



# Advancing Healthcare Data Interoperability Using FHIR

August 2020



# Agenda

- Key FHIR Attributes
- FHIR and Existing Platforms
- Native FHIR
- FHIR and the Final Rule
- Summary

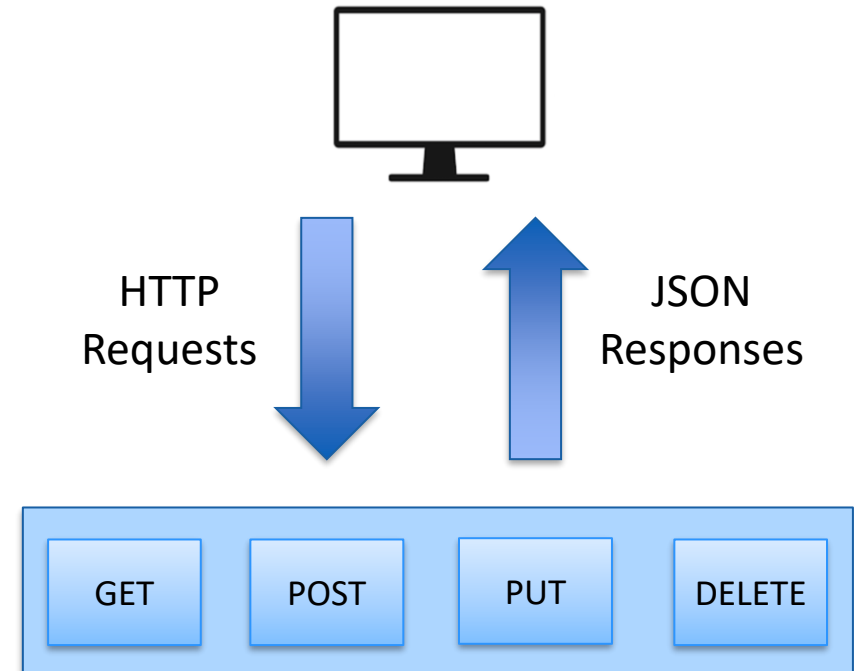
# FHIR Everywhere



# A Few Key Features

Operationally, FHIR provides:

- A REST Server with healthcare-specific information model



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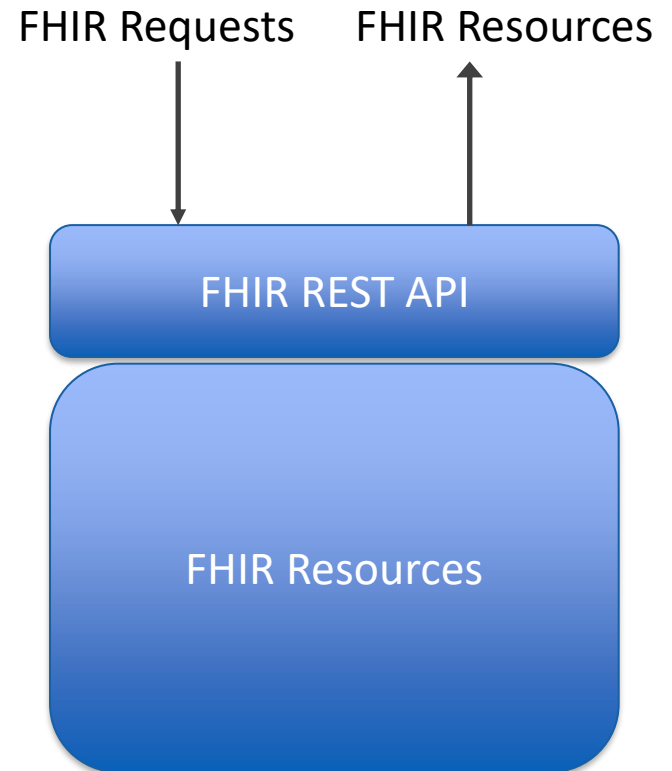
- A REST Server with healthcare-specific information model
- A simple & extensible Data Model



