



Finnish Base Profiles

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Recent FHIR Implementation Guides



- HL7 Finland initially started with use case specific implementation guides for scheduling and writing data to EHRs. Work for base profiles started later.
- Finnish Implementation Guide for SMART App Launch
 - Require REST, JSON
 - Recommend XML, IPA
- Finnish Base Profiles
 - 27 profiles for 20 resource types
 - 11 extensions
 - 1 code system, 2 value sets

Resource types in Base Profiles



- Appointment
- Condition
- Encounter
- EpisodeOfCare
- HealthcareService
- Immunization
- Location
- MedicationAdministration
- MedicationRequest
- MedicationStatement
- Medication
- Observation
- Organization
- Patient
- Practitioner
- PractitionerRole
- Procedure
- Provenance
- Schedule
- Slot

Current and Future Work



- Finnish FHIR implementation guide for Scheduling
 - Consolidate information from two previous implementation guides
 - Include input from the implementation guide for Kanta
- Terminology Server
 - Clarify needs and requirements
 - Clarify other activities (EU, HL7 Europe, ...)
- IHE Finland and OpenEHR Finland active within HL7 Finland

FHIR Demo 2024



- Nordic FHIR Showcase. fhir.fi/demo
 - Apps
 - Systems
 - Institutions
 - Consultants
- Updated throughout the year
- Get listed! Contact mikael@sensotrend.com

FHIR activities in Kanta



- Finnish PHR
- API for patient-facing apps
- Prescription data
- Appointments data
- Social care data

Kanta

Steps to harmonize Nordic base profiles



- Finnish Base Profiles
 - For each item to be profiled, analyzed solutions adopted by other Nordic implementation guides
 - national identifiers
 - home municipality
 - information security / confidentiality
 - Presented early findings in Vitalis 2023
- Thoughts on further work
 - Ensuring compliance with implementation guides from HL7 Europe
 - Consolidated Nordic FHIR Base Profile IG for development purposes
 - Middle name

Profiled Resource Types and Data Types



•	Address	
•	AllergyIntolerance	
•	Appoinmtnet	•
•	AppointmentResponse	
•	Composition	
	Condition	•
•	DocumentReference	
•	Encounter	•
•	Endpoint	
	EpisodeOfCare	•
•	HealthcareService	•
•	HumanName (data type)	
•	Identifier (data type)	•
	Immunization	•
•	Location	•
•	Medication	•
	MedicationAdministration	•
	MedicationRequest	•
•	MedicationStatement	•
	Observation	•
•	Organization	•
•	Patient	•
•	Person	
•	Practitioner	•
•	PractitionerRole	•
•	Procedure	•
	Provenance	•
•	RelatedPerson	
	Schedule	•
	Slot	•
•	Substance	

Combined Nordic FHIR Base Profiles

0.2.0-ci - ci-build

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Combined Nordic FHIR Base Profiles, published by HL7 Finland. This guide is not an authorized publication; it is the continuous build for version 0.2.0-ci built by the FHIR (HL7® FHIR® Standard) CI Build. This version is based on the current content of <https://github.com/fhir-fi/nordic-base/> and changes regularly. See the [Directory of published versions](#)

1 Home

Official URL: <http://hl7.fi/fhir/nordic-base/ImplementationGuide/hl7.fi.fhir.nordic>

Version: **0.2.0-ci**

Draft as of 2024-05-10

Computable Name: CombinedNordicFHIRBaseProfiles

Nordic Base Profile Experimentation

- [Nordic Base Profile Experimentation](#)
 - [Dependencies](#)
 - [IPR](#)

This “implementation guide” assists in checking how much the Nordic FHIR base profiles differ from each other.



This implementation guide is only meant to support harmonization efforts between Nordic FHIR base profile specifications.

1.1 Dependencies

IG	Package	FHIR	Comment
Combined Nordic FHIR Base Profiles	hl7.fi.fhir.nordic#0.2.0-ci	R4	
HL7 Terminology (THO)	hl7.terminology.r4#5.5.0	R4	Automatically added as a dependency - all IGs depend on HL7 Terminology
FHIR Extensions Pack	hl7.fhir.uv.extensions.r4#5.1.0	R4	Automatically added as a dependency - all IGs depend on the HL7 Extension Pack
HL7 FHIR Implementation Guide: DK Core	hl7.fhir.dk.core#3.2.0	R4	
Finnish Base Profiles	hl7.fhir.fi.base#1.0.0	R4	
	hl7.fhir.no.basis#2.2.0	R4	
Swedish Base Profiles Implementation Guide	hl7se.fhir.base#1.0.0	R4	

Path	Severity	Message
Organization (I1/c2)	error	Constraint failed: dk-core-organization-mandatory-identifier: 'Minimum one identifier shall be of type <code>SOR-ID</code> , <code>KOMBIT-ORG-ID</code> or <code>CVR-ID</code> ' (defined in http://hl7.dk/fhir/core/StructureDefinition/dk-core-organization)

[fsh-generated/resources/Organization-b08997bb-4476-4dd0-84dd-2e297f809364.json](#) [Show Validation Information](#) (10)

