

# SRI LANKA FHIR PROFILES

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# CONTENT



- Journey of FHIR Profiling in Sri Lanka
- Process of FHIR Profiling
- Where we are now
- Challenges & Way forward

# JOURNEY OF FHIR PROFILING IN SRI LANKA



NDHGS V2.0

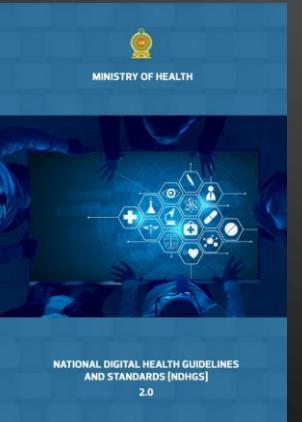
# JOURNEY OF FHIR PROFILING IN SRI LANKA

Pre-  
Blueprint  
era



NDHGS V2.0

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NDHGS V2.0

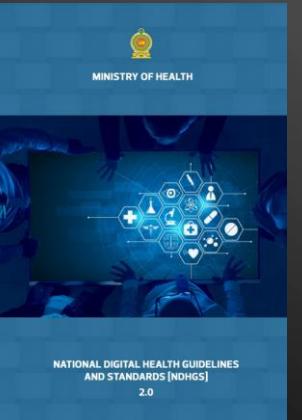
Pre-  
Blueprint  
era



Sri Lanka  
Digital Health  
Blueprint V1.0b  
(2022)

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NDHGS V2.0

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FHIR Profiling  
is not a journey  
in isolation

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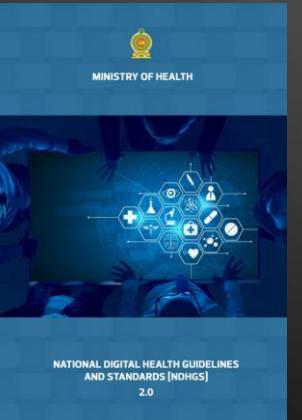
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is not a journey  
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Travel with  
Terminology  
services

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NDHGS V2.0



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# PROCESS OF FHIR PROFILING

- Multiple phases – ongoing process
- NEHR – the thin slice was agreed upon

# PROCESS OF FHIR PROFILING

- Multiple phases – ongoing process
- NEHR – the thin slice was agreed upon



# PROCESS OF FHIR PROFILING

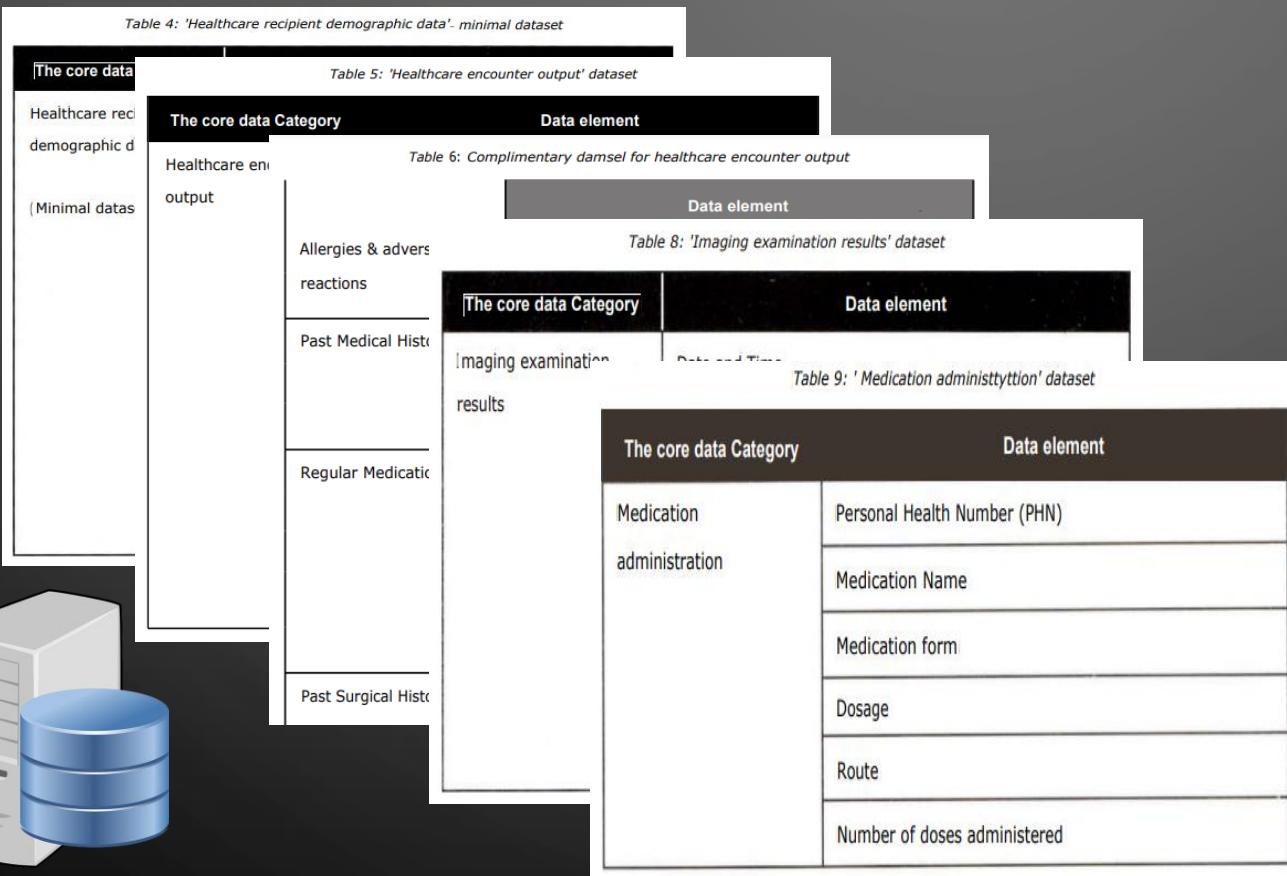
- The identified minimal dataset for the NEHR in the NDHGS was studied against the respective data fields and value sets in the various EMRs.

Table 4: 'Healthcare recipient demographic data' - minimal dataset	
The core data Category	Data element
(Minimal dataset)	Personal Health Number (PHN)
	National Identity type
	National Identity Number Ex. National Identity card number / Identity
	Reporting name
	Legal Name / Registered Name
	Date of Birth
	Is the date of birth calculated
	Gender
	Contact Details

Table 5: 'Healthcare encounter output' dataset	
The core data Category	Data element
Healthcare encounter output	Healthcare encounter
	Healthcare Institution
	Encounter identifier
	Healthcare Institution
	Encounter type
	Date and Time of encounter
	Provider identifier
	Reason for encounter
	Diagnosis (Current)
	Referral details
Allergies & adverse reactions	Allergen name
	Manifestation
	Past Medical History
	Condition
	Onset
	Clinical Status
	Regular Medication
	Regular Medication Name
	Regular Medication form
	Regular Medication Dosage
Past Surgical History	Regular Medication Route
	Medication Status
Procedure name	

Table 6: Complimentary damsel for healthcare encounter output dataset	
The core data Category	Data element
Imaging examination results	Date and Time
	HIN - Health Institution Number
	Investigation request identifier
	Personal Health Number (PHN)
	Radiology test name
	Radiology test Impression
	Radiology Test diagnosis /Conclusion
	Provider ID

# PROCESS OF FHIR PROFILING



EMR 1



EMR 2



EMR 3



EMR 4

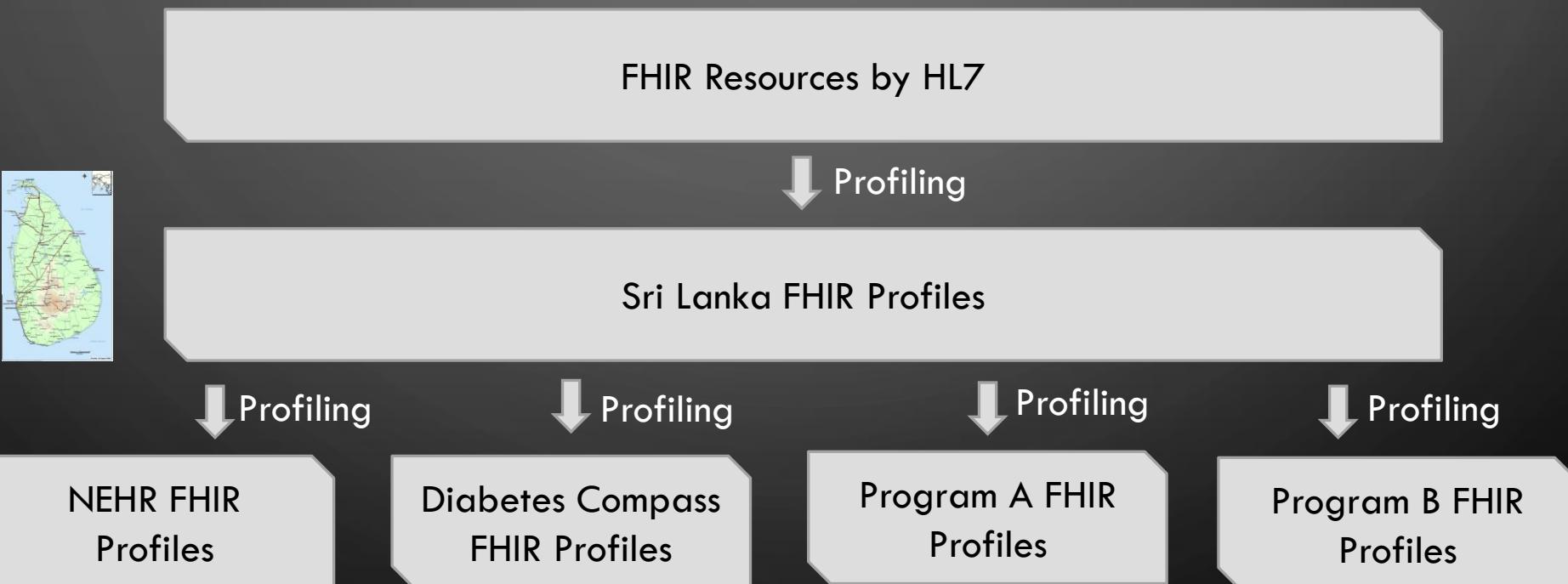
# PROCESS OF FHIR PROFILING

Value sets creation for FHIR profiles

	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P
1															
2	Core Data Category	Data Elements in the Minimal Dataset as mentioned in NDHGS v2.1	Data Elements to be pushed to NEHR version 1.0	Concept Description	Use of the core information	Recommended Data type / Terminology*	Reference to HL7 FHIR	Reference to HL7 FHIR V4 Corrections	Reference to HL7 FHIR Version5	HHIMS	HIMS	HIMS-Cloud	FHIR Value set	FHIR Value set - Binding Strength	
12	Date of Birth	Date of Birth	Date of Birth of a Person as Registered with the RGD	Use to represent the Date of Birth of a Person as Registered with the RGD	Date	Person.birth date DDMMyYYY			Years, Months, Days	Date of birth	Date of Birth				
13	Is the date of birth calculated		If the date of birth is uncertain, calculated birth of date should be transferred to EHR, flagging that this is a calculated		Boolean					Yes	Approximation (True / False)				
14	Gender	Gender	Details about the gender of an individual	Use to record details about the individual's gender for administrative purposes.	String	Person.gender			Male, Female	Male, Female, Other	Male, Female, Other	<a href="http://hl7.org/fhir/ValueSet/administrative-gender">http://hl7.org/fhir/ValueSet/administrative-gender</a>	Required		
15	Address. (a) Permanent. (b) Temporary		(a) Used to indicate where a person is Permanently living (b) a person who usually resides overseas or where the provider of the address is in temporary accommodation due to renovation or treatment etc.	Use to communicate with, identify service provision requirements and trends, and to provide direct services.	String	Person.address				Address, Guardian Address		<a href="https://build.fhir.org/valueset-address-use.html">https://build.fhir.org/valueset-address-use.html</a>	<a href="https://build.fhir.org/valueset-address-type.html">https://build.fhir.org/valueset-address-type.html</a>	Required	
16	Grama Niladhi Division		Indicate GN division person's Permanent Address belongs to	Use to communicate with, identify service provision requirements and trends, and to provide direct services.	String	Refer HL7 FHIR profiles – Sri Lanka				GN Division					
17	Divisional Secretariat		Indicate person's GN division belongs to	Use to communicate with, identify service provision requirements and trends, and to provide direct services.	String	Refer HL7 FHIR profiles – Sri Lanka				District					
18	Contact type ID		Refers to the person given contact type	Use to determine "contact" mode Ex. Voice, email, etc	Integer	Refer HL7 FHIR profiles – Sri Lanka						<a href="https://build.fhir.org/valueset-patient-contactrelationship.html">https://build.fhir.org/valueset-patient-contactrelationship.html</a>	Extensible		