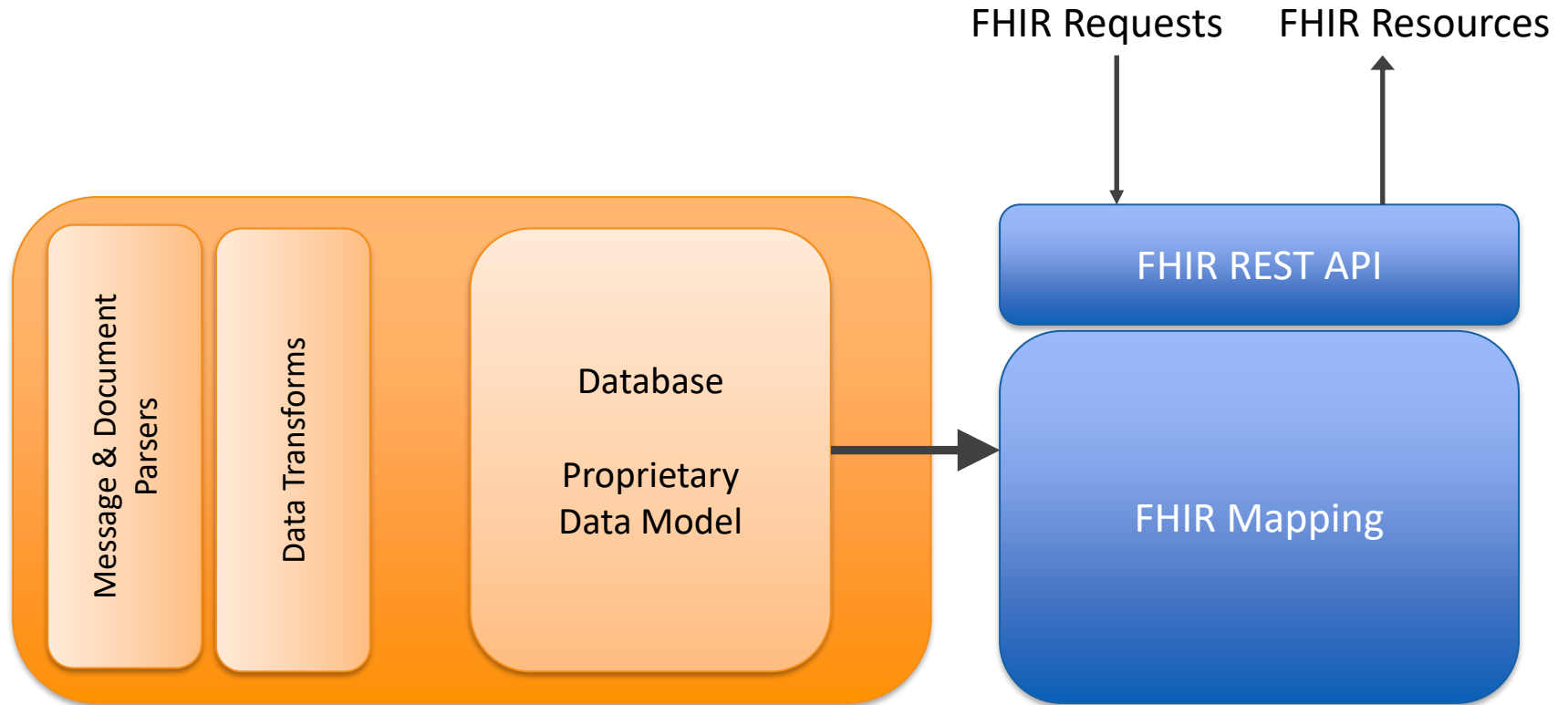
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