**CareConnect STU3 Profile Creation Summary**

The CareConnect STU3 profiles have been created as draft with the following assumptions, and also carry the proposed changes to the CareConnect DSTU2 profiles. This document contains a summary of some of the differences between DSTU2 and STU3.

# Commonalities

All profiles during their creation have:

* All profile and extension urls (excluding FHIR standards e.g. organization-period) have been changed to carry the FHIR version:
  + e.g. from - https://fhir.hl7.org.uk/StructureDefinition/CareConnect-Patient-1

to - https://fhir.hl7.org.uk/StructureDefinition/STU3/CareConnect-Patient-1

* The same profile name as DSTU2
* All profiles versioned at 0.0.1
* All profiles have lifecycle status ‘draft’
* All new optional STU3 elements remain in the profiles, including where there are choices of datatype/reference
* Changes in base resource element cardinality remain and have not been constrained down
* All ValueSets all have status ‘active’
* All ValueSets have version 1.0.0

Common datatype changes:

* Reference elements now contain an identifier element

# CareConnect-Patient-1

Change to element name:

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| careProvider | generalPractitioner |

# CareConnect-Practitioner-1

Removal of element in STU3:

* practitionerRole – in STU3 this has become its own resource

# CareConnect-PractitionerRole-1

New resource; all constraints based on Practioner.practitionerRole in DSTU2.

Valueset differences:

* specialty

*from* - Example binding: <http://hl7.org/fhir/ValueSet/practitioner-specialty>

*to -* Preferred binding: <http://hl7.org/fhir/ValueSet/c80-practice-codes>

# CareConnect-Organization-1

Additional optional STU3 elements:

* alias
* endpoint

Changes to base resource cardinality:

* type: from 0..1 to 0..\*

# CareConnect-Location-1

Additional optional STU3 elements:

* operationalStatus
* alias
* endpoint

# CareConnect-Encounter-1

Change to element name:

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| patient | subject |

Removal of elements in STU3:

* indication – in STU3 this has been replaced by diagnosis and child elements
* hospitalization.admittingDiagnosis
* hospitalization.dischargeDiagnosis

Additional optional STU3 elements:

* classHistory
* subject.reference(Group)
* diagnosis.condition
* diagnosis.role
* diagnosis.rank
* account

Datatype changes

* class – from code to Coding

ValueSet changes:

* status and statusHistory.status

*from* - Required binding: <http://hl7.org/fhir/ValueSet/encounter-state>

*to -* Required binding: <http://hl7.org/fhir/ValueSet/encounter-status>

* class

from – Required binding: <http://hl7.org/fhir/ValueSet/encounter-class>

to – Extensible binding: <http://hl7.org/fhir/ValueSet/v3-ActEncounterCode>

(Short description and Definition changed in the profile as they are incorrect in the FHIR standard – also updated classHistory.class)

* priority

*from* – Preferred(profiled from example) binding: <http://hl7.org/fhir/ValueSet/encounter-priority>

*to -* Example binding: <http://hl7.org/fhir/ValueSet/v3-ActPriority>

# CareConnect-Condition-1

Change to element name:

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| patient | subject |
| encounter | context |
| notes | note |

Removal of elements in STU3

* dateRecorded

Additional optional STU3 elements:

* subject.reference(Group)
* context.reference(EpisodeOfCare)
* asserter.reference(RelatedPerson)
* assertedDate

Changes to base resource cardinality:

* verificationStatus: from 1..1 to 0..1
* category: from 0..1 to 0..\*
* code: from 1..1 to 0..1
* evidence.code: from 0..1 to 0..\*
* note: from 0..1 to 0..\*

ValueSet changes:

* clinicalStatus

*from* – Required binding: <https://fhir.hl7.org.uk/ValueSet/CareConnect-ConditionClinicalStatus-1>

*to -* Required binding: <http://hl7.org/fhir/ValueSet/condition-clinical>

*\*Therefore CareConnect-ConditionClinicalStatus cannot be carried forward into STU3\**

# CareConnect-Observation-1

Change to element name:

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| encounter | context |
| comments | comment |

Removal of elements in STU3

* referenceRange.meaning

Additional optional STU3 elements:

* basedOn
* context.reference(EpisodeOfCare)
* value[x].boolean
* referenceRange.type
* referenceRange.appliesTo
* related.target.reference(Sequence)
* component.interpretation

Changes to base resource cardinality:

