



# NEUE METHODIK BEI IMPLEMENTATION GUIDES FÜR FHIR, V2 UND CDA

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# IG-Publisher bei IHE

Beginnend mit FHIR-  
basierten  
Integrationsprofilen ...

**IHE INTERNATIONAL** Integrating the Healthcare Enterprise **ITI**

**Patient Identifier Cross-referencing for mobile (PIXm)**  
3.0.3 - Trial-Implementation

PIXm Home Volume 1 Volume 2 Artifacts Other <prev | bottom | next>

Table of Contents > **1:41 PIXm Home**

This page is part of the IHE Patient Identifier Cross-referencing for Mobile (v3.0.3: Publication) based on [FHIR R4](#). This is the current published version. For a full list of available versions, see the [Directory of published versions](#).

Official URL: <a href="https://profiles.ihe.net/ITI/PIXm/ImplementationGuide/ihe.iti.pixm">https://profiles.ihe.net/ITI/PIXm/ImplementationGuide/ihe.iti.pixm</a>	Version: 3.0.3
Active as of 2023-08-04	Computable Name: IHE_PIXm

The **Patient Identifier Cross-reference for Mobile (PIXm) Profile** provides RESTful transactions for mobile and lightweight browser-based applications to create, update and delete patient records in a Patient Identifier Cross-reference Manager and to query the Patient Identifier Cross-reference Manager for a patient's cross-domain identifiers.

- Organization of This Guide
- Conformance Expectations

**Note**  
Significant Changes, Open and Closed Issues  
[Search this IG](#)

### Organization of This Guide

This guide is organized into following sections:

- Volume 1: Use-Case Analysis
  - 41.1 PIXm Actors, Transactions, and Content Modules
  - 41.2 PIXm Actor Options
  - 41.3 PIXm Required Actor Groupings
  - 41.4 PIXm Overview
  - 41.5 PIXm Security Considerations
  - 41.6 PIXm Cross Profile Considerations
- Volume 2: Transaction Detail
  - 3.83 Patient Identifier Cross-reference Query [ITI-83]
  - 3.104 Patient Identity Feed FHIR [ITI-104]
- Other
  - Test Plan

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Nothing in this presentation should be taken as

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# V2+ Vokabular Management



1. (Concept Domain)
2. Codesystem
3. Value Set
4. ..

**v2+ Vocabulary**  
0.1.0 - Working Draft to present the concept ideas (FO)

Homepage Details Artifacts

Table of Contents > **V2+ Vocabulary**

v2+ Vocabulary - Local Development build (v0.1.0). See the [Directory of published versions](#)

1 V2+ Vocabulary	Version: 0.1.0
Official URL: <a href="https://hl7.eu/v2plusvocab/ImplementationGuide/hl7v2plus.v2.uv.vocab">https://hl7.eu/v2plusvocab/ImplementationGuide/hl7v2plus.v2.uv.vocab</a>	Computable Name: HL7v2v2plusVocabulary

Draft as of 2023-08-17

- Introduction to Vocabulary for v2+
- Open Topics

This is just the very first rough draft.

### 1.1 Introduction to Vocabulary for v2+

This is the introductory page for v2+ vocabulary.

Content:

- Explanations (not yet added)
  - basic structures: concept domains, value sets and codesystems
  - concept domains with example values: the problem with some user tables
  - options to represent concept domains: one or more codesystems with properties
- [concept domains with example values](#)
- [Artifacts](#)
  - Value Sets
  - Codesystems
  - Concept Domains (as special Codesystem)
- [Content Changes](#)

### 1.2 Open Topics

The following is a list of open topics that still need to be realized:

- [ConceptDomain](#)
  - new property to represent table\_type
  - sort codes alphabetically
- [CodeSystem](#)
  - property for realm/country
- [ValueSet](#)

Probleme:

1. Versionen
2. „Table oriented view“

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# CDA Management Group



Implementation Guides (IGs) will convert

- ... Template Constraint Sets to *StructureDefinition* from Profiling Tools such as ART-DECOR or Lantana’s Trifolia Workbench
- ... including Value Sets to be able to
- ... use the **FHIR Implementation Guide Publisher** Tool to create HTML IGs

## Examples

- International Patient Summary (re-ballot in January 2024)
- Consolidated CDA

HL7 International International Patient Summary 1.0.0 Release 1.0 - CI Build HL7 CDA

IG Home Table of Contents General Principles and Design Artifact Index Appendix

Table of Contents > IG Home Page

International Patient Summary 1.0.0 Release - Local Development build (v1.0). See the [Directory of published versions](#)