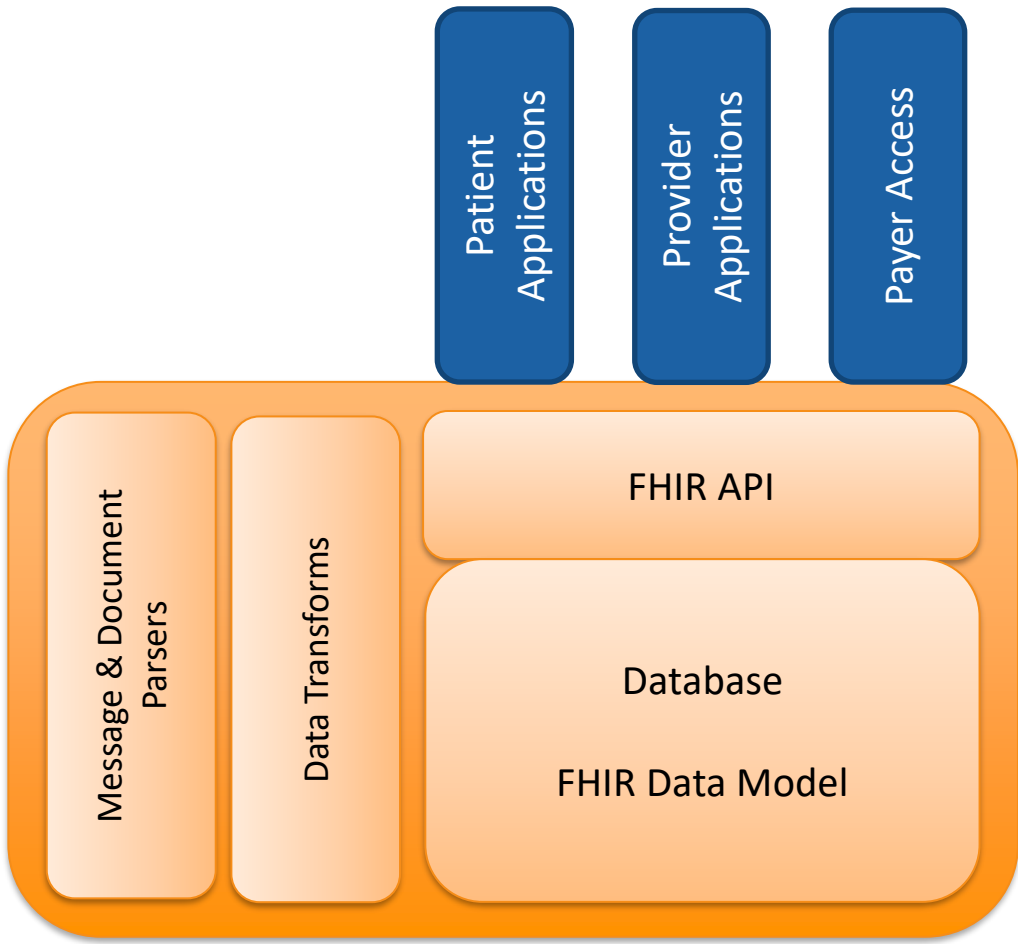
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# Adding FHIR to Existing Platforms