* category: from 0..1 to 0..\*

ValueSet changes:

* category - binding from Example to Preferred

# CareConnect-Medication-1

Change in element path:

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| product.form | form |
| product.ingredient | ingredient |
| batch.lotNumber | package.batch.lotNumber |
| batch.expirationDate | package.batch.expirationDate |

Additional optional STU3 elements:

* status
* isBrand
* isOverTheCounter
* ingredient.isActive
* ingredient.itemCodeableConcept
* package.content.itemCodeableConcept
* image

# CareConnect-Flag-1

Additional optional STU3 elements:

* subject.reference(PlanDefinition)
* subject.reference(Medication)
* subject.reference(Procedure)

# CareConnect-FamilyMemberHistory-1

Additional optional STU3 elements:

* definition
* notDone
* notDoneReason
* estimatedAge
* reasonCode – this may require the SNOMED slice to be applied
* reasonReference

# CareConnect-AllergyIntolerance-1

Change to element name:

status (0..1): has been split into 2 elements – clinicalStatus (0..1) and verificationStatus (1..1)

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| reporter | asserter |

Removal of elements in STU3

* recordedDate
* substance
* substance.certainty (is the extension https://fhir.hl7.org.uk/StructureDefinition/Extension-CareConnect-AllergyCertainty-1) that replaced this element still required. FHIR have replaced this with verificationStatus.

Additional optional STU3 elements:

* onset[x].Age
* onset[x].Period
* onset[x].Range
* onset[x].string
* assertedDate
* code – this may require the SNOMED slice

Changes to base resource cardinality:

* category: from 0..1 to 0..\*
* note: from 0..1 to 0..\*
* reaction.note: from 0..1 to 0..\*

ValueSet changes:

* criticality - same required ValueSet, however the definition has changed:

*from* - <https://www.hl7.org/fhir/DSTU2/valueset-allergy-intolerance-criticality.html>

*to* - <http://hl7.org/fhir/valueset-allergy-intolerance-criticality.html>

* category - same required ValueSet, however the definition has changed:

*from* - <https://www.hl7.org/fhir/DSTU2/valueset-allergy-intolerance-category.html>

*to* - <http://hl7.org/fhir/valueset-allergy-intolerance-category.html>

# CareConnect-Procedure-1

Change to element name:

reason[x] (0..1): has been split into reasonCode (0..\*) and reasonReference(0..\*). This element was replaced in DSTU2 by Extension-CareConnect-ReasonCondition-1 (0..\*). This change means the extension is no longer required for this resource.

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| request | basedOn (removed reference choice – DiagnosticOrder) |
| notPerformed | notDone |
| reasonNotPerformed | notDoneReason |
| encounter | context |
| notes | note |
| used | usedReference |

Removal of elements in STU3

* dateRecorded

Additional optional STU3 elements:

* definition
* part of
* context.reference(EpisodeOfCare)
* performer.onBehalfOf
* performer.actor.reference(Device)
* reasonReference.reference(Observation)
* complicationDetail
* usedCode

Changes to base resource cardinality:

* notDoneReason: from 0..1 to 0..\*
* code: from 1..1 to 0..1
* performer.actor: from 0..1 to 1..1

ValueSet changes:

* status:

*from* – Required binding - <https://www.hl7.org/fhir/DSTU2/valueset-procedure-status.html>

*to* – Required binding - <http://hl7.org/fhir/ValueSet/event-status>

* focalDevice.action:

*from* – Required binding - <https://www.hl7.org/fhir/DSTU2/valueset-device-action.html>

*to* – Preferred binding - <http://hl7.org/fhir/valueset-device-action.html> (move towards SNOMED)

# CareConnect-Immunization-1

Change to element name:

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| wasNotGiven | notGiven |
| performer | practitioner\* |
| requestor | practitioner\* |

\*performer/requester (0..1) to practitioner (0..\*): has also been split into practitioner.role (0..1) and practitioner.actor (0..1). The role extensible ValueSet differentiates this by Ordering Provider / Administering Provider (<http://hl7.org/fhir/valueset-immunization-role.html>).

