PH4H Conectathon 2024

MPI – Master Patient Index

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Technical Manager - IHE Catalyst/Kereval

Summary

I. Introduction to Master Patient Index

II. Introduction to key IHE profiles involved in MPI

III. Gazelle Patient Manager (MPI server Simulation)

IV. Questions/Responses

Introduction to MPI Master Patient Index

IHE CATALYST

MPI
Master Patient Index

Introduction to Master Patient Index

Country Level

Mrs Brenda Cruz

- ❑ Date of Birth: 10/10/1998
- ❑ Country born: Colombia
- ❑ She is 5 months pregnant
- ❑ Address : Cl. 180a #54A-20,
- ❑ Bogotá, Colombia

Introduction to Master Patient Index

Antenatal Care

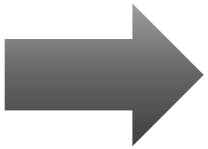
Blood Laboratory

Vaccination Center

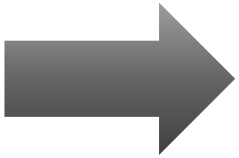
Introduction to Master Patient Index

Antenatal Care

Software Applications



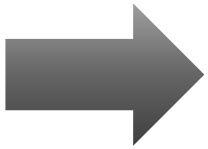
Clinical Data



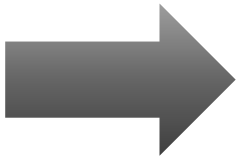
Outcomes / Indicators

Blood Labaratory

Software Applications



Clinical Data

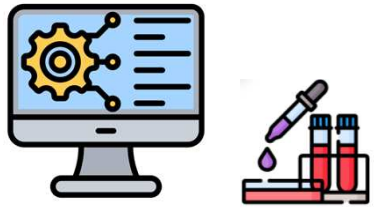


Outcomes / Indicators

Introduction to Master Patient Index

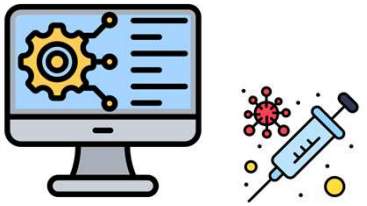
System ID #A0108

ID #108