1 IG Home Page

Official URL: <a href="http://hl7.org/cda/uv/ips/ImplementationGuide/hl7.cda.uv.ips">http://hl7.org/cda/uv/ips/ImplementationGuide/hl7.cda.uv.ips</a>	Version: 1.0
Draft as of 2023-01-12	Computable Name: IPS

This document contains: Standard for Trial Use **International Patient Summary** (1.86)

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# CDA Management Group



**Clinical Document Architecture**  
2.0.1 - active



[IG Home](#) [Table of Contents](#) [Artifact Index](#) [Downloads](#)

[Table of Contents](#) > [Artifacts Summary](#) > [ClinicalDocument \(CDA Class\)](#)

Clinical Document Architecture, published by Health Level 7. This is not an authorized publication; it is the continuous build for version 2.0.1). This version is based on the current content of <https://github.com/HL7/CDA-core-2.0/> and changes regularly. See the [Directory of published versions](#)

**Content** [Detailed Descriptions](#) [Mappings](#) [Examples](#) [XML](#)

## 3.12.1 Logical Model: ClinicalDocument (CDA Class)

**Differential Table** [Key Elements Table](#) [Snapshot Table](#) [Statistics/References](#)

This structure is derived from [Base](#)

Name	Flags	Card.	Type	Description & Constraints
ClinicalDocument		1..1	Base	<b>XML Namespace:</b> urn:hl7-org: ClinicalDocument Base for all types and resources
@classCode		0..1	cs	<b>Binding:</b> ActClass (extensible) <b>Fixed Value:</b> DOCCLIN
@moodCode		0..1	cs	<b>Binding:</b> ActMood (required) <b>Fixed Value:</b> EVN
realmCode		0..*	CS	
typeId		1..1	II	
@root		1..1	st	<b>Fixed Value:</b> 2.16.840.1.113883.
@extension		1..1	st	

**Differential Table** **Key Elements Table** **Snapshot Table** **Statistics/References**

Name	Flags	Card.	Type	Description & Constraints
PN	<b>C</b>	1..*	EN	<b>XML Namespace:</b> urn:hl7-org:v3 Elements defined in Ancestors: @nullFlavor, @use Base for all types and resources <b>pn-no-ls:</b> No PN name part may have a qualifier <b>Binding:</b> NullFlavor (required)
@nullFlavor		0..1	CS	
@use		0..*	CS	
delimiter		0..*	ENXP	
family		0..*	ENXP	
given		0..*	ENXP	
prefix		0..*	ENXP	
suffix		0..1	st	
xmlText		0..1	IVL_TS	Allows for mixed text content
validTime		0..1	IVL_TS	

# Gegenwärtige Schwachstelle: “Obligations”

## 13.144.1.1 Mandatory and Must Support Data Elements

The following data-elements must always be present (**Mandatory** definition) or must be supported if the data is present in the sending system (**Must Support** definition). They are presented below in a simple human-readable explanation. Profile specific guidance and examples are provided as well. The **Formal Views** below provides the formal summary, definitions, and terminology requirements.

### Each Patient Must Have:

1. a patient identifier (e.g. MRN)
2. a patient name
3. a gender\*

### Each Patient Must Support:

1. a birth date
2. an address

### Additional USCDI Requirements

For ONC’s USCDI requirements, each Patient Must

1. contact detail (e.g. a telephone number)
2. a communication language
3. a race
4. an ethnicity
5. a tribal affiliation
6. sex\*
7. gender identity\*
8. date of death
9. previous address
10. previous name
11. suffix

\*see guidance below

## 13.148.1.1 Mandatory and Must Support Data Elements

The following data-elements must always be present (**Mandatory** definition) or must be supported if the data is present in the sending system (**Must Support** definition). They are presented below in a simple human-readable explanation. Profile specific guidance and examples are provided as well. The **Formal Views** below provides the formal summary, definitions, and terminology requirements.