# Native FHIR Clinical Data Repository



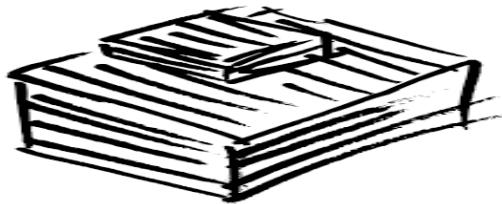


# Clinical Data Processing

## Transforming Data into Information

### Exchanged Info;

- Cerner CCDA, HL-7 v3
- EPIC CCDA, HL-7 v2
- Labcorp HL-7 v2
- Quest HL-7
- Hospital Lab HL-7
- Radiology HL7, DICOM
- Blue Button
- Other repositories
- Any clinical data
- Etc..



Transform data into standardized FHIR JSON documents.

This lets us take data from any system and make it useful for patients, providers, and payers.

### FHIR JSON Documents

```
<DiagnosticReport xmlns="http://hl7.org/fhir">
  <text>
    <status value="generated"/>
    <div xmlns="http://www.w3.org/1999/xhtml">
      <h3>CBC Report for Wile. E. COYOTE (MRN: 23453) issued 3-Mar 2011 1
      <pre>
        Test           Units      Value      Reference Range
        Haemoglobin     g/L       176       135 - 180
        Red Cell Count  x1012/L   5.9       4.2 - 6.0
        Haematocrit     0.55+    0.38 - 0.52
        Mean Cell Volume fL        99+      80 - 98
        Mean Cell Haemoglobin pg      36+     27 - 35
        Platelet Count  x109/L   444      150 - 450
        White Cell Count x109/L   4.6      4.0 - 11.0
      </pre>
      <p>Acme Laboratory, Inc signed: Dr Pete Pathologist</p>
    </div>
  </text>
  <status value="final"/> <!-- all this report is final -->