System ID #A0308

ID #721



System ID #A0511

ID #511

Brenda Cruz

- ANC ID # 108
- Blood Lab ID # 721
- Immu ID : 511

Introduction to Master Patient Index

Emergency department
ID #571

National
Master Patient Index

National Health
ID #A0210503

ID #108
Antenatal Care

ID #721
Blood Laboratory

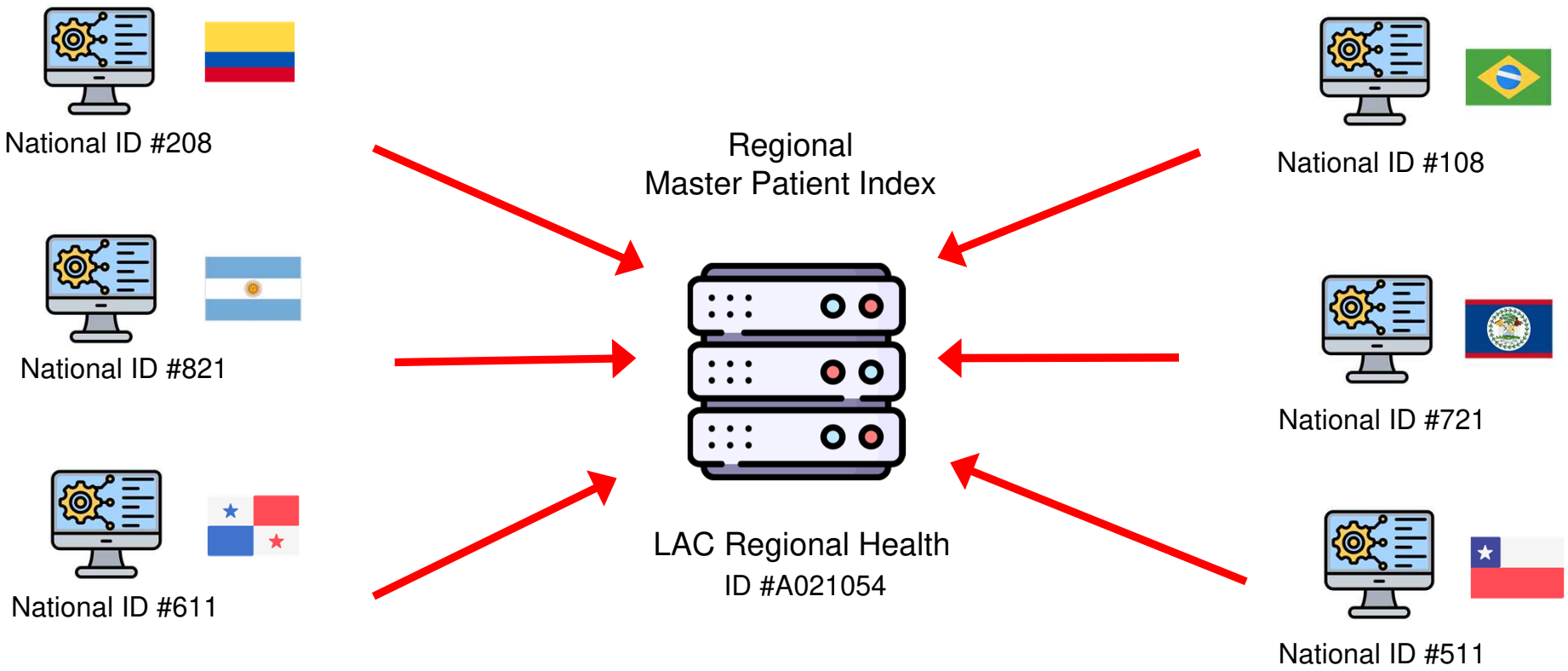
ID #511
Vaccination Center

Introduction to Master Patient Index

Regional Level

Brenda Cruz
1. National ID A: 102
2. National ID B : 108
3. National ID C: 511

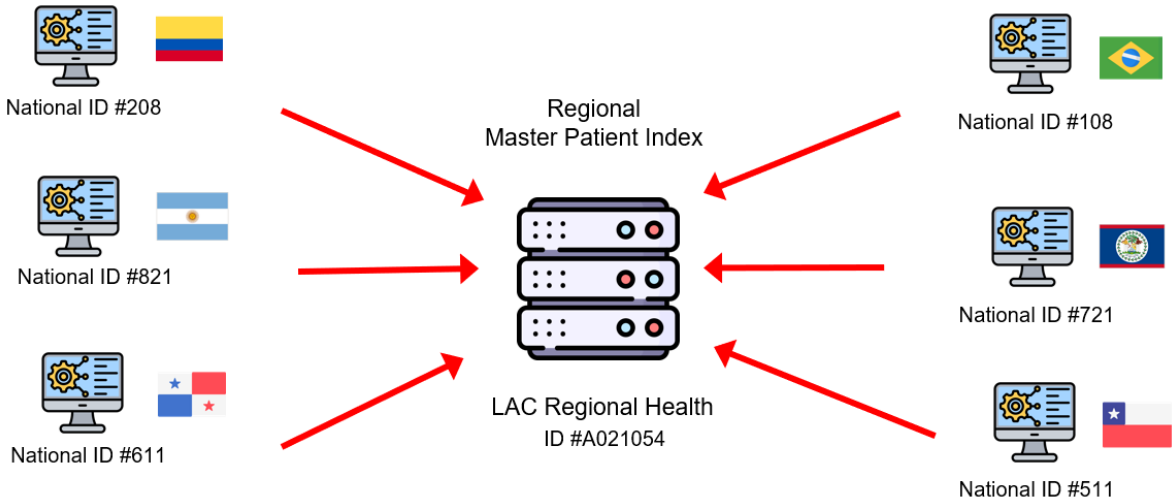
Introduction to Master Patient Index



Introduction to Master Patient Index

The MPI, also referred to as an Enterprise Master Patient Index (EMPI) or patient master index, is an electronic database that holds essential demographic data on every patient receiving healthcare services. This database plays a crucial role in identifying and retrieving a patient's complete and accurate medical records.

The primary goal of the MPI is to correctly match and link records by uniquely identifying each individual. It achieves this by storing information such as name, date of birth, gender, and other relevant details, and by assigning a unique identifier to every person.