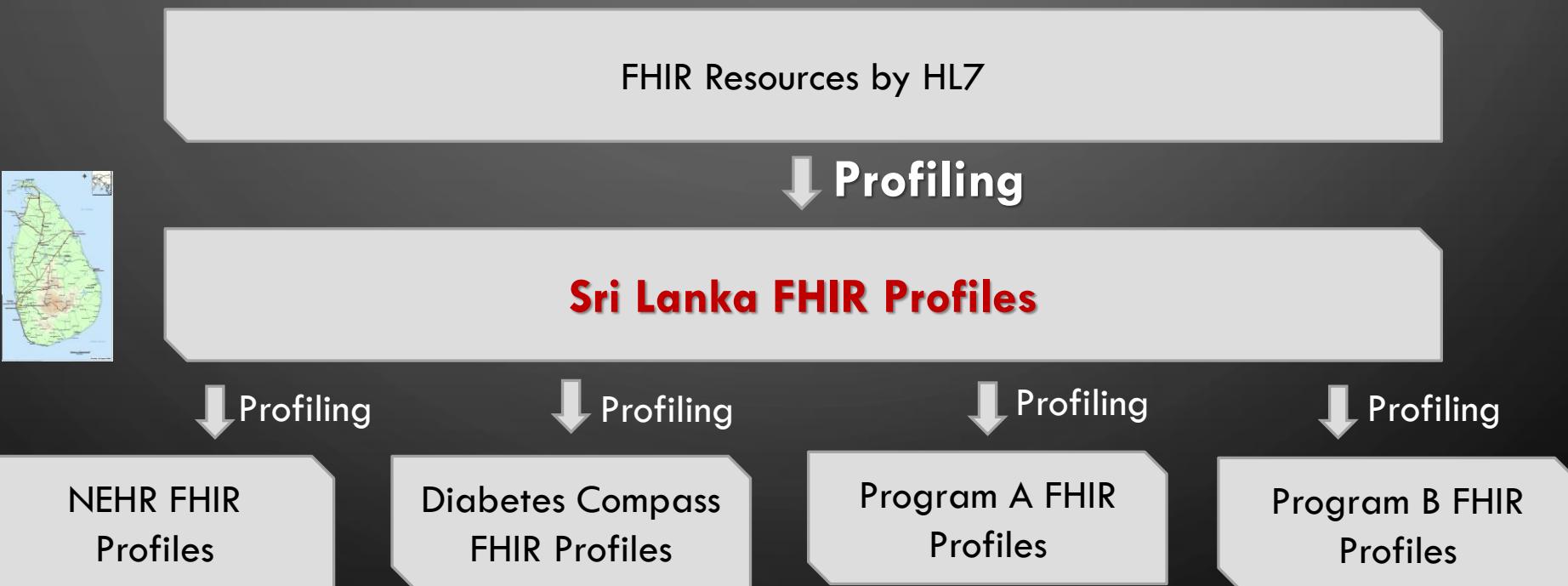
# PROCESS OF FHIR PROFILING

Profiling at different levels based on the requirements



# PROCESS OF FHIR PROFILING

Profiling at different levels based on the requirements



# PROCESS OF FHIR PROFILING

- Reviewed other country profiles

The screenshot shows the Simplifier.NET web interface for the "Malaysia Health Information Exchange" project. The top navigation bar includes links for SNIPPETS, FEEDBACK, LOG IN, and SIGN UP. Below the header, there are buttons for Query, API, and Download. The main content area displays the project details: "PROJECT Malaysia Health Information Exchange" with a logo, and "Malaysia Health Information Exchange". It shows project status as PUBLIC PROJECT, FHIR R4, Scope International, and 0 Subscriptions. The "Introduction" tab is selected, followed by "Resources", "Guides", "Team", "Log", "Dependencies", and "Packages". On the left, there's a sidebar with a search bar, a dropdown for "Resource Categories" (Address (MY Core), AdverseEvent (MY Core)), and checkboxes for "Profiles" (checked) and "ValueSets". The main list area shows two items: "Address (MY Core)" and "AdverseEvent (MY Core)", both marked as "Active".

Malaysia Health Information Exchange

# PROCESS OF FHIR PROFILING

- Reviewed other country profiles

The image shows two screenshots side-by-side. On the left is the Simplifier.NET website for the Malaysia Health Information Exchange. It features a search bar, a project navigation menu (Introduction, Resources, Guides, Team, Log, Dependencies), and a resource list table with columns for Name, Type, Status, and Actions. The table includes rows for Address (MY Core), Profile on Address, Address, and AdverseEvent (MY Core). On the right is the HL7 US Core Implementation Guide website. The header includes the HL7 International logo, a search bar, and navigation links for Snippets, Feedback, Login, and Sign Up. The main content area is titled 'US Core Implementation Guide 6.1.0 - STU6' and contains sections for Home, Conformance, Guidance, FHIR Artifacts, Security, Examples, Downloads, and Change Log. A yellow banner at the top states: 'US Core Implementation Guide, published by HL7 International - Cross-Group Projects. This is not an authorized publication; it is the continuous build for version 6.1.0. This version is based on the current content of <https://github.com/HL7/US-Core/> and changes regularly. See the [Directory of published versions](#)'. Below this is a '1 Home' section with tables for Official URL, Version, Active as of, and Computable Name. A 'STU Note' box provides information about updates and changes between versions. A sidebar on the right lists topics such as Introduction, Background, How to read this Guide, US Core Actors, US Core Profiles, and US Core FHIR RESTful interactions.

US Core Implementation Guide

# PROCESS OF FHIR PROFILING

- Consensus arrived at during the workshops
- Documentation – Consensus, justification, tasks to be done

A1	A	B	C	D	E	F	G	H
1	Resource	Items	Status of the Profiling	Justifications	RoadMap item			
2	Patient	Slice the Identifier into PHN, NIC, Passport No, DL No, Senior citizen no and Other Change Patient.identifier cardinality to 1..*		To use the MedicationStatement Resource for the capture of past drug history				
4				PHN was made as 1 to 1 as the patient would either come with 1 PHN number, or if PHN is not available a PHN would be generated. So there is provision only for 1 PHN number in the EMR. And handling of multiple PHN for 1 patient would be the task of the client registry and not the fhir resource per se.				
5		Change PHN cardinality to 1..*—Change PHN cardinality to 1..1 NIC 0..*, Passport No 0..*, DL 0..4, DL No 0..*, SSN 0..1, other 0..*						
6		Change the valueSet for the Identifier.type (add PHN to the existing value set)	LKCoreIdentifierTypeVS	Patient.name will remain the same. Cardinality will not be changed. (0..*) Patient's full name if available will be captured into HumanName.text				
7				Patient.gender the cardinality should be changed as mandatory (1..1). There is an option in the Value set as unknown, so it wouldn't be a problem.				
9		Change Patient.gender cardinality to 1..1						

# PROCESS OF FHIR PROFILING

## Tools used for FHIR profiling

- VS Code
- FHIR extension
- FSH extension
- Sushi
- Ruby
- Jekyll

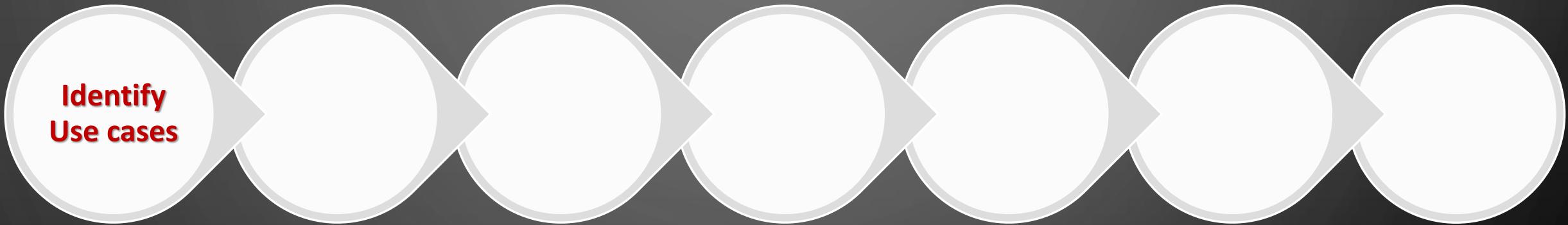
The screenshot shows a Visual Studio Code (VS Code) interface with the following details:

- File Explorer:** Shows a folder named "MYEXAMPLEFORWORKSHOP" containing various FHIR-related files such as FSH.fsh, LKCoreDistrictCS.fsh, LKCoreProvinceCS.fsh, patient.fsh, and several LKCore\*.fsh and LKCore\*.VS.fsh files.
- Code Editor:** Displays the content of LKCoreProvinceCS.fsh, which defines a FHIR CodeSystem for provinces in Sri Lanka with 9 entries (LKL-1 to LKL-9).
- Terminal:** Shows log output from the "powershell" command, indicating the export of 23 FHIR resources as JSON, assembly of Implementation Guide sources, and generation of the ImplementationGuide-ShakiraIG.json file.
- SUSHI Results:** A summary table showing the results of the SUSHI profiling:

SUSHI RESULTS			
ValueSets	CodeSystems	Instances	
8	8	1	

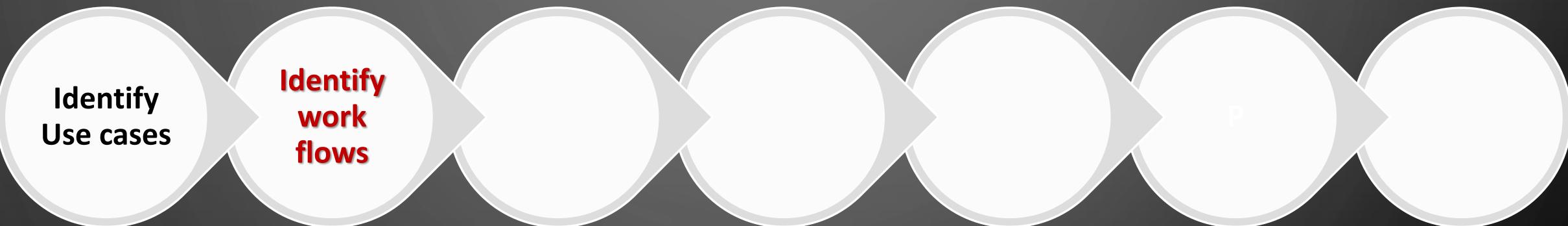
A note at the bottom says "Maybe you should scale back".

# PROCESS OF FHIR PROFILING



Ex. NEHR

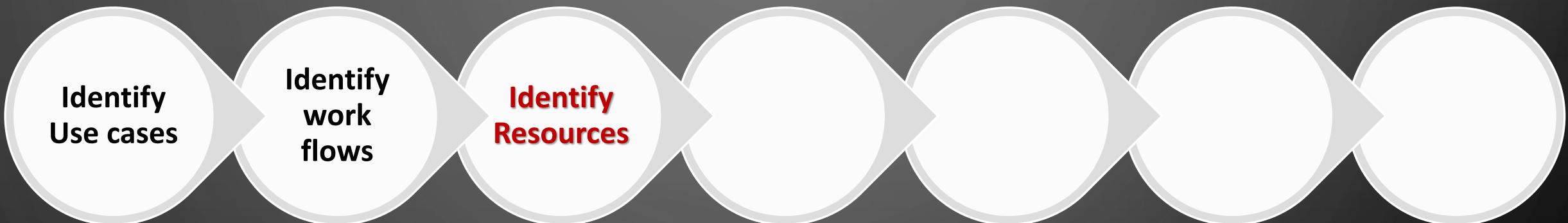
# PROCESS OF FHIR PROFILING



Ex. NEHR

Ex. EMR A sends request for a patient to NEHR. NEHR sends patient data to EMR A.

# PROCESS OF FHIR PROFILING



Ex. NEHR

Ex. EMR A  
sends request  
for a patient  
to NEHR.  
NEHR sends  
patient data  
to EMR A.