### Each Practitioner Must Have:

1. An identifier which Must Support an NPI if available.
2. A name

### Each PractitionerRole Must Support:

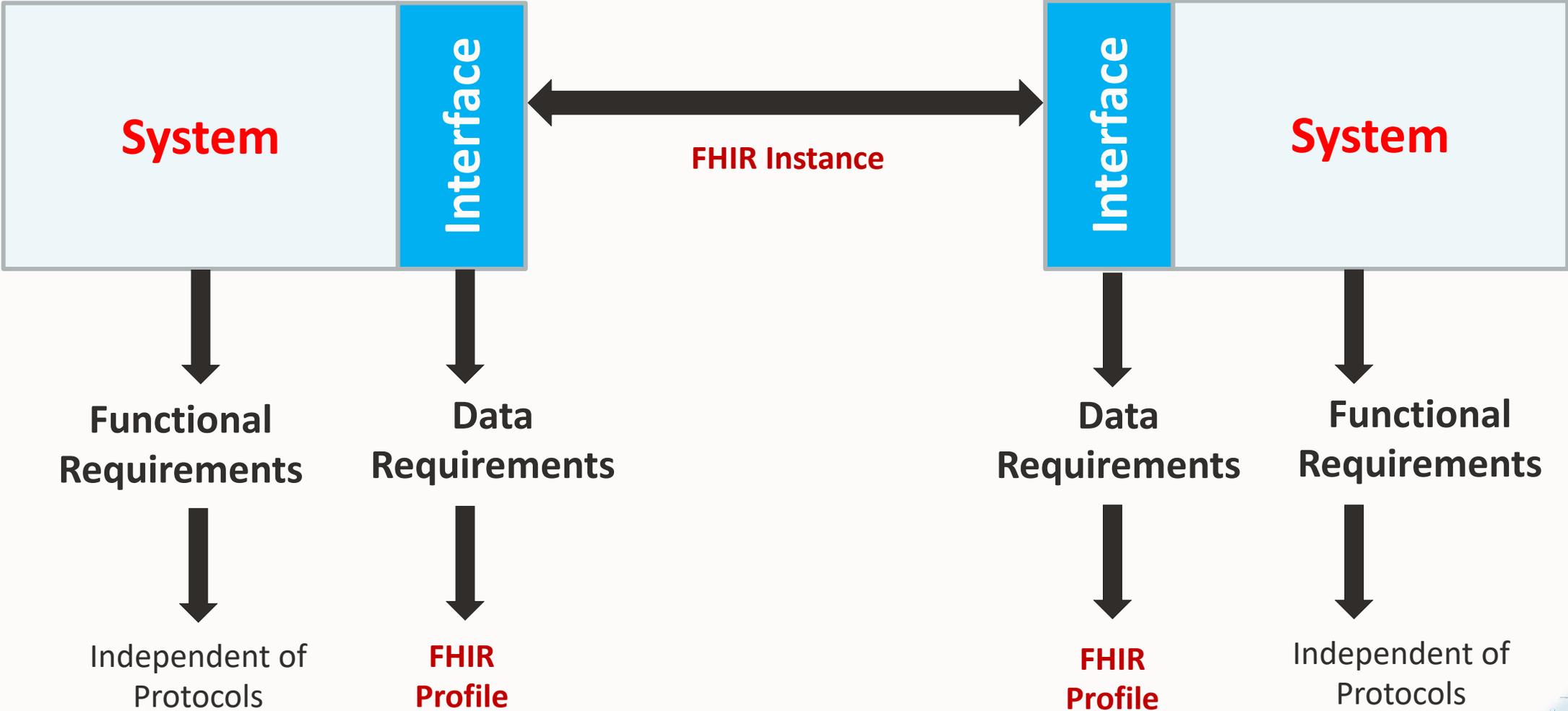
1. Contact information
2. An address

### Profile Specific Implementation Guidance:

- Servers that support only US Core Practitioner Profile **SHALL** provide implementation specific guidance how to access a provider’s location and contact information using only the Practitioner resource.
- It is important to balance the privacy of healthcare workers with the patient’s right to access information. Only professional/work contact information about the practitioner **SHOULD** be available to the patient (such as a work address or office telephone number).
- This profile may be referenced by different capability statements, such as the **Conformance requirements for the US Core Server**, or a provider directory capability statement.