Introduction to Key IHE Profiles involved in MPI

The main benefits of having a server Master Patient Index (MPI) include:

Improved Patient Care:

- **Accurate Patient Identification**: Ensures that healthcare providers access the correct patient records, leading to better diagnosis and treatment.
- **Comprehensive Medical Histories**: Aggregates patient data from multiple sources, providing a complete medical history that can improve care coordination and outcomes.

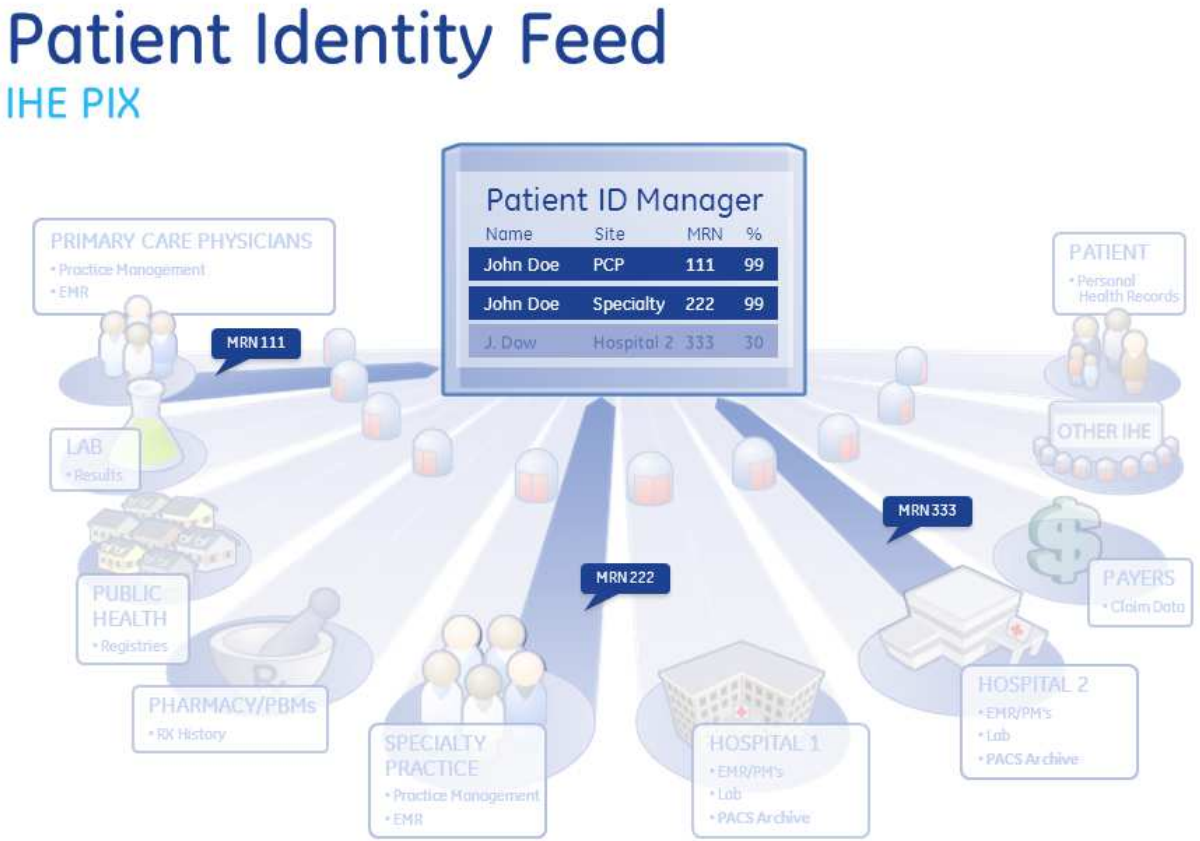
Enhanced Data Integrity and Quality:

- **Reduced Duplicate Records**: Minimizes the risk of duplicate records, which can lead to fragmented and incomplete patient information.
- **Consistent Demographic Data**: Maintains consistent and up-to-date demographic information across all healthcare systems.

Interoperability and Integration:

- **System Integration**: Enables seamless integration with various healthcare systems, such as electronic health records (EHRs), laboratory information systems, and billing systems.
- **Improved Health Information Exchange**: Facilitates efficient health information exchange between different healthcare providers and organizations.