Ex. Patient,  
Observation,  
Procedure,  
Condition etc

# PROCESS OF FHIR PROFILING



**Identify  
Use cases**

Ex. NEHR

**Identify  
work  
flows**

Ex. EMR A  
sends request  
for a patient  
to NEHR.  
NEHR sends  
patient data  
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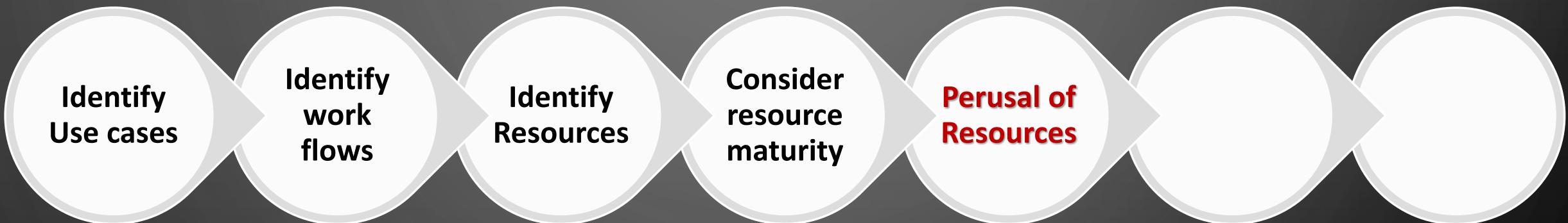
**Identify  
Resources**

Ex. Patient,  
Observation,  
Procedure,  
Condition etc

**Consider  
resource  
maturity**

Ex. Better to  
use resources  
with higher  
maturity level.

# PROCESS OF FHIR PROFILING



**Identify  
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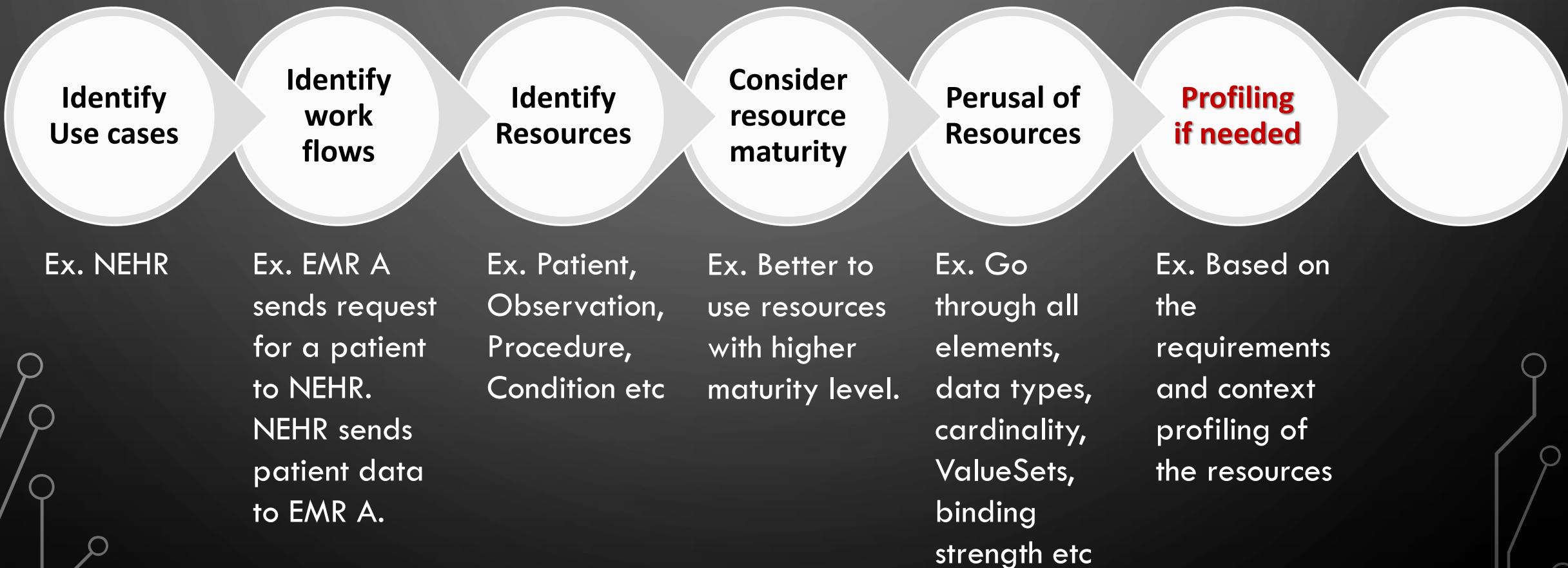
**Consider  
resource  
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Ex. Better to use resources with higher maturity level.

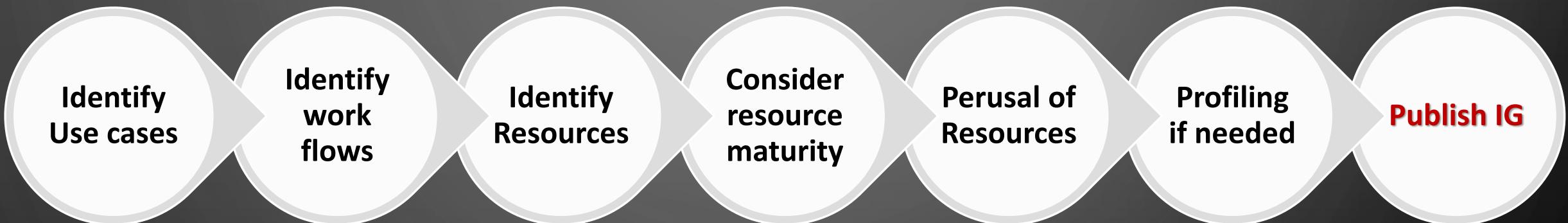
**Perusal of  
Resources**

Ex. Go through all elements, data types, cardinality, ValueSets, binding strength etc

# PROCESS OF FHIR PROFILING



# PROCESS OF FHIR PROFILING



Ex. NEHR

Ex. EMR A sends request for a patient to NEHR. NEHR sends patient data to EMR A.

Ex. Patient, Observation, Procedure, Condition etc

Ex. Better to use resources with higher maturity level.

Ex. Go through all elements, data types, cardinality, ValueSets, binding strength etc

Ex. Based on the requirements and context profiling of the resources

Ex. Put the resources together and publish the Implementation Guide

**Identify Use cases**

**Identify work flows**

**Identify Resources**

**Consider resource maturity**

**Perusal of Resources**

**Profiling if needed**

**Publish IG**

# PROCESS OF FHIR PROFILING

Arriving at a consensus during Brainstorming sessions  
– Time consuming and the crucial part in FHIR profiling



# WHERE WE ARE NOW

SL FHIR Profiling has started and going on ...

Based on FHIR R4

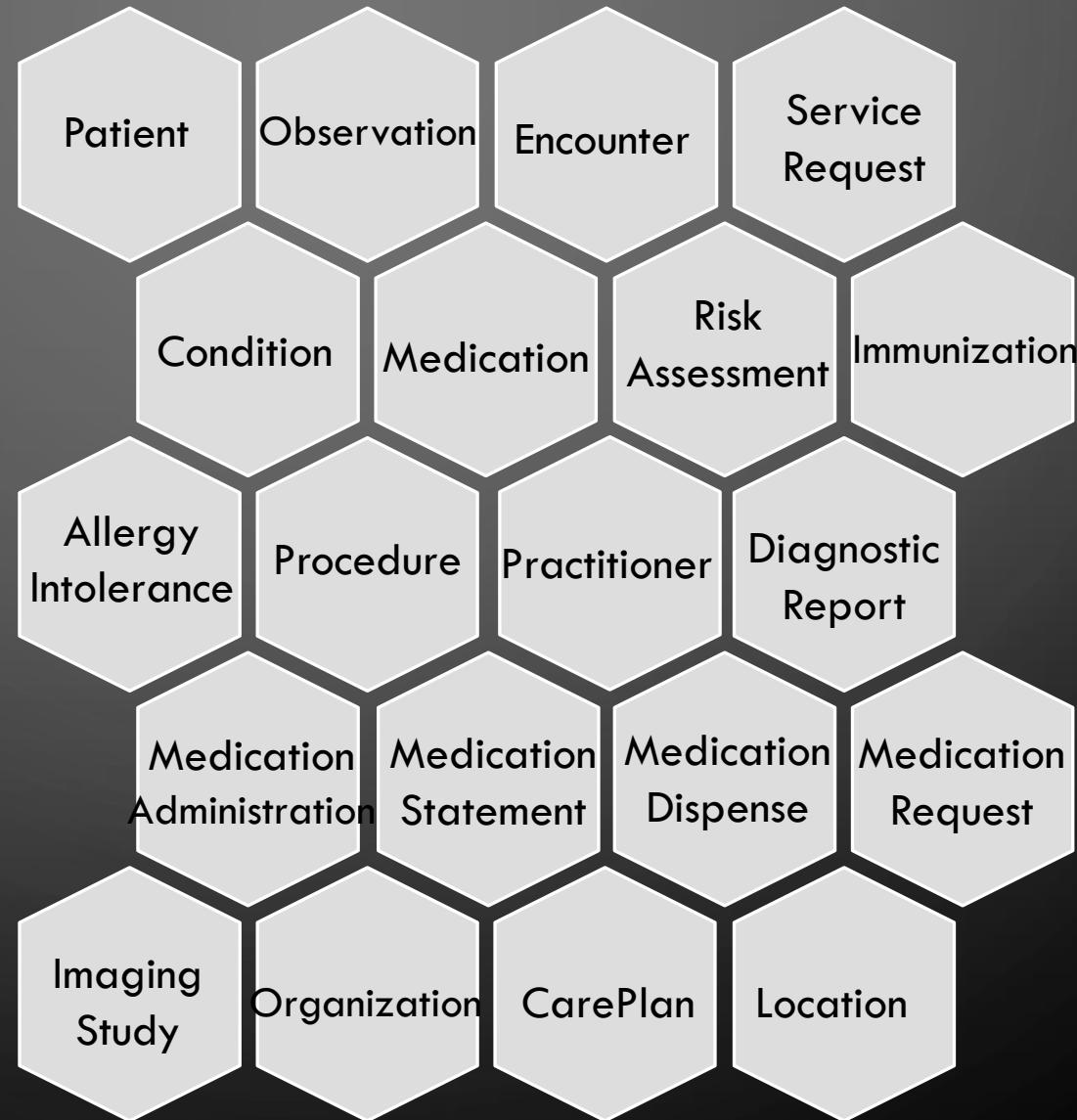
The screenshot shows the homepage of the HL7 FHIR Release 4 website. The header features the HL7 FHIR logo with "Release 4" and a search icon. The navigation menu includes Home, Getting Started, Documentation, Resources, Profiles, Extensions, Operations, and Terminologies. The main content area has a red banner at the top stating: "This page is part of the FHIR Specification (v4.0.1: R4 - Mixed Normative and STU) in its permanent home (it will always be available at this URL). The current version which supercedes this version is 5.0.0. For a full list of available versions, see the [Directory of published versions](#). Page versions: R5 R4B R4 R3 R2". Below the banner, a section titled "Welcome to FHIR®" is displayed, with a note that FHIR is a standard for health care data exchange, published by HL7®. A "First time here?" box contains links to executive summary, developer's introduction, clinical introduction, architect's introduction, and other resources. A "Technical Corrections" box lists changes for version 4.0.1. At the bottom, there are two sections: "Level 1 Basic framework on which the specification is built" (Foundation, Base Documentation, XML, JSON, Data Types, Extensions) and "Level 2 Supporting implementation and binding to external specifications".