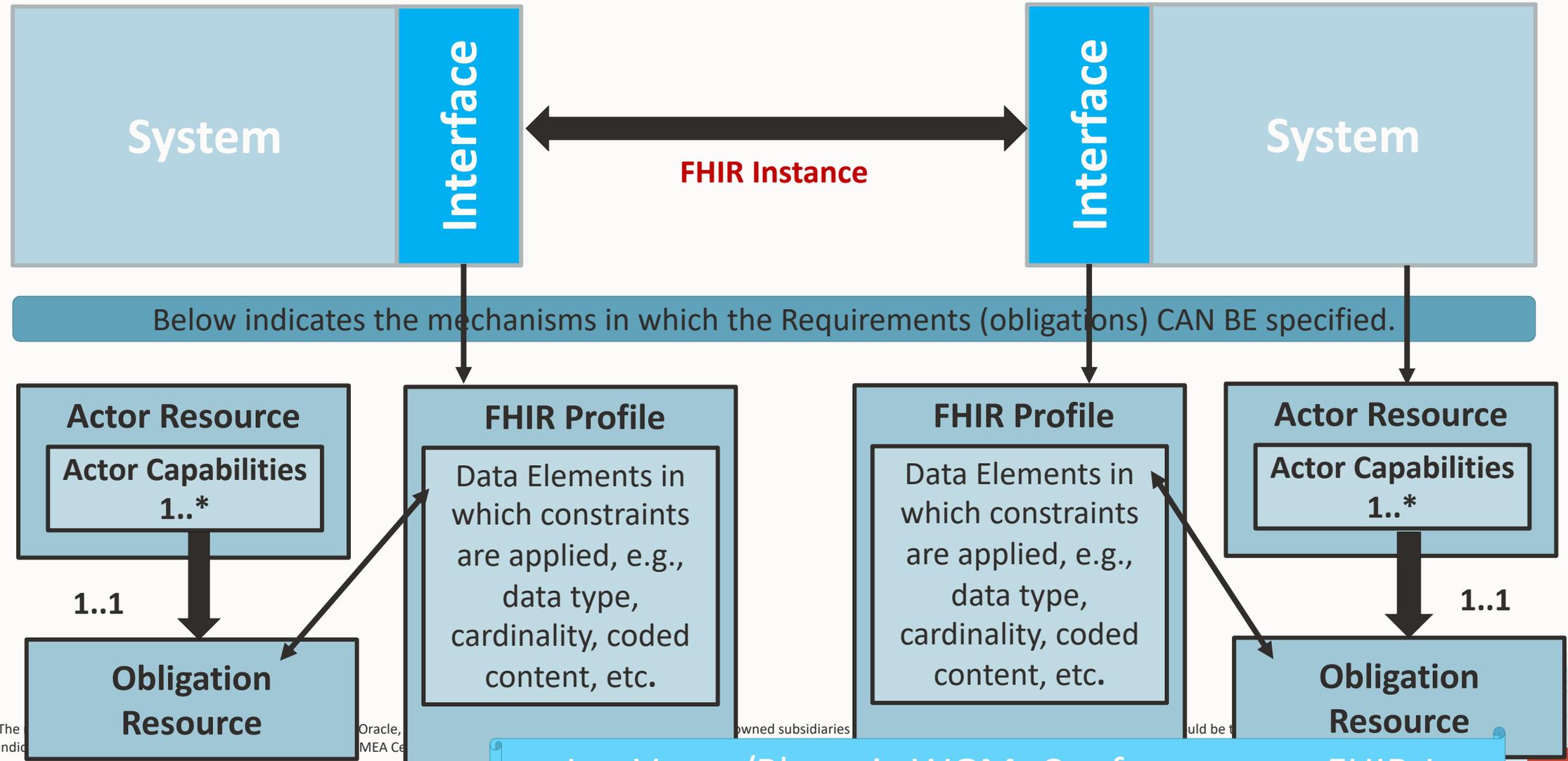
# Basic System Model



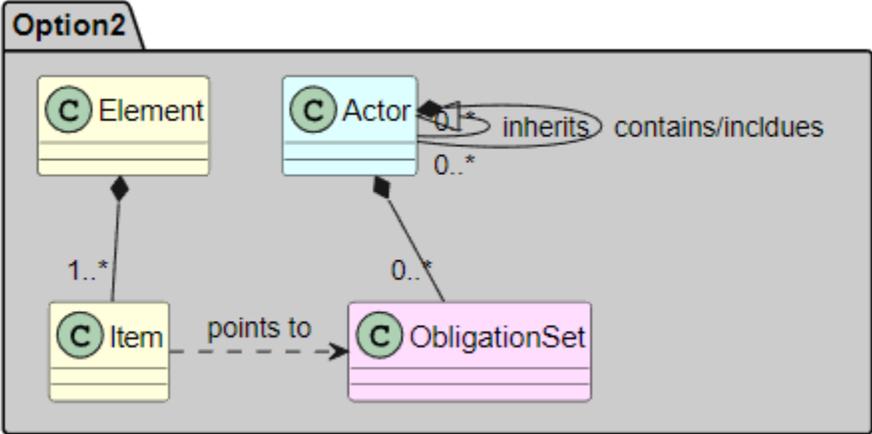
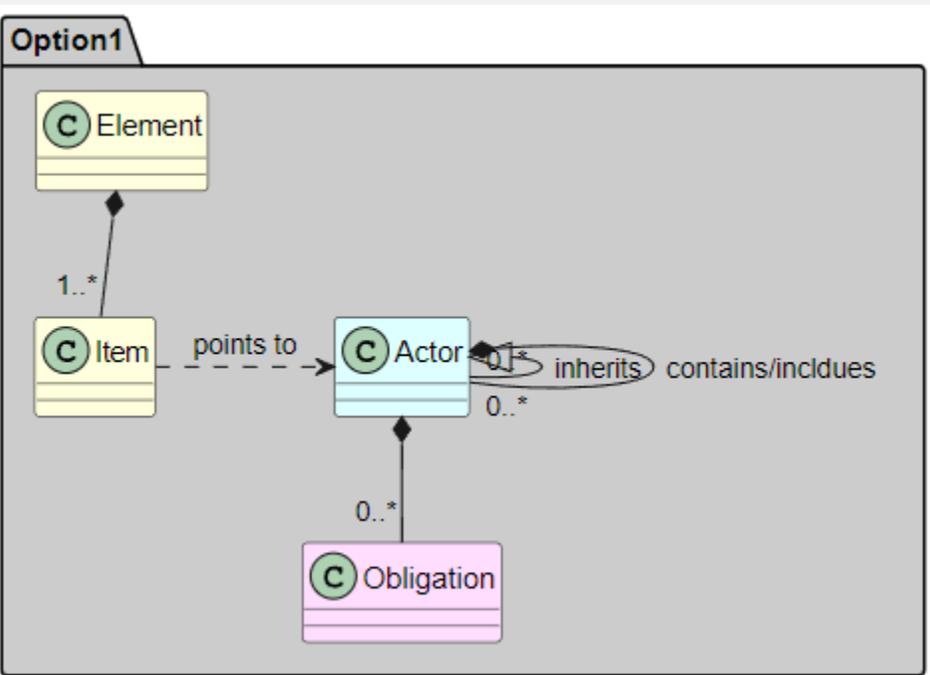
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# Actor and Obligations Resources