IHE Profile and testing process



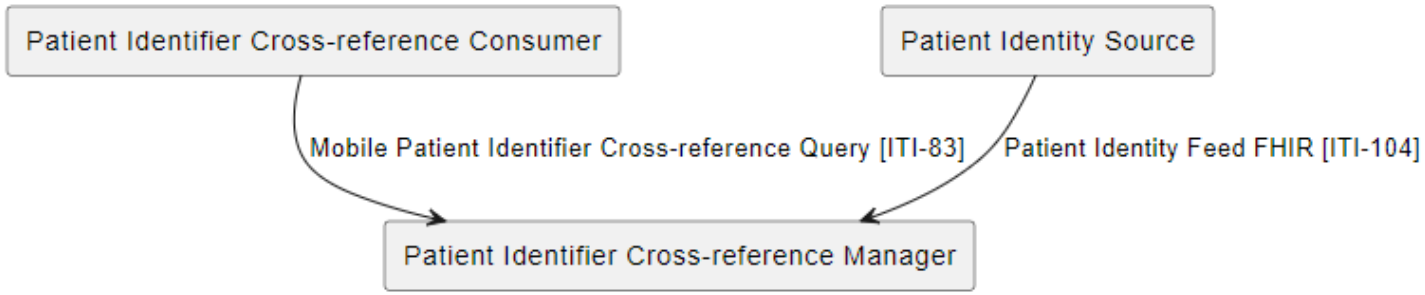
Key IHE Profiles involved in MPI

PIXm - Patient Identifier Cross-referencing for mobile

Actors
- Patient Identity Source
- Patient Identifier Cross-reference Consumer
- Patient Identifier Cross-reference Manager

Transactions
- Patient Identity Cross-reference Query [ITI-83]
- Patient Identity Feed FHIR [ITI-104]

The figure below shows the actors directly involved in the PIXm Profile and the relevant transactions between them.



https://build.fhir.org/ig/IHE/ITI.PIXm/volume-1.html#1411-pixm-actors-transactions-and-content-modules

IHE Profiles PIXm : ITI-104 - example

```
PUT http://example.org/fhir/Patient?identifier=urn:oid:1.3.6.1.4.1.21367.13.20.1000|IHERED-994 HTTP/1.1
Accept: application/fhir+json
Content-Type: application/fhir+json
```

```
{
  "resourceType" : "Patient",
  "identifier" : [
    {
      "system" : "urn:oid:1.3.6.1.4.1.21367.13.20.1000",
      "value" : "IHERED-994"
    }
  ],
  "active" : true,
  "name" : [
    {
      "family" : "MOHR",
      "given" : [
        "ALISSA"
      ]
    }
  ],
  "gender" : "female",
  "birthDate" : "1958-01-30"
}
```