# WHERE WE ARE NOW

As of now,  
20 resources  
were selected  
& reviewed  
(however, it is  
an ongoing  
process)

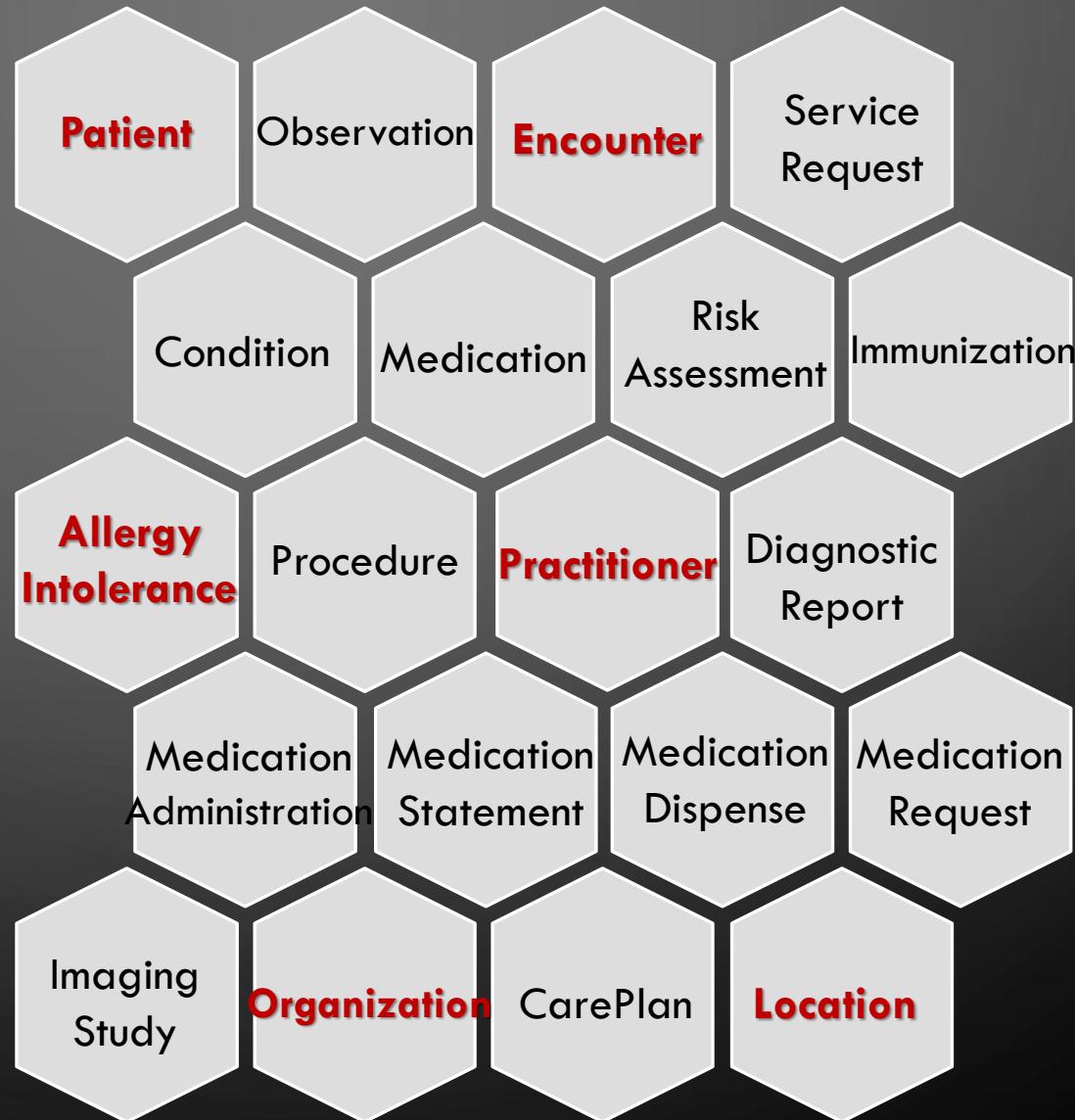
# WHERE WE ARE NOW

As of now,  
20 resources  
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# WHERE WE ARE NOW

As of now,  
6 Resources  
were  
profiled  
(however, it  
is an  
ongoing  
process)



# WHERE WE ARE NOW

Following were done during Profiling

- Slicing
- Adding extensions
- Constraining Cardinality
- Defining CodeSystems
- Defining ValueSets
- Constraining Binding Strength

# WHERE WE ARE NOW

8.1.2 Resource Content			
Structure	UML	XML	JSON
<b>Structure</b>			
Name	Flags	Card.	Type
Patient	N	0..*	DomainResource
identifier	S	0..*	Identifier
active	?!	0..1	boolean
name	S	0..*	HumanName
telecom	S	0..*	ContactPoint
gender	S	0..1	code
birthDate	S	0..1	date
deceased[x]	?!	0..1	boolean
deceasedBoolean			boolean
deceasedDateTime			dateTime
address	S	0..*	Address
maritalStatus		0..1	CodeableConcept
multipleBirth[x]		0..1	boolean
multipleBirthBoolean			boolean
multipleBirthInteger			integer
photo		0..*	Attachment
contact	I	0..*	BackboneElement
relationship		0..*	CodeableConcept
name		0..1	HumanName
telecom		0..*	ContactPoint
address		0..1	Address
gender		0..1	code
organization	I	0..1	Reference(Organization)
period		0..1	Period
communication		0..*	BackboneElement
language		1..1	CodeableConcept
preferred		0..1	boolean
generalPractitioner		0..*	Reference(Organization)
			Patient's nominated primary care provider

## Patient Resource in HL7 FHIR

# WHERE WE ARE NOW

## Patient Resource in HL7 FHIR

Name	Flags	Card.	Type	Description & Constraints	
Patient	N		DomainResource	Information about an individual or Elements defined in Ancestors: id, type	
identifier	Σ	0..*	Identifier	An identifier for this patient	
active	?!	Σ	0..1	boolean	Whether this patient's record is in a active state
name	Σ	0..*	HumanName	A name associated with the patient	
telecom	Σ	0..*	ContactPoint	A contact detail for the individual	
gender	Σ	0..1	code	male   female   other   unknown AdministrativeGender (Required)	
birthDate	Σ	0..1	date	The date of birth for the individual	

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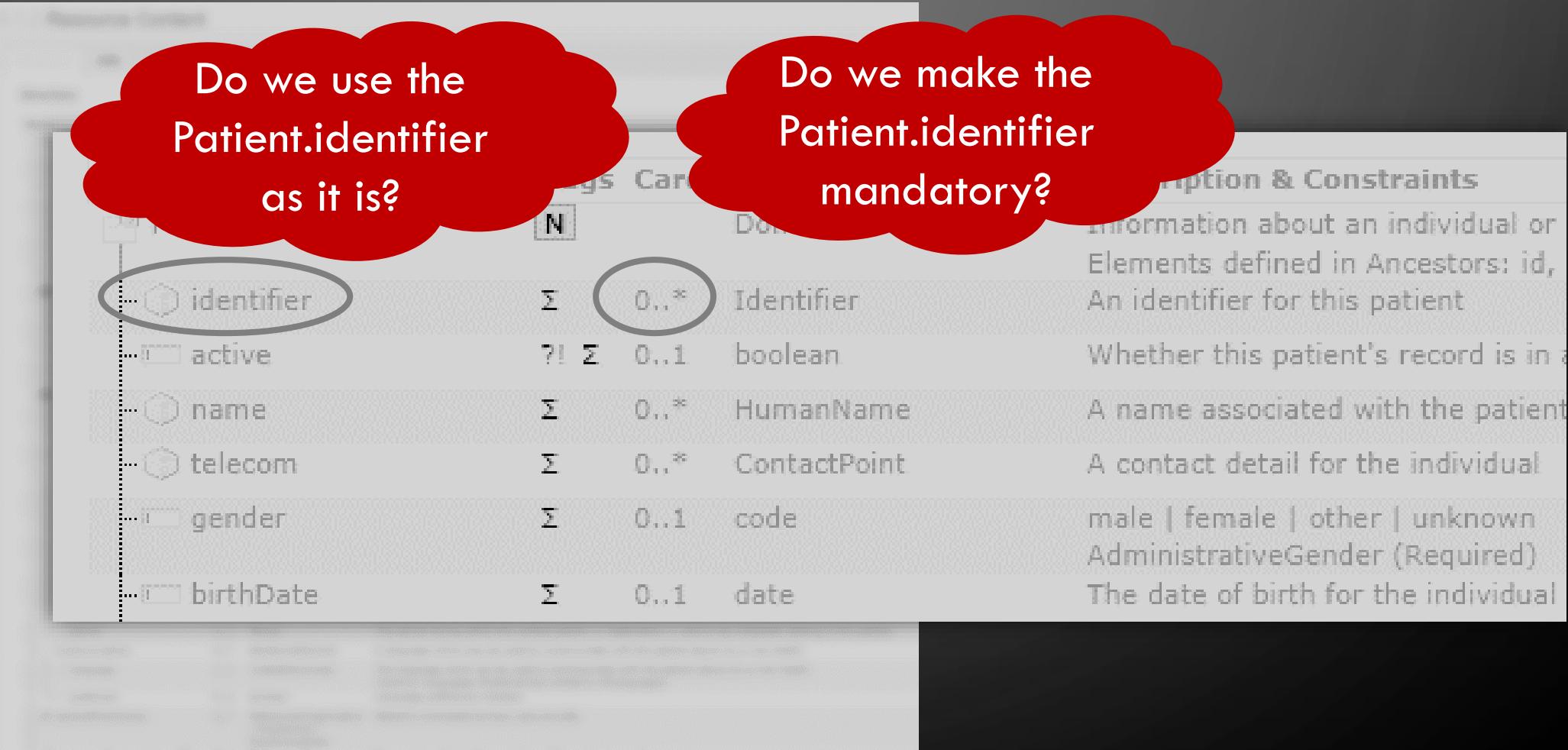
Do we use the  
Patient.identifier  
as it is?

		Card.	Type	Description & Constraints
	N		DomainResource	Information about an individual or Elements defined in Ancestors: id, type, name, identifier, telecom, gender, birthDate
identifier	Σ	0..*	Identifier	An identifier for this patient
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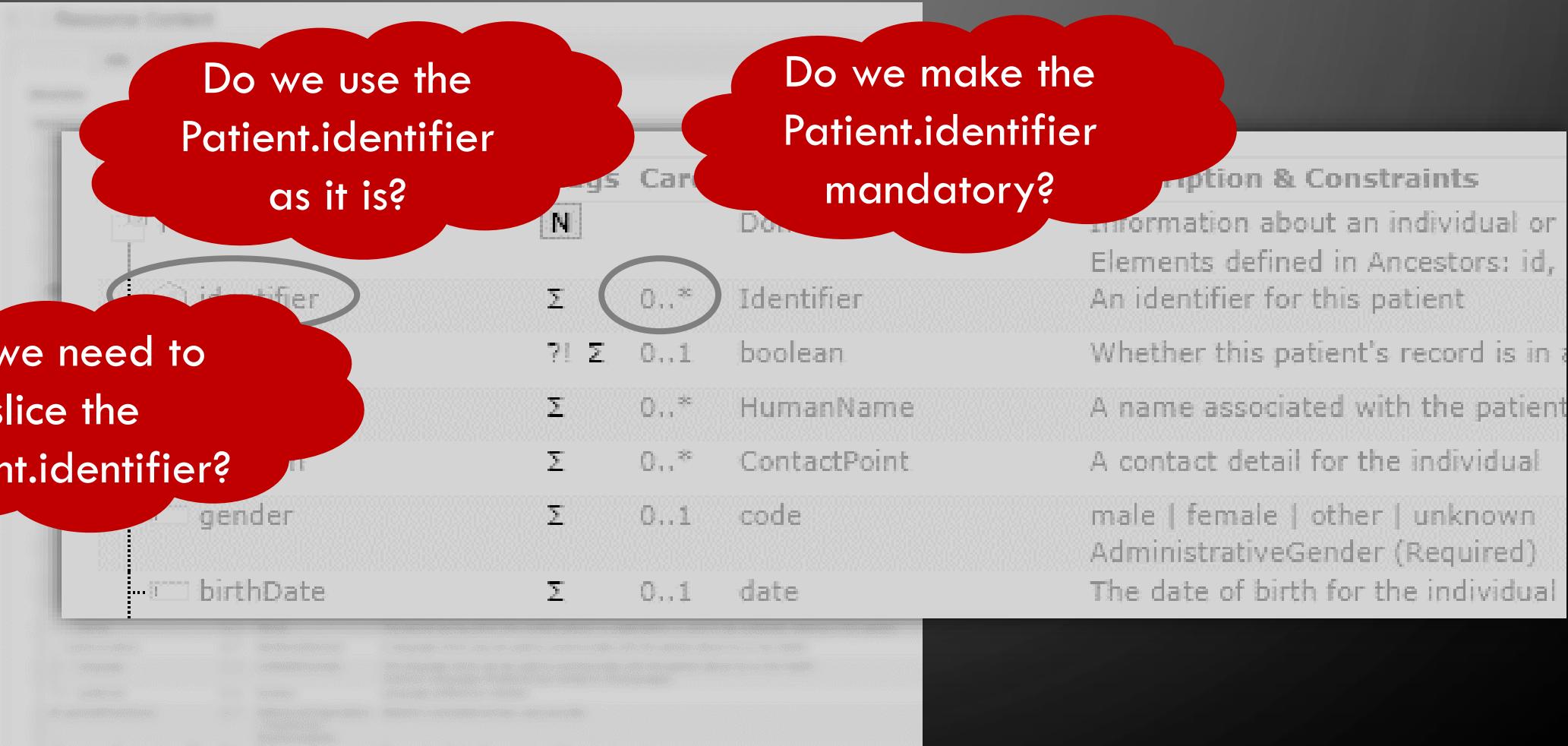
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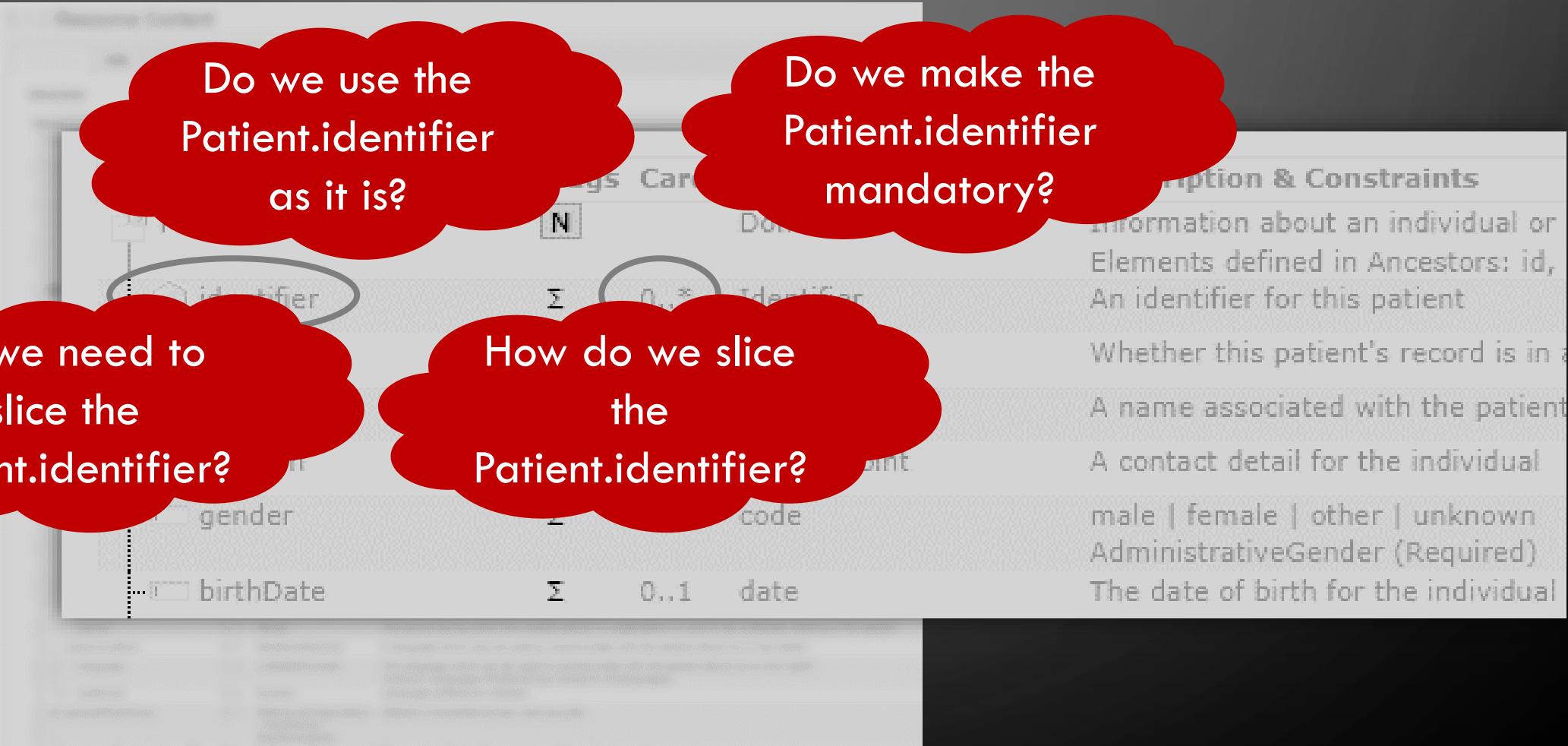
Do we make the  
Patient.identifier  
mandatory?