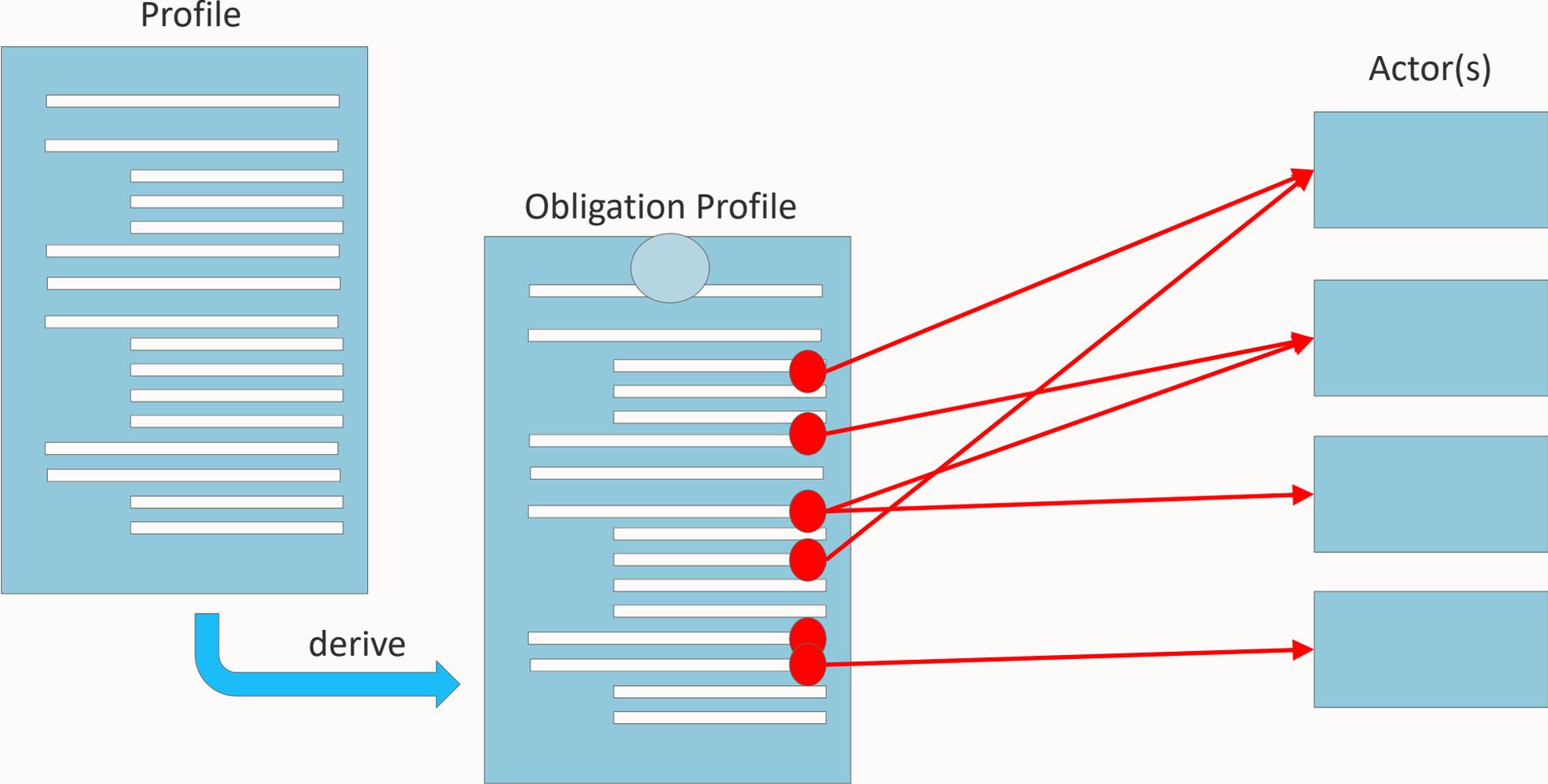
# Umsetzungsmöglichkeiten



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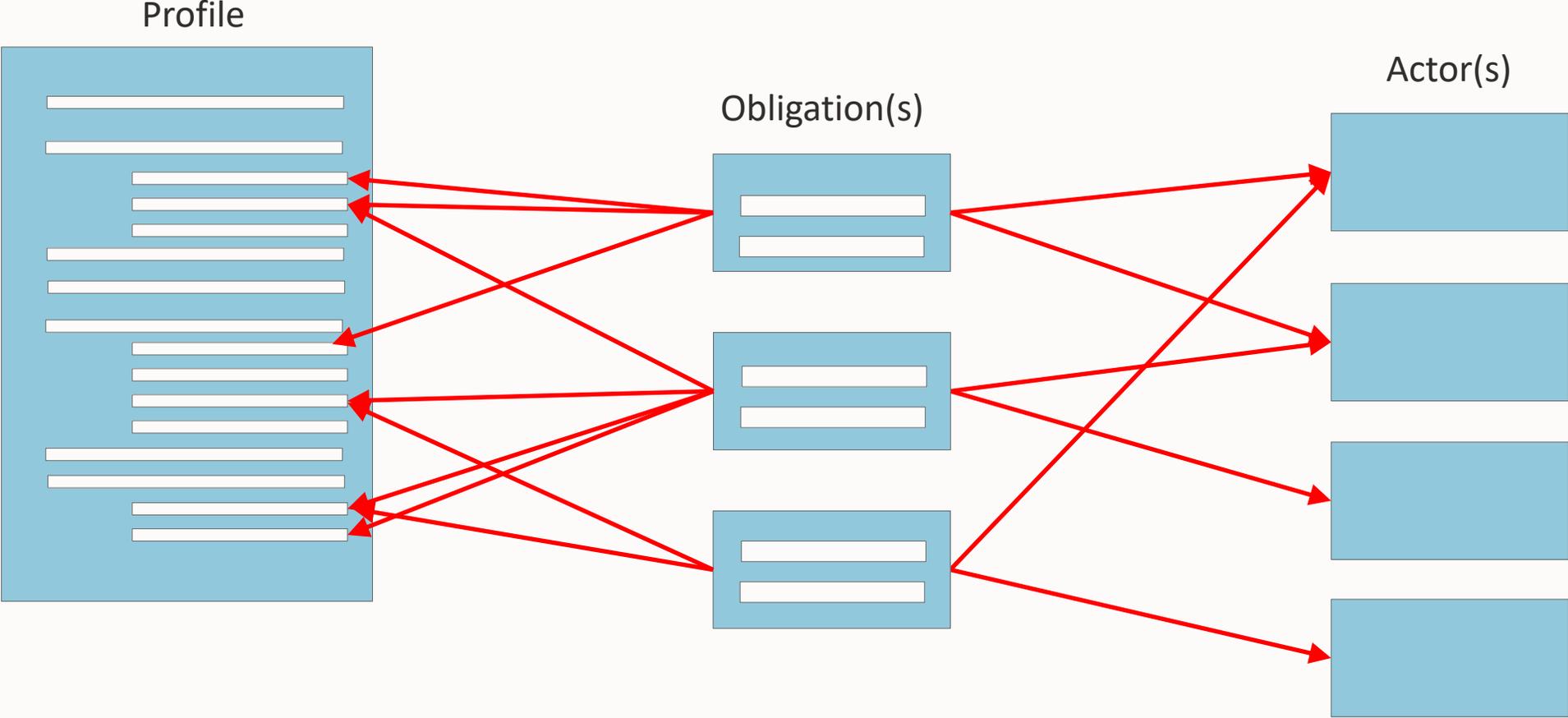
# Obligation Extension



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# Obligation Resource



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# Aktuelle Tests mit IG-Publisher