Simulation in Gazelle Patient Manager

ITI 104 – Add/Update/Remove/Merge

Antenatal Care System

PAT_IDENTITY_SOURCE

Add/Remove/Update Patient

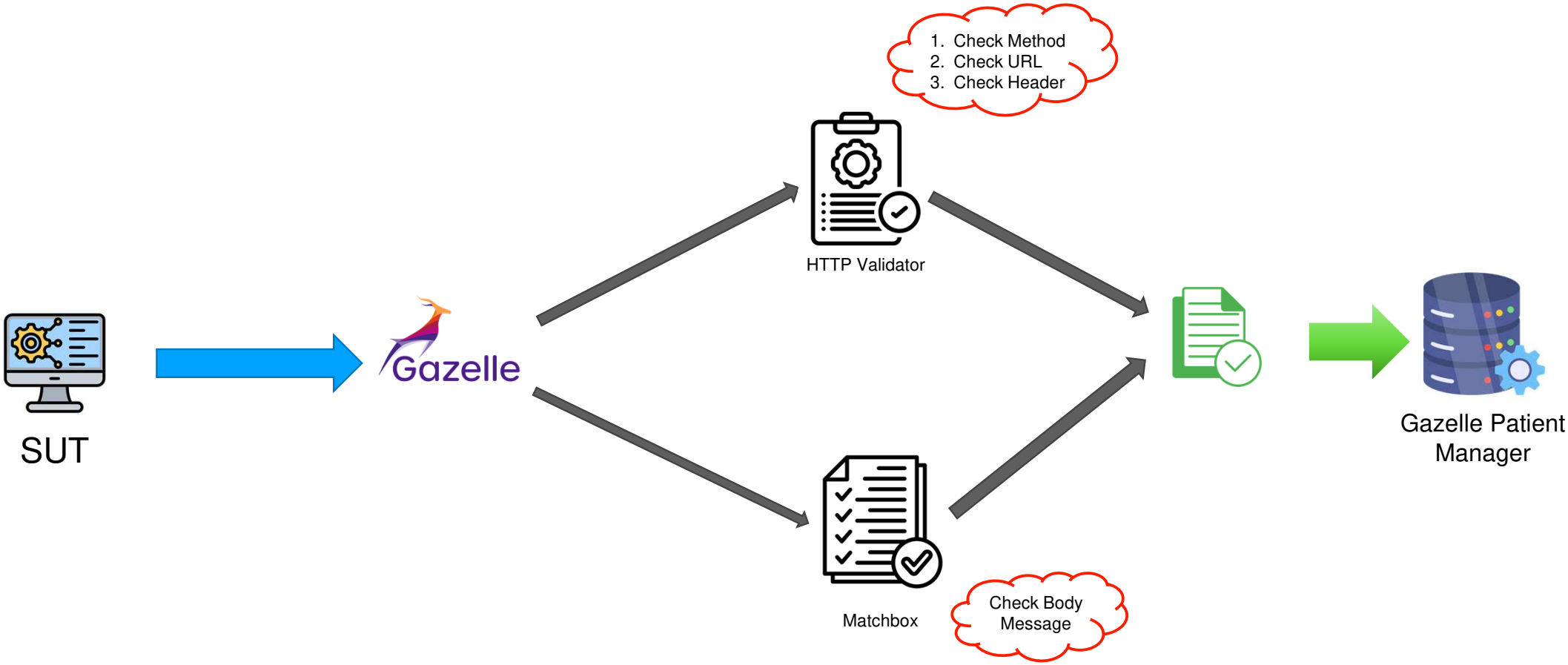
Patient Added/Removed/Updated

Gazelle

Patient Manager

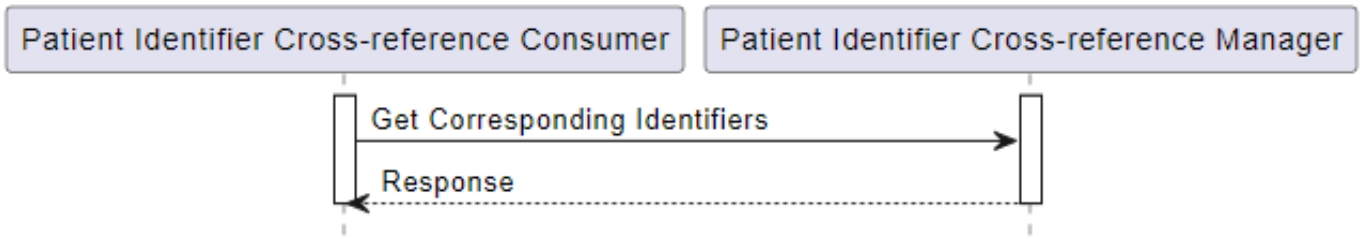
PAT_IDENTITY_X_REF_MGR

Behind the scenes – ITI 104



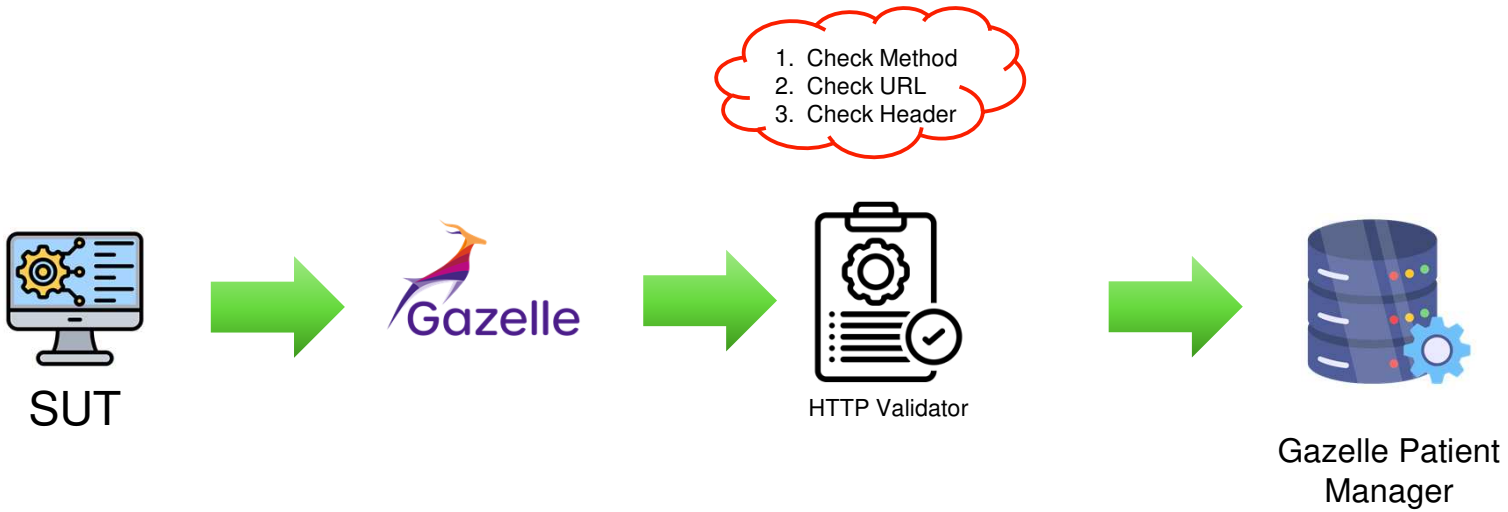
IHE Profiles PIXm : ITI-83 - example

Actor	Role
Patient Identifier Cross-reference Consumer	Queries the Patient Identifier Cross-reference Manager for a list of corresponding patient identifiers, if any
Patient Identifier Cross-reference Manager	Manages the cross-referencing of patient identifiers across Patient Identification Domains. Upon request it returns a list of corresponding patient identifiers, if any.



https://build.fhir.org/ig/IHE/ITI.PIXm/ITI-83.html