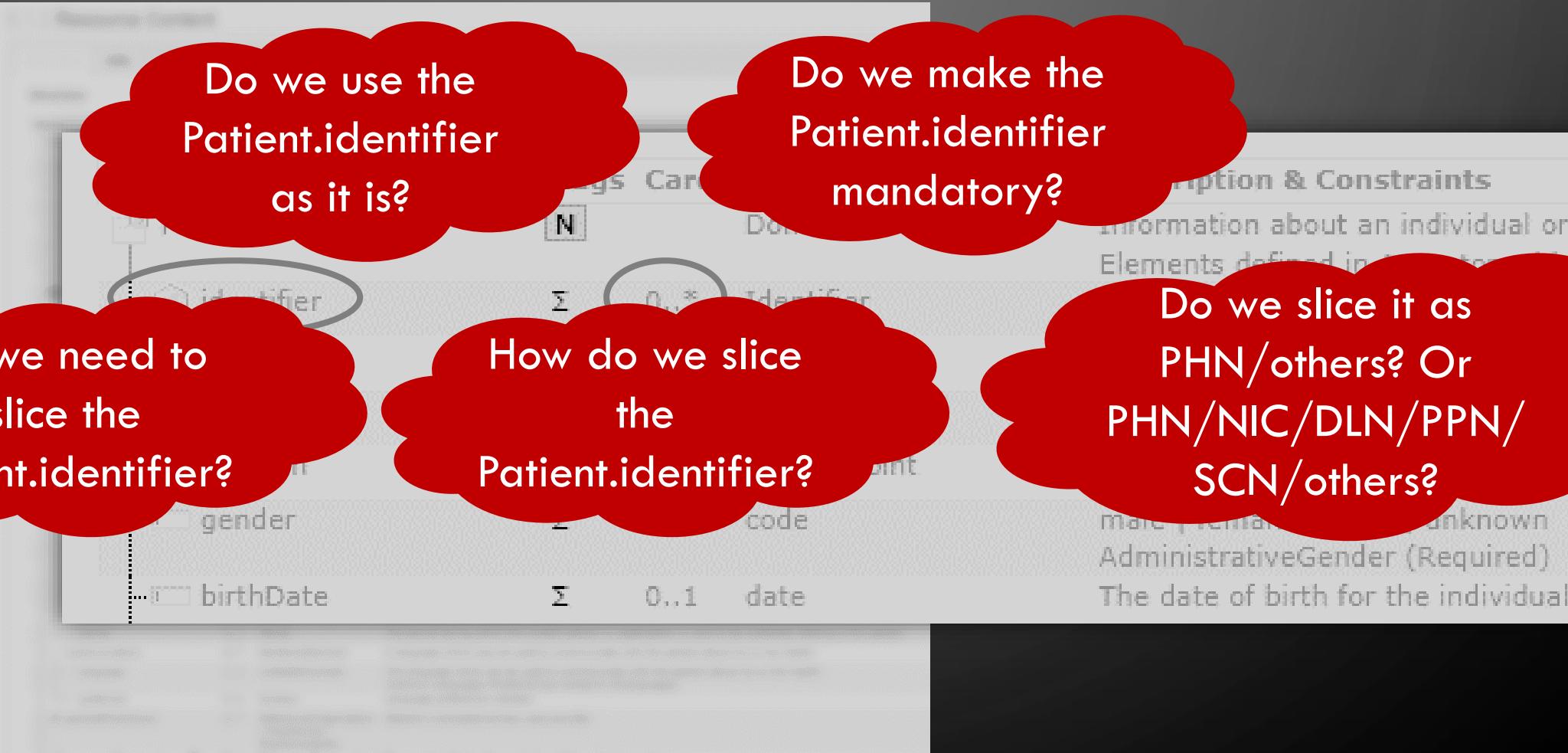
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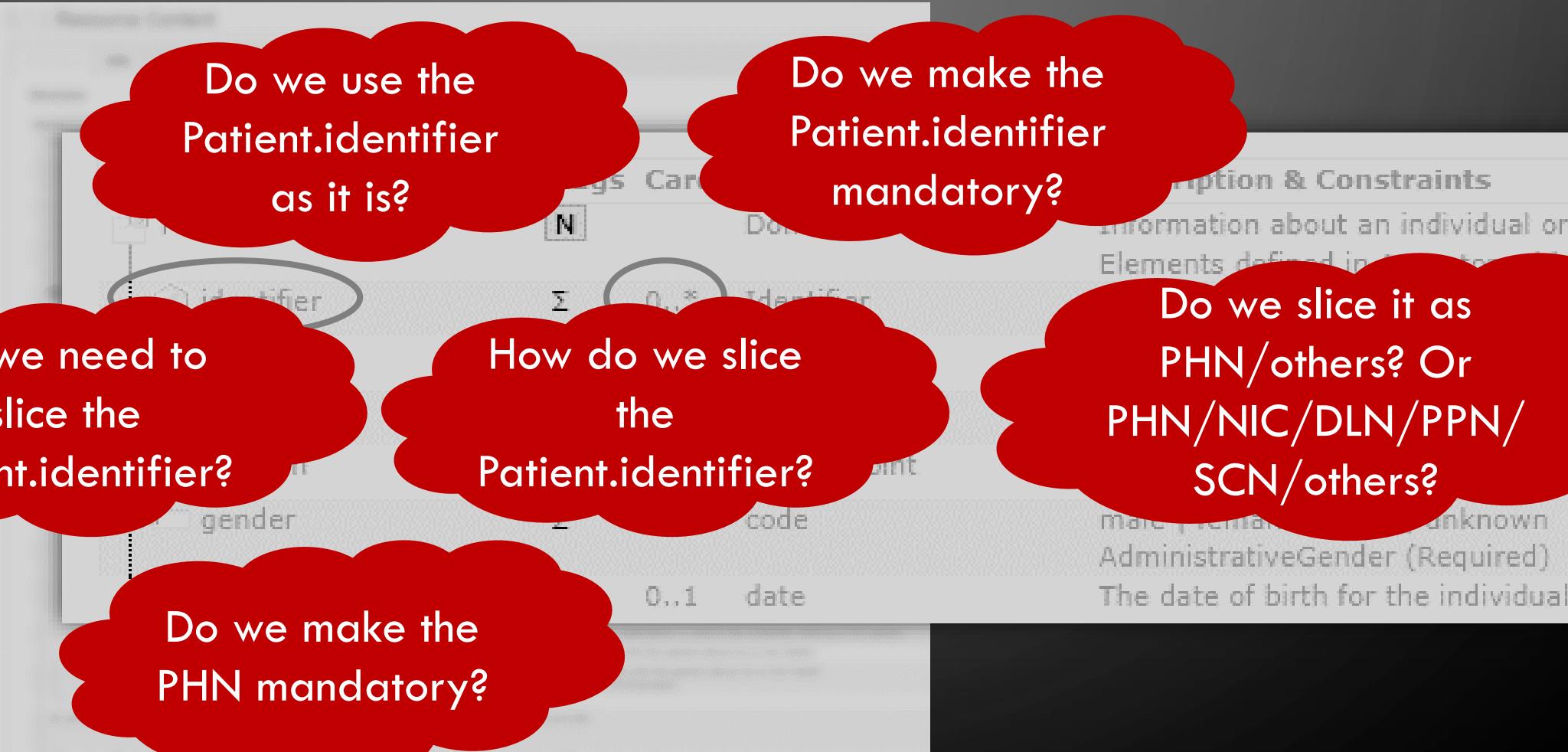
# WHERE WE ARE NOW