Name	Flags	Card.	Type	Description & Constraints						
Patient		0..*	Patient	Information about an individual or animal receiving health care services						
name	O	1..*	HumanName	A name associated with the patient <table border="1"> <tr><td>Obligations</td><td>Actor</td></tr> <tr><td>send</td><td>Server Actor 1</td></tr> </table>	Obligations	Actor	send	Server Actor 1		
Obligations	Actor									
send	Server Actor 1									
text	O	0..1	string	Text representation of the full name <table border="1"> <tr><td>Obligations</td><td>Actor</td></tr> <tr><td>send</td><td>Server Actor 1</td></tr> </table>	Obligations	Actor	send	Server Actor 1		
Obligations	Actor									
send	Server Actor 1									
family	O	0..1	string	Family name (often called 'Surname') <table border="1"> <tr><td>Obligations</td><td>Actor</td></tr> <tr><td>send</td><td>Server Actor 1</td></tr> <tr><td>send</td><td>Server Actor 1</td></tr> </table>	Obligations	Actor	send	Server Actor 1	send	Server Actor 1
Obligations	Actor									
send	Server Actor 1									
send	Server Actor 1									
given	S	0..*	string	Given names (not always 'first'). Includes middle names						
telecom	O	0..*	ContactPoint	A contact detail for the individual <table border="1"> <tr><td>Obligations</td><td>Actor</td></tr> <tr><td>send</td><td>Server Actor 1</td></tr> </table>	Obligations	Actor	send	Server Actor 1		
Obligations	Actor									
send	Server Actor 1									
gender	S	1..1	code	male   female   other   unknown						
birthDate	S	1..1	date	The date of birth for the individual						

## 1. Patient

### 2. Patient.name

Control 10..\*

Obligations	<b>Obligations</b>	Actor
	send	Server Actor 1

### 3. Patient.name.text

Definition Text representation of the full name. Due to the culture, the parts of the name go in given or family. Creators of this guide may require this element

Control 0..?

Obligations	<b>Obligations</b>	Actor
	send	Server Actor 1

### 4. Patient.name.family

Control 0..?

Obligations	<b>Obligations</b>	Actor
	send	Server Actor 1
	send	Server Actor 1

### 5. Patient.name.given

Control 0..?

Must true  
Support

### 6. Patient.telecom

Obligations	<b>Obligations</b>	Actor
	send	Server Actor 1

### 7. Patient.gender

Control 10..1

Must true  
Support

### 8. Patient.birthDate

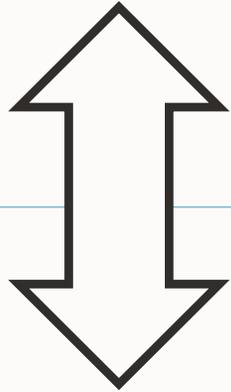
Control 10..1

Must true  
Support

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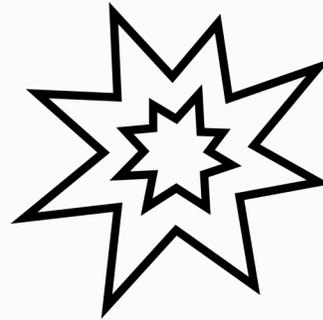


# “Obligations”



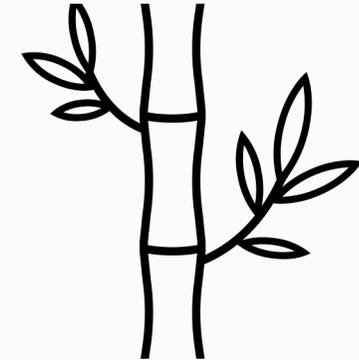
## Requirement Level

Verbindlichkeit der Anforderung



## Activity

Was soll gemacht werden?



