.0.0 |
| category | codeableconcept-uv-ips | CodeableConcept |
| One | Many |
| code | codeableconcept-uv-ips | CodeableConcept |
| example: observation-codes | extensible: observation-vitalsignresult |
| performer | Required | Optional |
| One | Many |
| value[x] | string, boolean, Range, Ratio, time, dateTime, Period, CodeableConcept-uv-ips, quantity-uv-ips | Quantity - required: UCUM units |
| dataAbsentReason | Prohibited | MustSupport |
| interpretation | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Optional |
| bodySite | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Optional |
| method | codeableconcept-uv-ips | CodeableConcept |
| specimen | Prohibited | Optional |
| device | Prohibited | Optional |
| referenceRange | MustSupport | Optional |
|  .type.coding | coding-uv-ips | Coding |
|  .appliesTo | Prohibited | Optional |
| One | Many |
|  .age | Prohibited | Optional |
| category.coding | Optional | Required |
|  .system | Optional | Required |
|  .code | Optional | Required |
| component | Optional | MustSupport |
|  .code | example: observation-codes | extensible: observation-vitalsignresult |
|  .value[x] | Optional | MustSupport |
|   | required: ucum-vitals-common|4.0.0 |
|  .dataAbsentReason | Optional | MustSupport |

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| **Organization - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-organization-laboratory-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-organization.html) |
| type | Required | Optional |
| One | Many |
|  .coding | coding-uv-ips | Coding |
| Required | Optional |
| One | Many |
| extensible: performing-organization-type | example: organization-type |
| identifier | Optional | Required |
|  .system | Optional | Required |
| active | Optional | Required |
| telecom | Optional | Required |
| address | Optional | Required |
|  .line | Optional | MustSupport |
|  .city | Optional | MustSupport |
|  .state | Optional | MustSupport |
|   | required: us-core-usps-state |
|  .postalCode | Optional | MustSupport |
| endpoint | Optional | MustSupport |

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| **Patient - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-patient-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-patient.html) |
| identifier | Optional | Required |
|  .system | Optional | Required |
|  .value | Optional | Required |
| name | MustSupport | Required |
|  .given | One | Many |
| telecom | MustSupport | Optional |
| birthDate | Required | MustSupport |
| address | MustSupport | Optional |
|  .line | MustSupport | Optional |
|  .city | MustSupport | Optional |
|  .state | MustSupport | Optional |
|  .postalCode | MustSupport | Optional |
|  .country | MustSupport | Optional |
| contact | MustSupport | Optional |
|  .relationship | codeableconcept-uv-ips | CodeableConcept |
| MustSupport | Optional |
| required: personal-relationship-uv-ips | extensible: patient-contactrelationship |
|  .name | MustSupport | Optional |
|  .family | MustSupport | Optional |
|  .given | MustSupport | Optional |
|  .telecom | MustSupport | Optional |
|  .address | MustSupport | Optional |
|  .line | MustSupport | Optional |
|  .city | MustSupport | Optional |
|  .state | MustSupport | Optional |
|  .country | MustSupport | Optional |
|  .organization | MustSupport | Optional |
|  .identifier | Prohibited | Optional |
| communication.language | preferred: languages | extensible: simple-language |
| generalPractitioner | MustSupport | Optional |
|  .identifier | Prohibited | Optional |
| extension: us-core-race | N/A | MustSupport |
| extension: us-core-ethnicity | N/A | MustSupport |
| extension: us-core-birthsex | N/A | MustSupport |

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| **Practitioner - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-practitioner-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-practitioner.html) |
| identifier | Optional | Required |
|  .system | Optional | Required |
|  .value | Optional | Required |
| name | Many | One |
|  .text | Prohibited | Optional |
|  .family | MustSupport | Required |
|  .given | MustSupport | Optional |
| telecom | MustSupport | Optional |
| address | MustSupport | Optional |

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| **Procedure - R4** |
|  | [**IPS**](http://hl7.org/fhir/uv/ips/2018Sep/StructureDefinition-procedure-uv-ips.html) | [**Argonaut**](http://hl7.org/fhir/us/core/2019Jan/StructureDefinition-us-core-procedure.html) |
| code | MustSupport | Required |
| preferred: procedures-uv-ips | extensible: us-core-procedure-code |
|  .coding | Required | Optional |
| coding-uv-ips | Coding |
| required: absent-or-unknown-procedures-uv-ips |   |
| subject.identifier | Prohibited | Optional |
| bodySite | MustSupport | Optional |
| example: target-site-uv-ips | example: body-site |
| extension: statement-uv-ips | Optional | N/A |