  <issued value="2011-03-04T11:45:33+11:00"/>
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# Clinical Data Processing

## Building Universal Health Records

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```

Once the data is organized as useful health information, we can build aggregated universal health records.

Demographics

Hx Record

Problems

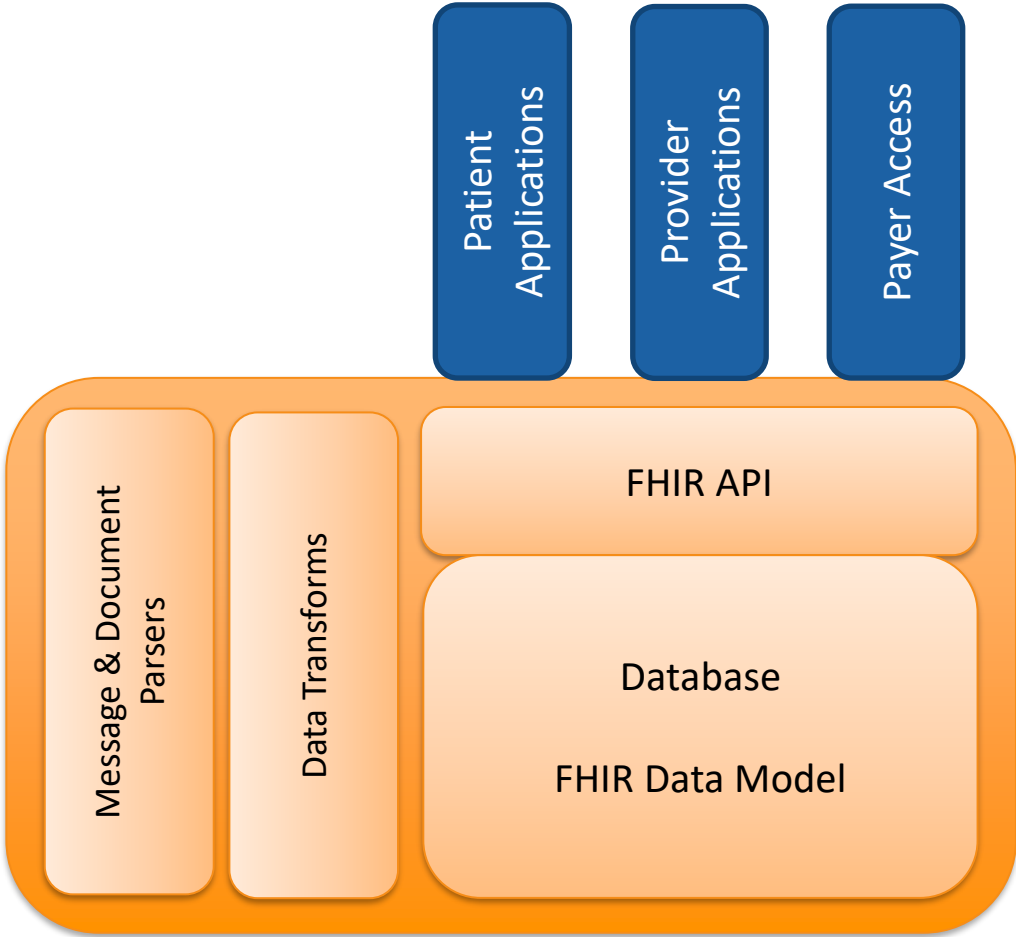
Medications

Allergies

Summaries



# Native FHIR Clinical Data Repository



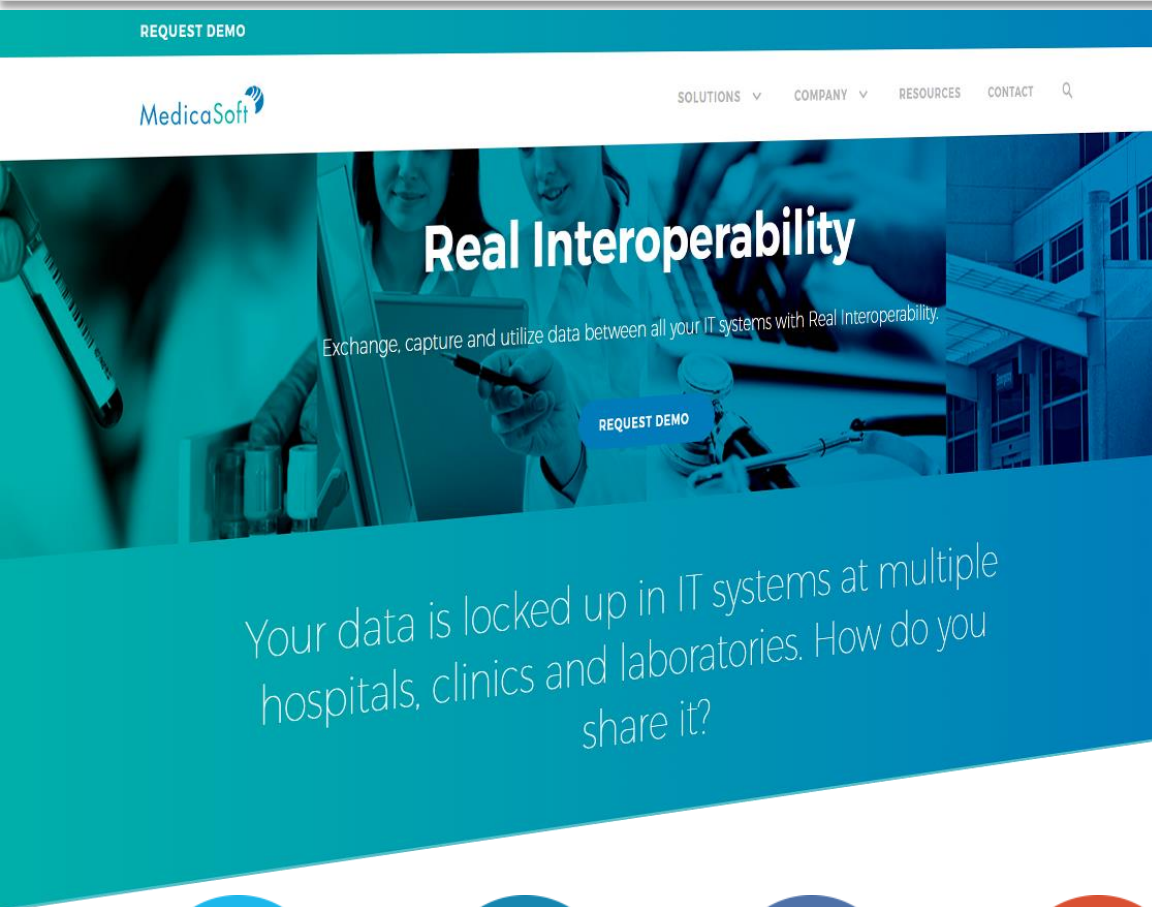
# A Push from the Final Rule

- **ONC Cures Act Final Rule**
  - Interoperability via standardized API: FHIR API
  - Defined set of data elements: USCDI
  - Single patient & multi-patient access
- **CMS Interoperability & Patient Access Final Rule**
  - Claims data available to patients (via FHIR API)
  - Provider directory (via FHIR API)
  - Payer-to-payer exchange
  - ADT notifications

# FHIR as a Strong Data Foundation

- Ideal health IT systems technology
  - Fits modern architecture
  - Robust, flexible data model
  - Development friendly
- Meaningful effort is still required
  - Patient matching
  - Data quality
  - Data completeness
- But FHIR is a significant step forward in allowing us to extract information, and value, from our data

# Thank You



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