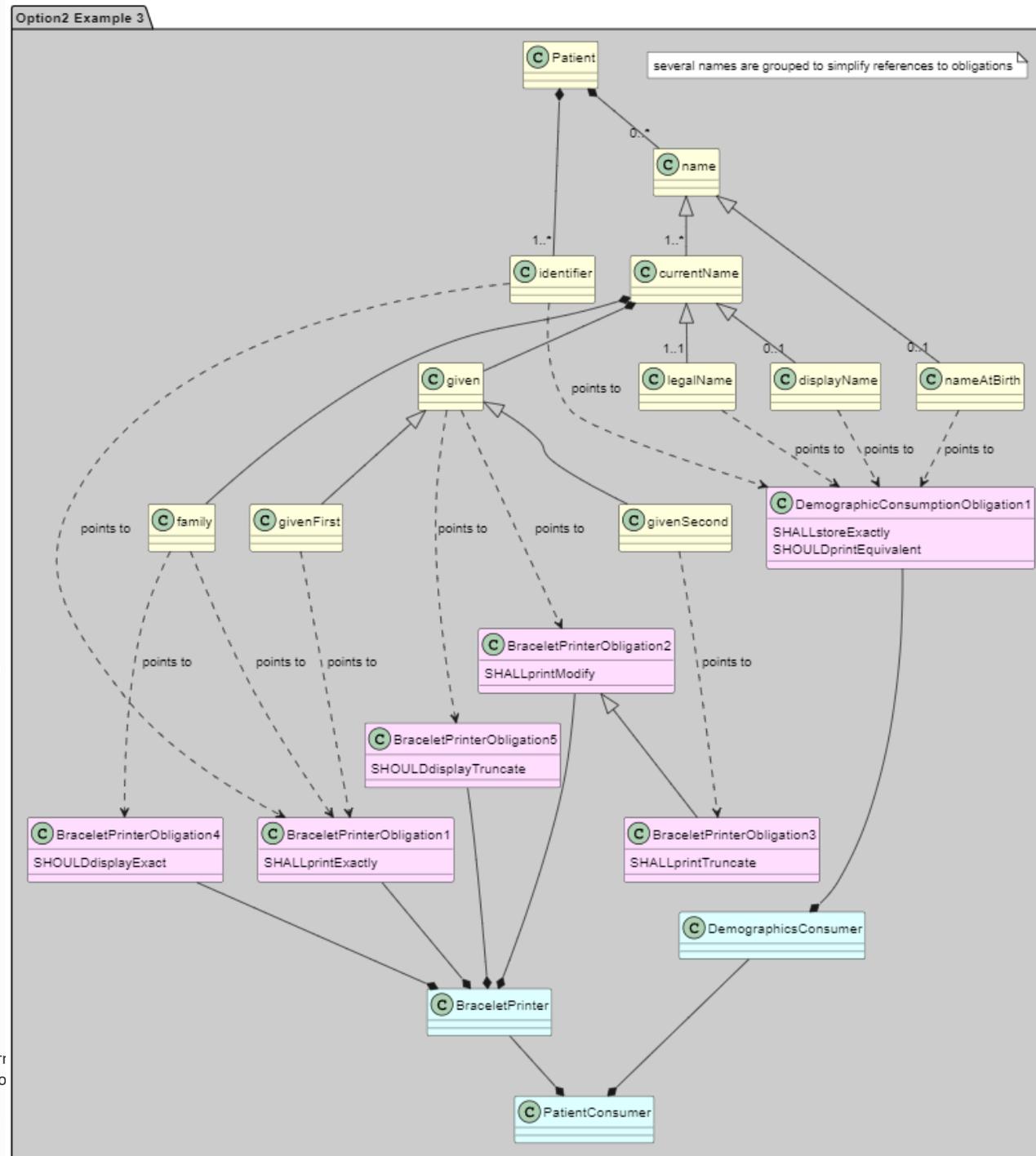
## Data Expectation

Was kann man erwarten?  
Womit muss man rechnen?  
Was darf man?



# Stichwort: Komplexität...

Was gehört in die „Obligation“?



# Profile ⇔ Actor ⇔ Test: Testscript

The screenshot shows the HL7 FHIR CI-Build website. The header includes the HL7 FHIR logo and navigation links like Home, Getting Started, Documentation, Data Types, Resource Types, Terminologies, Artifacts, and Implementation Guides. The breadcrumb trail is Implementation Support > TestScript > Example Instance. A warning box states: "This is the Continuous Integration Build of FHIR (will be incorrect/inconsistent at times). See the Directory of published versions". The main heading is "Example TestScript/testscript-example (Narrative)". Below it is a table with metadata: FHIR Infrastructure Work Group, Maturity Level: N/A, Standards Status: Informative, and Compartments: No defined compartments. There are tabs for Narrative, XML, JSON, and TTL. The Narrative tab is active, showing a description: "This is the narrative for the resource. See also the XML, JSON or Turtle format. This example conforms to the profile TestScriptExample". Under "Generated Narrative: TestScript", there is a resource identifier: "Resource TestScript 'testscript-example'", a URL: "http://hl7.org/fhir/TestScript/testscript-example", and other details like identifier, version, name, title, and status.

action	Description	StopTestOnFail	ValidateProfileId	WarningOnly
Asserts	Confirm that the returned Patient conforms to the base FHIR specification.	false	patient-profile	false

action	Description	Operator	Path	SourceId	StopTestOnFail	Value	WarningOnly
Asserts	Confirm that the returned Patient contains the expected family name 'Chalmers'. Uses explicit sourceId reference to read responseId fixture.	equals	fhir:Patient/fhir:name/fhir:family/@value	fixture-patient-read	false	Chalmers	false

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