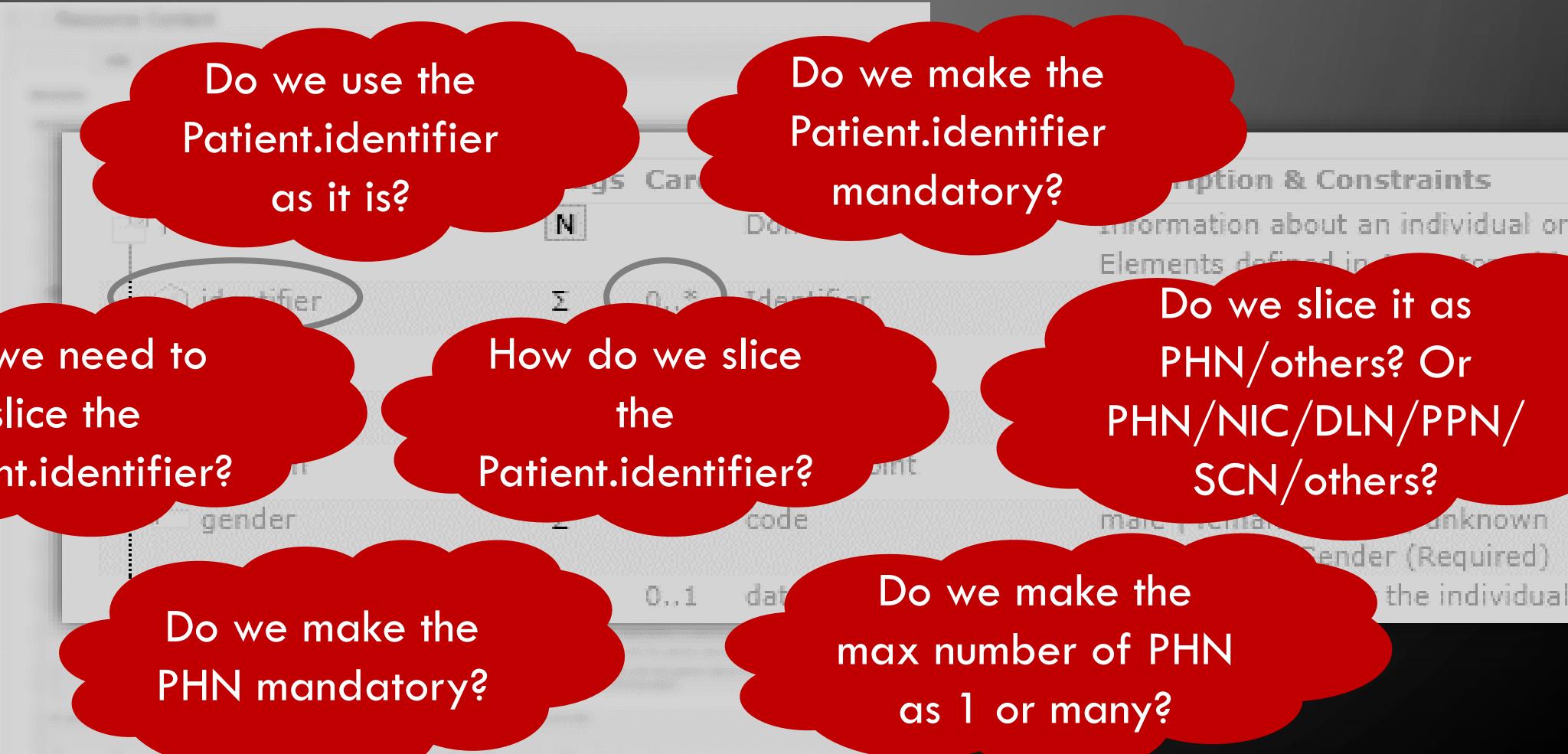
# WHERE WE ARE NOW



# WHERE WE ARE NOW



# WHERE WE ARE NOW?



# WHERE WE ARE NOW

## 4.3.1.1 Formal Views of Profile Content

Description of Profiles, Differentials, Snapshots and how the different presentations work.

Name	Flags	Card.	Type	Description & Constraints
Patient		0..*	Patient	Information about an individual or animal receiving health care services
Slices for identifier		1..*	Identifier	An identifier for this patient <b>Slice:</b> Unordered, Open At End by value:system
Identifier:phn		1..1	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/phn">https://fhir.health.gov.lk/id/phn</a>
value		1..1	string	The value that is unique
Identifier:nic		0..*	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/nic">https://fhir.health.gov.lk/id/nic</a>
value		1..1	string	The value that is unique
Identifier:ppn		0..*	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/ppn">https://fhir.health.gov.lk/id/ppn</a>
value		1..1	string	The value that is unique
Identifier:scn		0..*	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/scn">https://fhir.health.gov.lk/id/scn</a>
value		1..1	string	The value that is unique
Identifier:dl		0..*	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/dl">https://fhir.health.gov.lk/id/dl</a>
value		1..1	string	The value that is unique
Identifier:other		0..1	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/other">https://fhir.health.gov.lk/id/other</a>
value		1..1	string	The value that is unique
gender		1..1	code	male   female   other   unknown
birthDate		1..1	date	The date of birth for the individual

Patient Profile for Sri Lanka  
at national level

# WHERE WE ARE NOW

## 4.3.1.1 Formal Views of Profile Content

Description of Profiles, Differentials, Snapshots and how the different presentations work.

Name	Flags	Card.	Type	Description & Constraints
Patient		0..*	Patient	Information about an individual or animal receiving health care services
Slices for identifier		1..*	Identifier	An identifier for this patient <i>Slice: Unordered, Open At End by value:system</i>
identifier:phn		1..1	Identifier	An identifier for this patient
system				The namespace for the identifier value
value				Fixed Value: <a href="https://fhir.health.gov.lk/id/phn">https://fhir.health.gov.lk/id/phn</a>
identifier:nic		0..*	Identifier	An identifier for this patient
system				The namespace for the identifier value
value				Fixed Value: <a href="https://fhir.health.gov.lk/id/nic">https://fhir.health.gov.lk/id/nic</a>
identifier:ppn		0..*	Identifier	An identifier for this patient
system				The namespace for the identifier value
value				Fixed Value: <a href="https://fhir.health.gov.lk/id/ppn">https://fhir.health.gov.lk/id/ppn</a>
identifier:scn		0..*	Identifier	An identifier for this patient
system				The namespace for the identifier value
value				Fixed Value: <a href="https://fhir.health.gov.lk/id/scn">https://fhir.health.gov.lk/id/scn</a>
identifier:dl		0..*	Identifier	An identifier for this patient
system				The namespace for the identifier value
value				Fixed Value: <a href="https://fhir.health.gov.lk/id/dl">https://fhir.health.gov.lk/id/dl</a>
identifier:other		0..1	Identifier	An identifier for this patient
system				The namespace for the identifier value
value				Fixed Value: <a href="https://fhir.health.gov.lk/id/other">https://fhir.health.gov.lk/id/other</a>
gender		1..1	code	male   female   other   unknown
birthDate		1..1	date	The date of birth for the individual

Identifier sliced into PHN, NIC, DLN, PPN, SCN and other



Patient Profile for Sri Lanka at national level

# WHERE WE ARE NOW

4.3.1.1 Formal Views of Profile Content  
Description of Profiles, Differentials, Snapshots and how the different presentations work.

Differential Table Key Elements Table Snapshot Table Statistics/References All

This structure is derived from Patient

Name	Flags	Card.	Type	Description & Constraints
Patient		0..*	Patient	Information about an individual or animal receiving health care services
Slices for identifier		1..*	Id	<i>Slice: Unordered, Open At End by value:system</i> An identifier for this patient
identifier:phn		1..1	Identifier	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/phn">https://fhir.health.gov.lk/id/phn</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:nic		1..1	Identifier	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/nic">https://fhir.health.gov.lk/id/nic</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:ppn		1..1	Identifier	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/ppn">https://fhir.health.gov.lk/id/ppn</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:scn		1..1	Identifier	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/scn">https://fhir.health.gov.lk/id/scn</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:dl		1..1	Identifier	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/dl">https://fhir.health.gov.lk/id/dl</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:other		0..1	Identifier	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/other">https://fhir.health.gov.lk/id/other</a>
system		1..1	uri	The value that is unique
value		1..1	string	male   female   other   unknown
gender		1..1	code	male   female   other   unknown
birthDate		1..1	date	The date of birth for the individual

Identifier sliced into PHN, NIC, DLN, PPN, SCN and other

## Patient Profile for Sri Lanka at national level

Patient.identifier made mandatory by constraining the cardinality to 1.. \*

# WHERE WE ARE NOW?

4.3.1.1 Formal Views of Profile Content  
Description of Profiles, Differentials, Snapshots and how the different presentations work.

Differential Table Key Elements Table Snapshot Table Statistics/References All

This structure is derived from Patient

Name	Flags	Card.	Type	Description & Constraints
Patient		0..*	Patient	Information about an individual or animal receiving health care services
Slices for identifier		1..*	Id	Slice: Unordered, Open At End by value:system An identifier for this patient
identifier:phn		1..1	Identifier	The namespace for the identifier value Fixed Value: <a href="https://fhir.health.gov.lk/id/phn">https://fhir.health.gov.lk/id/phn</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:nic		1..1	Identifier	The namespace for the identifier value Fixed Value: <a href="https://fhir.health.gov.lk/id/nic">https://fhir.health.gov.lk/id/nic</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:ppn		1..1	Identifier	The namespace for the identifier value Fixed Value: <a href="https://fhir.health.gov.lk/id/ppn">https://fhir.health.gov.lk/id/ppn</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:scn		1..1	Identifier	The namespace for the identifier value Fixed Value: <a href="https://fhir.health.gov.lk/id/scn">https://fhir.health.gov.lk/id/scn</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:dl		1..1	Identifier	The namespace for the identifier value Fixed Value: <a href="https://fhir.health.gov.lk/id/dl">https://fhir.health.gov.lk/id/dl</a>
system		1..1	uri	The value that is unique
value		1..1	string	An identifier for this patient
identifier:other		0..1	Identifier	The namespace for the identifier value Fixed Value: <a href="https://fhir.health.gov.lk/id/other">https://fhir.health.gov.lk/id/other</a>
system		1..1	uri	The value that is unique
value		1..1	string	male   female   other   unknown
gender		1..1	code	male   female   other   unknown
birthDate		1..1	date	The date of birth for the individual

Identifier sliced into PHN, NIC, DLN, PPN, SCN and other

## Patient Profile for Sri Lanka at national level

Patient.identifier made mandatory by constraining the cardinality to 1.. \*

PHN made mandatory and not repeatable by constraining the cardinality to 1.. 1

# WHERE WE ARE NOW

4.3.1.1 Formal Views of Profile Content  
Description of Profiles, Differentials, Snapshots and how the different presentations work.

Differential Table Key Elements Table Snapshot Table Statistics/References All

This structure is derived from Patient.

Name	Flags	Card.	Type	Description & Constraints
Patient		0..*	Patient	Information about an individual or animal receiving health care services
Slices for identifier		1..*	Identifier	An identifier for this patient <b>Slice:</b> Unordered, Open At End by value:system
Identifier:phn		1..1	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/phn">https://fhir.health.gov.lk/id/phn</a>
value		1..1	string	The value that is unique
Identifier:nic		0..*	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/nic">https://fhir.health.gov.lk/id/nic</a>
value		1..1	string	The value that is unique
Identifier:ppn		0..*	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/ppn">https://fhir.health.gov.lk/id/ppn</a>
value		1..1	string	The value that is unique
Identifier:scn		0..*	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/scn">https://fhir.health.gov.lk/id/scn</a>
value		1..1	string	The value that is unique
Identifier:dl		0..*	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/dl">https://fhir.health.gov.lk/id/dl</a>
value		1..1	string	The value that is unique
Identifier:other		0..1	Identifier	An identifier for this patient
system		1..1	uri	The namespace for the identifier value <b>Fixed Value:</b> <a href="https://fhir.health.gov.lk/id/other">https://fhir.health.gov.lk/id/other</a>
value		1..1	string	The value that is unique
gender		1..1	code	male   female   other   unknown
birthDate		1..1	date	The date of birth for the individual

Patient Profile for Sri Lanka  
at national level

Patient.gender and Patient.birthDate made mandatory  
by constraining the cardinality to 1.. 1

# WHERE WE ARE NOW

8.1.2 Resource Content			
Structure	UML	XML	JSON
<b>Structure</b>			
Name	Flags	Card.	Type
Patient	N	0..*	DomainResource
identifier	S	0..*	Identifier
active	?!	0..1	boolean
name	S	0..*	HumanName
telecom	S	0..*	ContactPoint
gender	S	0..1	code
birthDate	S	0..1	date
deceased[x]	?!	0..1	boolean
deceasedBoolean			boolean
deceasedDateTime			dateTime
address	S	0..*	Address
maritalStatus		0..1	CodeableConcept
multipleBirth[x]		0..1	boolean
multipleBirthBoolean			boolean
multipleBirthInteger			integer
photo		0..*	Attachment
contact	I	0..*	BackboneElement
relationship		0..*	CodeableConcept
name		0..1	HumanName
telecom		0..*	ContactPoint
address		0..1	Address
gender		0..1	code
organization	I	0..1	Reference(Organization)
period		0..1	Period
communication		0..*	BackboneElement
language		1..1	CodeableConcept
preferred		0..1	boolean
generalPractitioner		0..*	Reference(Organization)
			Patient's nominated primary care provider

## Patient Resource in HL7 FHIR

# WHERE WE ARE NOW

## Patient Resource in HL7 FHIR

deceased[x]	?! Σ	0..1	Indicates if the individual is deceased or not
└ deceasedBoolean		boolean	
└ deceasedDateTime		dateTime	
address	Σ	0..*	Address
maritalStatus		0..1	CodeableConcept
multipleBirth[x]		0..1	Whether patient is part of a multiple birth
└ multipleBirthBoolean		boolean	
└ multipleBirthInteger		integer	

# WHERE WE ARE NOW

## Patient Resource in HL7 FHIR

<b>deceased[x]</b>	?!	$\Sigma$	0..1	Indicates if the individual is deceased or not
└ deceasedBoolean			boolean	
└ deceasedDateTime			dateTime	
<b>address</b>	$\Sigma$	0..*	<b>Address</b>	An address for the individual
<b>maritalStatus</b>		0..1	<b>CodeableConcept</b>	Marital (civil) status of a patient <a href="#">MaritalStatus (Extensible)</a>
<b>multipleBirth[x]</b>		0..1		Whether patient is part of a multiple birth
└ multipleBirthBoolean			boolean	
└ multipleBirthInteger			integer	

# WHERE WE ARE NOW

## 2.24.0.14 Address

See also [Examples](#), [Detailed Descriptions](#), [Mappings](#), [Profiles & Extensions](#) and [R2 Conversions](#).