Additional mandatory STU3 elements:

* primarySource

Additional optional STU3 elements:

* reportOrigin

Valueset differences:

* status:

*from* – Required binding - <http://hl7.org/fhir/ValueSet/medication-admin-status>

*to* – Required binding - <http://hl7.org/fhir/ValueSet/immunization-status> (subset of above)

# CareConnect-Medication-Flag-1

Additional optional STU3 elements:

* subject.reference(PlanDefinition)
* subject.reference(Medication)
* subject.reference(Procedure)

CareConnect-MedicationRequest-1 - This profile replaces CareConnect-MedicationOrder-1

Change to element name:

reason[x] (0..1): has been split into reasonCode (0..\*) and reasonReference(0..\*). This element was replaced in DSTU2 by Extension-CareConnect-ReasonCondition-1 (0..\*). This change means the extension is no longer required for this resource.

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| patient | subject |
| encounter | context |
| dateWritten | authoredOn |

Extension-CareConnect-MedicationOrderStatement (0..1):

This extension is used to specify a link to the medication authorisation that this order is part of. This has been replaced by basedOn (0..\*), which provides a reference to MedicationRequest along with other resources and is defined as ‘A plan or request that is fulfilled in whole or in part by this medication request.’.

Removal of elements in STU3

* practitioner – the closest replacement is requester.agent, this has been opened up to reference Organization, Patient, Related Person and Device
* dosageInstruction.timing.site[x] – removal of Reference BodySite, solely a CodeableConcept in STU3. The Example ValueSet references Snomed CT, should the coding element be sliced and a SNOMED CT slice added?
* dispenseRequest.medication[x]
* substitution.type

Additional mandatory STU3 elements:

* intent
* substitution.allowed

Additional optional STU3 elements:

* definition
* basedOn
* groupIdentifier
* category
* priority
* subject.Reference(Group)
* context.Reference(EpisodeOfCare)
* supportingInformation
* requester
* reasonReference.Reference(Observation)
* dosageInstruction.sequence
* dosageInstruction.patientInstruction
* maxDosePerPeriod
* maxDosePerAdministration
* maxDosePerLifetime
* rate[x].Quantity
* dispenseRequest.performer
* detectedIssue
* eventHistory

Changes to base resource cardinality:

* dosageInstruction.timing.event: from 0..1 to 0..\*

ValueSet changes:

* status:

*from* – Required binding - <https://www.hl7.org/fhir/DSTU2/valueset-medication-order-status.html>

*to* – Required binding - <http://hl7.org/fhir/ValueSet/medication-request-status>

Cardinalities:

Why was dosageInstruction constrained down from 0..1 to 1..1 in DSTU2? – changed to 1..\* in STU3

Why was dosageInstruction.timing.event constrained down from 0..\* to 0..1 in DSTU2? – remains as 0..\* in STU3

Quantity Datatype Constraints:

The following elements required profiling to suit the data type constraints in STU3 as they have been profiled to mandate child elements:

dispenseRequest.expectedSupplyDuration, following the FHIR standard the cardinality of unit (1..1) has been relaxed to 0..1.

Duration - <http://hl7.org/fhir/datatypes.html#Duration>

* system requires the fixed value of UCUM
* code – https://www.hl7.org/fhir/valueset-units-of-time

# CareConnect-MedicationStatement-1

Change to element name:

reasonForUse[x] (0..1): has been split into reasonCode (0..\*) and reasonReference(0..\*). This element was replaced in DSTU2 by Extension-CareConnect-ReasonCondition-1 (0..\*). This change means the extension is no longer required for this resource.

|  |  |
| --- | --- |
| DSTU2 | STU3 |
| patient | subject |
| supportingInformation | derivedFrom |
| dosage.quantityQuantity | dosage.dose[x] |

Extension-CareConnect-MedicationDosageAdditionalInstructions-1:

This extension has been replaced by standing element dosage.additionalInstruction (0..\*) so is no longer required.

Removal of elements in STU3

* site[x] – Reference BodySite has been removed codeable concept only element.

Additional mandatory STU3 elements:

* taken(code) that replaces the wasNotTaken(0..1) Boolean

Additional optional STU3 elements:

* basedOn
* part of
* context
* subject.reference(Group)
* category
* dosage.sequence
* dosage.patientInstruction
* dosage.dose[x].Range
* dosage.rate[x].Quantity(SimpleQuantity)
* dosage.maxDosePerAdministration
* dosage.maxDosePerLifetime

Changes to base resource cardinality:

* note: from 0..1 to 0..\*

Cardinalities:

Why was dosage constrained down from 0..\* to 0..1 in DSTU2? – changed to 0..\* in STU3

Why has dosage.timing.event been constrained down to 0..1 form 0..\* in DSTU2? - remains as 0..\* in STU3