Behind the scenes – ITI-83



Simulation in Gazelle Patient Manager

ITI 83 Patient Identity Consumer for Mobile

Blood Laboratory

PAT_IDENTITY_CONSUMER

Get Corresponding Idenfiers

Return Corresponding Idenfiers

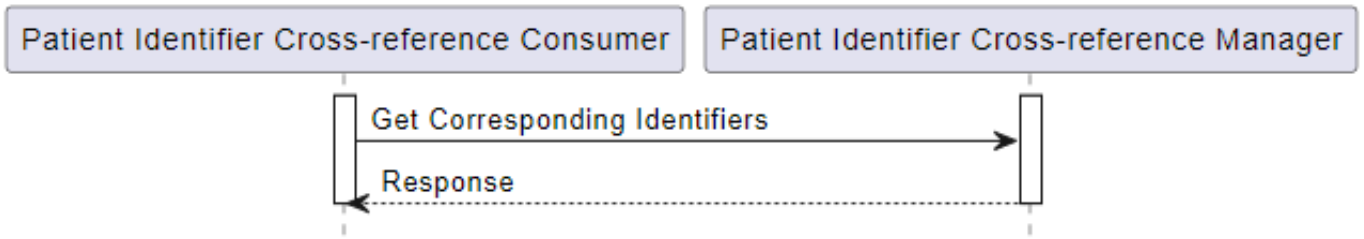
Gazelle

Patient Manager

PAT_IDENTITY_X_REF_MGR

IHE Profiles PDQm : ITI-78 - example

Actor	Role
Patient Identifier Cross-reference Consumer	Queries the Patient Identifier Cross-reference Manager for a list of corresponding patient identifiers, if any
Patient Identifier Cross-reference Manager	Manages the cross-referencing of patient identifiers across Patient Identification Domains. Upon request it returns a list of corresponding patient identifiers, if any.



https://build.fhir.org/ig/IHE/ITI.PIXm/ITI-83.html

Thank you for your attention