✓

[fsh-generated/resources/Patient-283.json](#) [Show Validation Information](#) (10)

Path	Severity	Message
Patient.identifier[0].system (I12/c42)	error	Value is 'urn:oid:1.2.208.176.1.2' but must be 'urn:oid:1.2.246.21'
Patient.name[0] (I17/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)

[fsh-generated/resources/Patient-Confidential.json](#) [Show Validation Information](#) (10)

Path	Severity	Message
Patient.meta.security[0] (I6/c8)	warning	A code with no system has no defined meaning, and it cannot be validated. A system should be provided
Patient.name[0] (I26/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)

[fsh-generated/resources/Patient-GOFSH-GENERATED-ID-2.json](#) [Show Validation Information](#) (11)

Path	Severity	Message
Patient.name[0] (I35/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)

[fsh-generated/resources/Patient-GOFSH-GENERATED-ID-3.json](#) [Show Validation Information](#) (11)

Path	Severity	Message
Patient.contact[0].relationship[1] (I107/c10)	warning	No code provided, and a code should be provided from the value set 'Patient Contact Relationship' (http://hl7.org/fhir/ValueSet/patient-contactrelationship 4.0.1)
Patient.contact[0].relationship[1] (I107/c10)	warning	No code provided, and a code should be provided from the value set 'DK Related Person Relationship Types' (http://hl7.dk/fhir/core/ValueSet/dk-core-RelatedPersonRelationshipTypes 3.2.0)
Patient.name[0] (I39/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)

[fsh-generated/resources/Patient-JaneDoe.json](#) [Show Validation Information](#) (10)

Path	Severity	Message
Patient (I1/c2)	error	Patient.identifier: minimum required = 1, but only found 0 (from http://hl7.dk/fhir/core/StructureDefinition/dk-core-patient 3.2.0)
Patient (I1/c2)	error	Patient.identifier: minimum required = 1, but only found 0 (from https://hl7.fi/fhir/finnish-base-profiles/StructureDefinition/fi-base-patient 1.0.0)
Patient.name[0] (I10/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)

[fsh-generated/resources/Patient-JohnDoe.json](#) [Show Validation Information](#) (10)

Path	Severity	Message
Patient.identifier[0] (I33/c6)	error	Constraint failed: ipa-pat-1: 'At least one of Patient.identifier.system or Patient.identifier.type or Patient.identifier.assigner SHALL be present' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient)
Patient.name[0] (I10/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)

[fsh-generated/resources/Patient-Max.json](#) [Show Validation Information](#) (10)

Path	Severity	Message
Patient.name[0] (I16/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)

[fsh-generated/resources/Patient-PatientExample1.json](#) [Show Validation Information](#) (10)

Path	Severity	Message
Patient.address[0].extension[0].value.ofType(CodeableConcept).coding[0].code (I64/c12)	error	Unknown code '63401000052101' in the CodeSystem 'http://snomed.info/sct' version 'http://snomed.info/sct/900000000000207008/version/20240201' (from http://tx.fhir.org/r4)
Patient.address[0].extension[0].value.ofType(CodeableConcept) (I64/c12)	error	None of the codings provided are in the value set 'SE ValueSet for official address types' (http://hl7.se/fhir/ig/base/ValueSet/SEBaseAddressPersonVS1.0.0), and a coding from this value set is required (codes = http://snomed.info/sct#63401000052101)
Patient.maritalStatus.coding[0] (I81/c4)	warning	Coding has no system. A code with no system has no defined meaning, and it cannot be validated. A system should be provided
Patient.identifier[0] (I20/c6)	error	Constraint failed: ipa-pat-1: 'At least one of Patient.identifier.system or Patient.identifier.type or Patient.identifier.assigner SHALL be present' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient)

[fsh-generated/resources/Patient-Poul.json](#) [Show Validation Information](#) (12)

Path	Severity	Message
Patient.name[0] (I24/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)
Patient.identifier[0] (I11/c6)	error	Patient.identifier.system: minimum required = 1, but only found 0 (from http://hl7.org/fhir/uv/phd/StructureDefinition/PhdPatient 1.0.0)

[fsh-generated/resources/Patient-e70f0ba2-44d8-4f14-9c3a-ff4c6ead7473.json](#) [Show Validation Information](#) (10)

Path	Severity	Message
Patient (I1/c2)	error	Patient.identifier: minimum required = 1, but only found 0 (from http://hl7.dk/fhir/core/StructureDefinition/dk-core-patient 3.2.0)
Patient (I1/c2)	error	Patient.identifier: minimum required = 1, but only found 0 (from https://hl7.fi/fhir/finnish-base-profiles/StructureDefinition/fi-base-patient 1.0.0)
Patient.name[0] (I10/c6)	warning	Constraint failed: ipa-pat-3: 'To be usable for a wide range of internationally available applications, the Patient.name.text SHOULD be present.' (defined in http://hl7.org/fhir/uv/ipa/StructureDefinition/ipa-patient) (Best Practice Recommendation)



HL7 FINLAND

Thank you!

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