An address expressed using postal conventions (as opposed to GPS or other location definition for as well as for visiting locations which might not be valid for mail delivery. There are a variety of po

**Structure**   [UML](#)   [XML](#)   [JSON](#)   [Turtle](#)   [R3 Diff](#)   [All](#)

### Structure

Name	Flags	Card.	Type	Description & Constraints
Address	$\Sigma$ <b>N</b>		Element	An address expressed using postal conventions (a
use	?! $\Sigma$	0..1	code	Elements defined in Ancestors: id, extension home   work   temp   old   billing - purpose of thi
type	$\Sigma$	0..1	code	AddressUse (Required) postal   physical   both
text	$\Sigma$	0..1	string	AddressType (Required) Text representation of the address
line	$\Sigma$	0..*	string	Street name, number, direction & P.O. Box etc. This repeating element order: The order in which
city	$\Sigma$	0..1	string	Name of city, town etc.
district	$\Sigma$	0..1	string	District name (aka county)
state	$\Sigma$	0..1	string	Sub-unit of country (abbreviations ok)
postalCode	$\Sigma$	0..1	string	Postal code for area
country	$\Sigma$	0..1	string	Country (e.g. can be ISO 3166 2 or 3 letter code)
period	$\Sigma$	0..1	Period	Time period when address was/is in use

# WHERE WE ARE NOW

2.24.0.14 Address

See also [Examples](#), [Detailed Descriptions](#), [Mappings](#), [Profiles & Extensions](#) and [R2 Conversions](#).

An address expressed using postal conventions (as opposed to GPS or other location definition for as well as for visiting locations which might not be valid for mail delivery. There are a variety of po

**Structure**   [UML](#)   [XML](#)   [JSON](#)   [Turtle](#)   [R3 Diff](#)   [All](#)

**Structure**

Name	Flags	Card.	Type	Description & Constraints
Address	$\Sigma$ [N]		Element	An address expressed using postal conventions (a
use	?!	$\Sigma$	0..1	code Elements defined in Ancestors: id, extension
type	$\Sigma$		0..1	code home   work   temp   old   billing - purpose of thi
text	$\Sigma$		0..1	string AddressType (Required)
line	$\Sigma$		0..*	string postal   physical   both
city	$\Sigma$		0..1	string AddressType (Required)
district	$\Sigma$		0..1	string Text representation of the address
state	$\Sigma$		0..1	string Street name, number, direction & P.O. Box etc.
postalCode	$\Sigma$		0..1	string This repeating element order: The order in which
country	$\Sigma$		0..1	string Name of city, town etc.
period	$\Sigma$		0..1	Period District name (aka county)
				Sub-unit of country (abbreviations ok)
				Postal code for area
				Country (e.g. can be ISO 3166 2 or 3 letter code)
				Time period when address was/is in use

# WHERE WE ARE NOW

## 2.24.0.14 Address

See also [Examples](#), [Detailed Descriptions](#), [Mappings](#), [Profiles & Extensions](#) and [R2 Conversions](#).

An address expressed using postal conventions (as opposed to GPS or other location definition for as well as for visiting locations which might not be valid for mail delivery. There are a variety of po

[Structure](#) [UML](#) [XML](#) [JSON](#) [Turtle](#) [R3 Diff](#) [All](#)

### Structure

Name	Flags	Card.	Type	Description & Constraints
Address	$\Sigma$ [N]		Element	An address expressed using postal conventions (a
use	?! $\Sigma$	0..1	code	Elements defined in Ancestors: id, extension home   work   temp   old   billing - purpose of thi
type	$\Sigma$	0..1	code	AddressType (Required) postal   physical   both
text	$\Sigma$	0..1	string	Text representation of the address
line	$\Sigma$	0..*	string	Street name, number, direction & P.O. Box etc. This repeating element order: The order in which
city	$\Sigma$	0..1	string	Name of city, town etc.
district	$\Sigma$	0..1	string	District name (aka county)
state	$\Sigma$	0..1	string	Sub-unit of country (abbreviations ok)
postalCode	$\Sigma$	0..1	string	Postal code for area
country	$\Sigma$	0..1	string	Country (e.g. can be ISO 3166 2 or 3 letter code)
period	$\Sigma$	0..1	Period	Time period when address was/is in use

Need to add  
Province  
MOH area  
& GN area  
As Extensions

# WHERE WE ARE NOW

Need to add  
Province  
MOH area  
& GN area  
As Extensions

# WHERE WE ARE NOW



# WHERE WE ARE NOW



# WHERE WE ARE NOW

← → C iso.org/obp/ui/#iso:code:3166:LK

ISO Online Browsing Platform (OBP)

Search LK x

Code source  
Sri Lanka Customs + ISO/TC 46/WG 2 Secretariat (\*)

Subdivision category	3166-2 code	Subdivision name	Local variant	Language code
district	LK-52	Ampara		en
district	LK-33	Ampāntōṭṭai		ta
district	LK-52	Ampāra		si
district	LK-52	Ampārai		ta
district	LK-71	Anuradhapura		en
district	LK-71	Anurādhapura		si
district	LK-71	Anurātapuram		ta
district	LK-81	Badulla		en
district	LK-81	Badulla		si
province	LK-1*	Basnāhira paṭāta		si
district	LK-51	Batticaloa		en
province	LK-2*	Central Province		en

Need to add Province MOH area & GN area As Extensions

# WHERE WE ARE NOW

Following were done during Profiling

- Slicing
- Adding extensions
- Constraining Cardinality
- Defining CodeSystems
- Defining ValueSets
- Constraining Binding Strength – **Let's discuss**

**DISCUSSED**

# WHERE WE ARE NOW

## 8.11.3 Resource Content

Name	Flags	Card.	Type	Description & Constraints
Encounter	TU		DomainResource	An interaction during which services are provided to the patient Elements defined in Ancestors: <a href="#">id</a> , <a href="#">meta</a> , <a href="#">implicitRules</a> , <a href="#">language</a> , <a href="#">text</a> , <a href="#">modifierExtension</a>
identifier	Σ	0..*	Identifier	Identifier(s) by which this encounter is known
status	?! Σ	1..1	code	planned   arrived   triaged   in-progress   onleave   finished   cancelled + <a href="#">EncounterStatus (Required)</a>
statusHistory	0..*		BackboneElement	List of past encounter statuses
status	1..1		code	planned   arrived   triaged   in-progress   onleave   finished   cancelled + <a href="#">EncounterStatus (Required)</a>
period	1..1		Period	The time that the episode was in the specified status
class	Σ	1..1	Coding	Classification of patient encounter <a href="#">V3 Value SetActEncounterCode (Extensible)</a>
classHistory	0..*		BackboneElement	List of past encounter classes
class	1..1		Coding	inpatient   outpatient   ambulatory   emergency + <a href="#">V3 Value SetActEncounterCode (Extensible)</a>
period	1..1		Period	The time that the episode was in the specified class
type	Σ	0..*	CodeableConcept	Specific type of encounter <a href="#">Encounter type (Example)</a>
serviceType	Σ	0..1	CodeableConcept	Specific type of service <a href="#">Service type (Example)</a>
priority	0..1		CodeableConcept	Indicates the urgency of the encounter <a href="#">v3 Code System ActPriority (Example)</a>
subject	Σ	0..1	Reference(Patient   Group)	The patient or group present at the encounter
episodeOfCare	Σ	0..*	Reference(EpisodeOfCare)	Episode(s) of care that this encounter should be recorded against
basedOn	Σ	0..*	Reference(ServiceRequest)	The ServiceRequest that initiated this encounter

Encounter Resource in HL7 FHIR

# WHERE WE ARE NOW

Encounter Resource in  
HL7 FHIR

 priority	0..1	CodeableConcept	Indicates the urgency of the encounter <a href="#">v3 Code System ActPriority (Example)</a>
--	------	-----------------	--

# WHERE WE ARE NOW

Encounter Resource in  
HL7 FHIR

 priority	0..1	CodeableConcept	Indicates the urgency of the encounter v3 Code System ActPriority <a href="#">(Example)</a>
--	------	-----------------	--

# WHERE WE ARE NOW

All codes from system <http://terminology.hl7.org/CodeSystem/v3-ActPriority>

Lvl	Code	Display	Definition
0	A	ASAP	As soon as possible, next highest priority after stat.
0	CR	callback results	Filler should contact the placer as soon as results are available, even for preliminary results. (Was "C" in HL7 version 2.3's reporting priority.)
0	CS	callback for scheduling	Filler should contact the placer (or target) to schedule the service. (Was "C" in HL7 version 2.3's TQ-priority component.)
1	CSP	callback placer for scheduling	Filler should contact the placer to schedule the service. (Was "C" in HL7 version 2.3's TQ-priority component.)
1	CSR	contact recipient for scheduling	Filler should contact the service recipient (target) to schedule the service. (Was "C" in HL7 version 2.3's TQ-priority component.)
0	EL	elective	Beneficial to the patient but not essential for survival.
0	EM	emergency	An unforeseen combination of circumstances or the resulting state that calls for immediate action.
0	P	preop	Used to indicate that a service is to be performed prior to a scheduled surgery. When ordering a service and using the pre-op priority, a check is done to see the amount of time that must be allowed for performance of the service. When the order is placed, a message can be generated indicating the time needed for the service so that it is not ordered in conflict with a scheduled operation.
0	PRN	as needed	An "as needed" order should be accompanied by a description of what constitutes a need. This description is represented by an observation service predicate as a precondition.
0	R	routine	Routine service, do at usual work hours.
0	RR	rush reporting	A report should be prepared and sent as quickly as possible.
0	S	stat	With highest priority (e.g., emergency).
0	T	timing critical	It is critical to come as close as possible to the requested time (e.g., for a through antimicrobial level).
0	UD	use as directed	Drug is to be used as directed by the prescriber.
0	UR	urgent	Calls for prompt action.

# WHERE WE ARE NOW

## Constrain on Binding strength

- The binding strength of `Encounter.priority` was constrained from example to extensible

# WHERE WE ARE NOW

Discussed about profiling of the resources

- Patient
- Encounter

Quick word on AuditEvent resource

- Profiling not done

# WHERE WE ARE NOW

## AuditEvent

- One of the resources in Security & Privacy Module
- A record of an event made for purposes of maintaining a security log.
- Typical uses
  - include detection of intrusion attempts
  - monitoring for inappropriate usage.

# WHERE WE ARE NOW

## AuditEvent

- One of the resources in Security & Privacy Module
- A record of an event made for purposes of maintaining a security log.
- Typical uses
  - include detection of intrusion attempts
  - monitoring for inappropriate usage.

**■ FHIR is NOT a security protocol.**  
**■ FHIR doesn't define any security related functionality**

**■ FHIR defines exchange protocols & content models that need to be used with various security protocols defined elsewhere**

# WHERE WE ARE NOW

## AuditEvent

Structure			
Name	Flags	Card.	Type
AuditEvent	TU		DomainResource
type	Σ	1..1	Coding
subtype	Σ	0..*	Coding
action	Σ	0..1	code
period		0..1	Period
recorded	Σ	1..1	instant
outcome	Σ	0..1	code
outcomeDesc	Σ	0..1	string
purposeOfEvent	Σ	0..*	CodeableConcept
agent		1..*	BackboneElement
type		0..1	CodeableConcept
role		0..*	CodeableConcept
who	Σ	0..1	Reference(PractitionerRole   Practitioner   Organization   Device   Patient   RelatedPerson)
altId		0..1	string
name		0..1	string
requestor	Σ	1..1	boolean
location		0..1	Reference(Location)
policy		0..*	uri
media		0..1	Coding
network		0..1	BackboneElement
address		0..1	string
type		0..1	code
purposeOfUse		0..*	CodeableConcept
source		1..1	BackboneElement
site		0..1	string
observer	Σ	1..1	Reference(PractitionerRole   Practitioner   Organization   Device   Patient   RelatedPerson)
type		0..*	Coding
entity	I	0..*	BackboneElement
what	Σ	0..1	Reference(Any)
type		0..1	Coding
role		0..1	Coding
lifecycle		0..1	Coding

# WHERE WE ARE NOW

## AuditEvent

type	$\Sigma$	1..1	Coding	Type/identifier of event <a href="#">Audit Event ID (Extensible)</a>
subtype	$\Sigma$	0..*	Coding	More specific type/id for the event <a href="#">Audit Event Sub-Type (Extensible)</a>
action	$\Sigma$	0..1	code	Type of action performed during the event <a href="#">AuditEventAction (Required)</a>
period		0..1	Period	When the activity occurred
recorded	$\Sigma$	1..1	instant	Time when the event was recorded
outcome	$\Sigma$	0..1	code	Whether the event succeeded or failed <a href="#">AuditEventOutcome (Required)</a>
outcomeDesc	$\Sigma$	0..1	string	Description of the event outcome
purposeOfEvent	$\Sigma$	0..*	CodeableConcept	The purposeOfUse of the event <a href="#">V3 Value SetPurposeOfUse (Extensible)</a>
agent		1..*	BackboneElement	Actor involved in the event
source		1..1	BackboneElement	Audit Event Reporter
entity	I	0..*	BackboneElement	Data or objects used

# WHERE WE ARE NOW

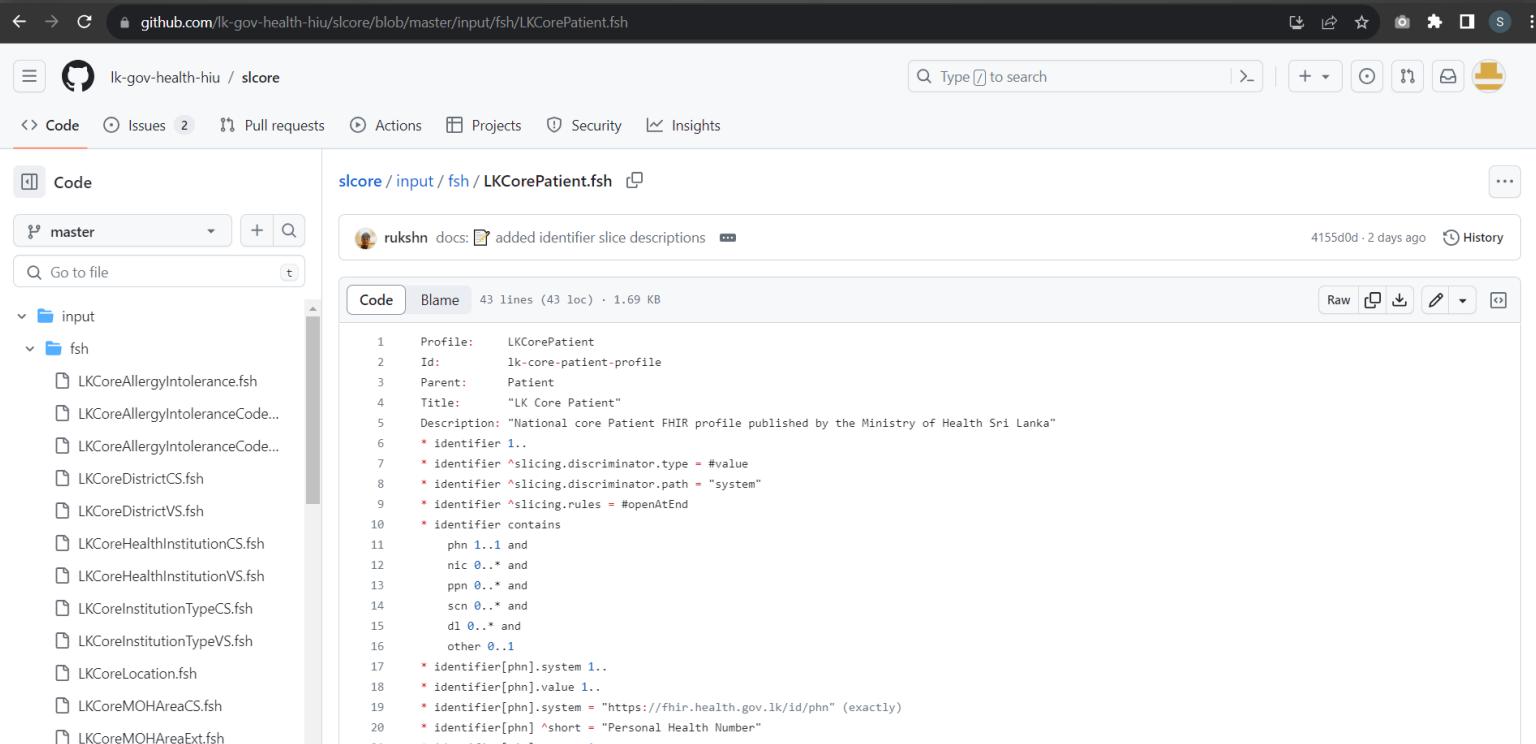
## ■ Naming conventions decided

The screenshot shows a spreadsheet application titled "Value sets creation for FHIR profiles". The table contains 58 rows of data, each representing a FHIR value set. The columns are labeled A through H.

	A	B	C	D	E	F	G	H
1	Resource	Name	Binding Strength	Type	id	Title	Code System	
38	Pod	Immunization	LKCoreImmunizationStatusVS	Required	Valueset	lk-core-immunization-status	LK Core Immunization Status	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
39		Immunization	LKCoreImmunizationStatusReasonVS	Example	Valueset	lk-core-immunization-statusreason	LK Core Immunization Status Reason	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
40		Immunization	LKCoreImmunizationVaccineCodeVS	Example	Valueset	lk-core-immunization-vaccinecode	LK Core Immunization Vaccine Code	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
41		Immunization	LKCoreImmunizationInformationSourceVS	Example	Valueset	lk-core-immunization-informationsource	LK Core Immunization Information Source	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
42		Immunization	LKCoreImmunizationSiteVS	Example	Valueset	lk-core-immunization-site	LK Core Immunization Site	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
43		Immunization	LKCoreImmunizationRouteVS	Example	Valueset	lk-core-immunization-route	LK Core Immunization Route	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
44		Immunization	LKCoreImmunizationPerformerFunctionVS	Extensible	Valueset	lk-core-immunization-performer-function	LK Core Immunization Performer Function	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
45		Immunization	LKCoreImmunizationPerformerReasonVS	Example	Valueset	lk-core-immunization-performer-reason	LK Core Immunization Performer Reason	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
46		Immunization	LKCoreImmunizationSubpotentReasonVS	Example	Valueset	lk-core-immunization-subpotent-reason	LK Core Immunization Subponent Reason	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
47		Immunization	LKCoreImmunizationProgramEligibilityProgramVS	Example	Valueset	lk-core-immunization-programeligibility-program	LK Core Immunization Program Eligibility Program	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
48		Immunization	LKCoreImmunizationProgramEligibilityProgramSta	Example	Valueset	lk-core-immunization-programeligibility-programstatus	LK Core Immunization Program Eligibility Program Status	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
49		Immunization	LKCoreImmunizationProgramFundingSourceVS	Example	Valueset	lk-core-immunization-fundingsource	LK Core Immunization Funding Source	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
50		Immunization	LKCoreImmunizationProtocolAppliedTargetDisease	Example	Valueset	lk-core-immunization-protocolapplied-targetdisease	LK Core Immunization Protocol Applied Target Disease	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
51	Sh:	Condition	LKCoreConditionClinicalStatusCodesVS	Required	Valueset	lk-core-condition-clinical-status-codes-vs	LK Core Condition Clinical Status Codes Value Set	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
52		Condition	LKCoreConditionVerificationStatusVS	Required	Valueset	lk-core-condition-verification-status-vs	LK Core Condition Verification Status Value Set	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
53		Condition	LKCoreConditionCategoryCodesVS	Preferred	Valueset	lk-core-condition-category-codes-vs	LK Core Condition Category Codes Value Set	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
54		Condition	LKCoreConditionDiagnosisSeverityVS	Preferred	Valueset	lk-core-condition-diagnosis-severity-vs	LK Core Condition Diagnosis Severity Value Set	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
55		Condition	LKCoreConditionProblemDiagnosisCodesVS	Example	Valueset	lk-core-condition-problem-diagnosis-codes-vs	LK Core Condition Problem Diagnosis Codes Value Set	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
56		Condition	LKCoreSNOMEDCTBodyStructuresVS	Example	Valueset	lk-core-snomed-ct-body-structures-vs	LK Core SNOMED CT Body Structures Value Set	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
57		Condition	LKCoreParticipationRoleTypeVS	Extensible	Valueset	lk-core-participation-role-type-vs	LK Core Participation Role Type Value Set	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>
58		Condition	LKCoreConditionStageVS	Example	Valueset	lk-core-condition-stage-vs	LK Core Condition Stage Value Set	<a href="http://hl7.org/fhir/ValueS">http://hl7.org/fhir/ValueS</a>

# WHERE WE ARE NOW

FSH files of the profiles are uploaded in the GitHub



The screenshot shows a GitHub repository page for 'lk-gov-health-hiu/slcore'. The repository has 2 issues and 0 pull requests. The user 'rukshn' has added identifier slice descriptions. The 'LKCorePatient.fsh' file is displayed, containing FHIR profile definitions for the LK Core Patient.

```
Profile: LKCorePatient
Id: lk-core-patient-profile
Parent: Patient
Title: "LK Core Patient"
Description: "National core Patient FHIR profile published by the Ministry of Health Sri Lanka"
* identifier 1..
* identifier ^slicing.discriminator.type = #value
* identifier ^slicing.discriminator.path = "system"
* identifier ^slicing.rules = #openAtEnd
* identifier contains
  phn 1..1 and
  nic 0..* and
  ppn 0..* and
  scn 0..* and
  dl 0..* and
  other 0..1
* identifier[phn].system 1..
* identifier[phn].value 1..
* identifier[phn].system = "https://Fhir.health.gov.lk/id/phn" (exactly)
* identifier[phn].^short = "Personal Health Number"
```

<https://github.com/lk-gov-health-hiu/slcore/blob/master/input/fsh/LKCorePatient.fsh>

# WHERE WE ARE NOW

IG published (however, more work yet to be done...)

The screenshot shows a web browser displaying the SL Core FHIR Implementation Guide at <https://lk-gov-health-hiu.github.io/fhir-ig/StructureDefinition-lk-core-patient-profile.html>. The page title is "SL Core 0.1.0 - ci-build". The navigation bar includes "Home", "Section", "Artifacts", "Table of Contents", "Artifacts Summary", and "LK Core Patient". A yellow banner at the top states "SL Core – Local Development build (v0.1.0). See the [Directory of published versions](#)". Below this, tabs for "Content", "Detailed Descriptions", "Mappings", "XML", "JSON", and "TTL" are shown, with "Content" selected. The main content area is titled "4.3.1 Resource Profile: LK Core Patient". It includes an "Official URL" table with "http://fhir.health.gov.lk/StructureDefinition/lk-core-patient-profile" and "Version: 0.1.0", and a "Draft as of 2023-07-19" table with "Computable Name: LKCorePatient". A note below states "National core Patient FHIR profile published by the Ministry of Health Sri Lanka". The "Usage" section lists "• This Resource Profile is not used by any profiles in this Implementation Guide". The "4.3.1.1 Formal Views of Profile Content" section includes a "Description of Profiles, Differentials, Snapshots and how the different presentations work". At the bottom, a "Differential Table" shows the inheritance of elements from the "Patient" profile. The table columns are "Name", "Flags", "Card.", "Type", and "Description & Constraints". The "Patient" row has "Patient" under "Name", "0..\* Patient" under "Card.", and "Identifier" under "Type". The "Description & Constraints" column provides details about the patient identifier.

Name	Flags	Card.	Type	Description & Constraints
Patient		0..*	Patient	Information about an individual or animal receiving health care services
Slices for identifier		1..*	Identifier	An identifier for this patient
identifier:phn		1..1	Identifier	An Identifier for this patient
system		1..1	uri	The namespace for the Identifier value
values		1..1	token	Fixed Value: <a href="https://fhir.health.gov.lk/id/phn">https://fhir.health.gov.lk/id/phn</a>

<https://lk-gov-health-hiu.github.io/fhir-ig/StructureDefinition-lk-core-patient-profile.html>

# WHERE WE ARE NOW

Establishment of HAPI FHIR – to be discussed during the Hands on session



# CHALLENGES & WAY FORWARD

- Policy level decisions taken/ some yet to be taken  
No standard code system - Development & maintenance of the Code system
- Generation of Value sets – Variation in the granularity  
Stakeholder involvement and collaboration  
Arriving at a consensus
- Suggestions to the Roadmap  
Changes to be incorporated to the EMR to be FHIR compatible. Eg. If an element is mandatory in FHIR specification, it has to be captured in EMR

# CHALLENGES & WAY FORWARD

- Develop a Standard Operating Procedure (SOP) – Process, tooling, naming conventions
- Once the National level profiling is done, it is the best practice for the next level programmes to use the same profiles and if necessary to apply further constraints based on the local need and context.
- Continue the FHIR profiling in alignment with the NDHGS, DH Blueprint and the upcoming Interoperability plan
- Human resources



**THANK YOU**