Improving Provider Access To Patient Data Using CMS 0057-F APIs & GenAI

HIMSS 2025 Interop and Smart Experience Pavillion

Capgemini

# Problem Collecting Patient Health History

- Comprehensive view of a patient's health history is important, especially for new providers

  - Allows for more effective, personalized treatment

  - Reduces treatment delays

  - Reduces patient and provider burden around information sharing

  - Reduces risk of clinical error

- Patient data is scattered amongst different providers and payers, using different systems, storing data in different formats

- This fragmentation makes it very hard for a new provider to assemble and understand the full context of the patient. It's a messy process and prone to error!
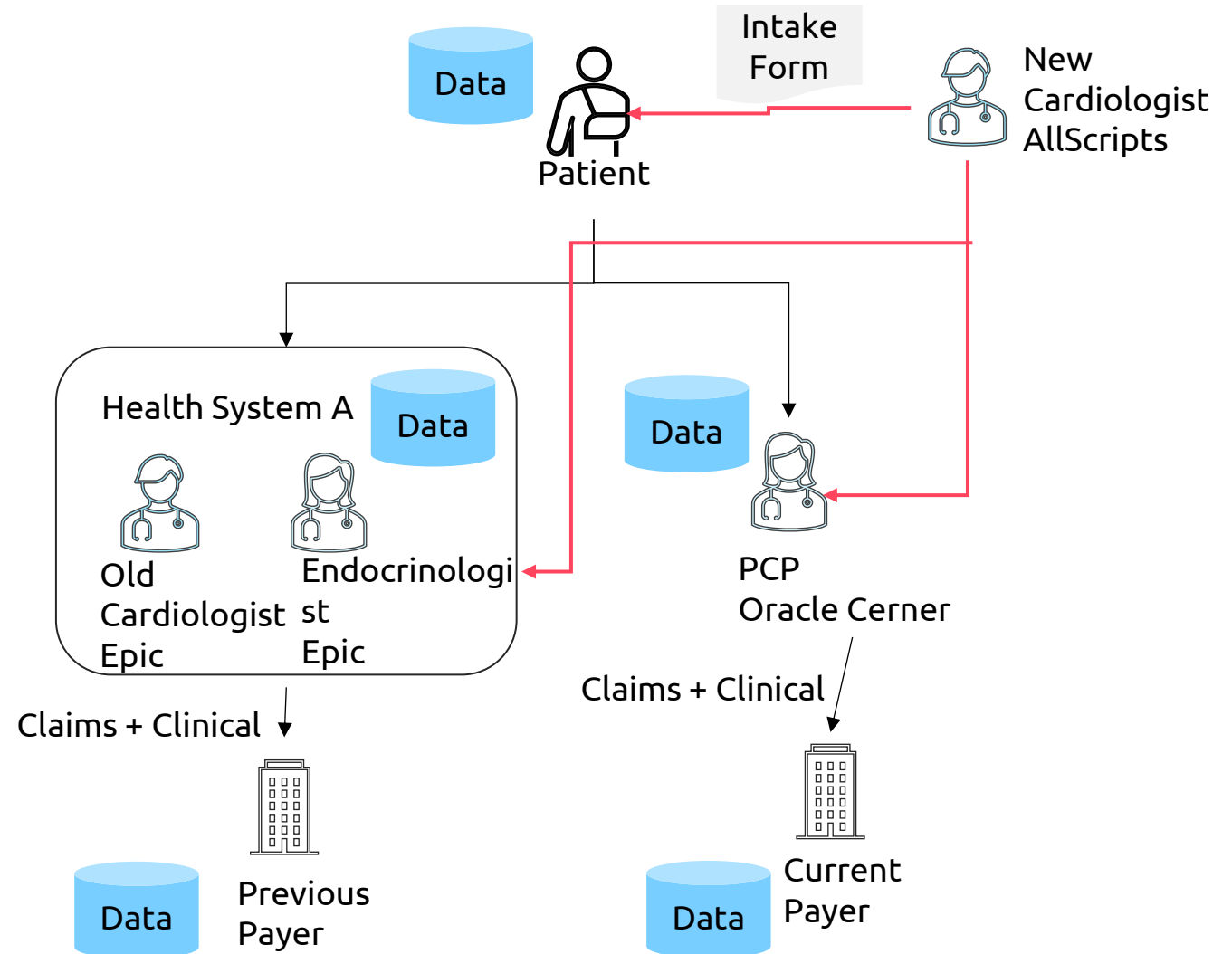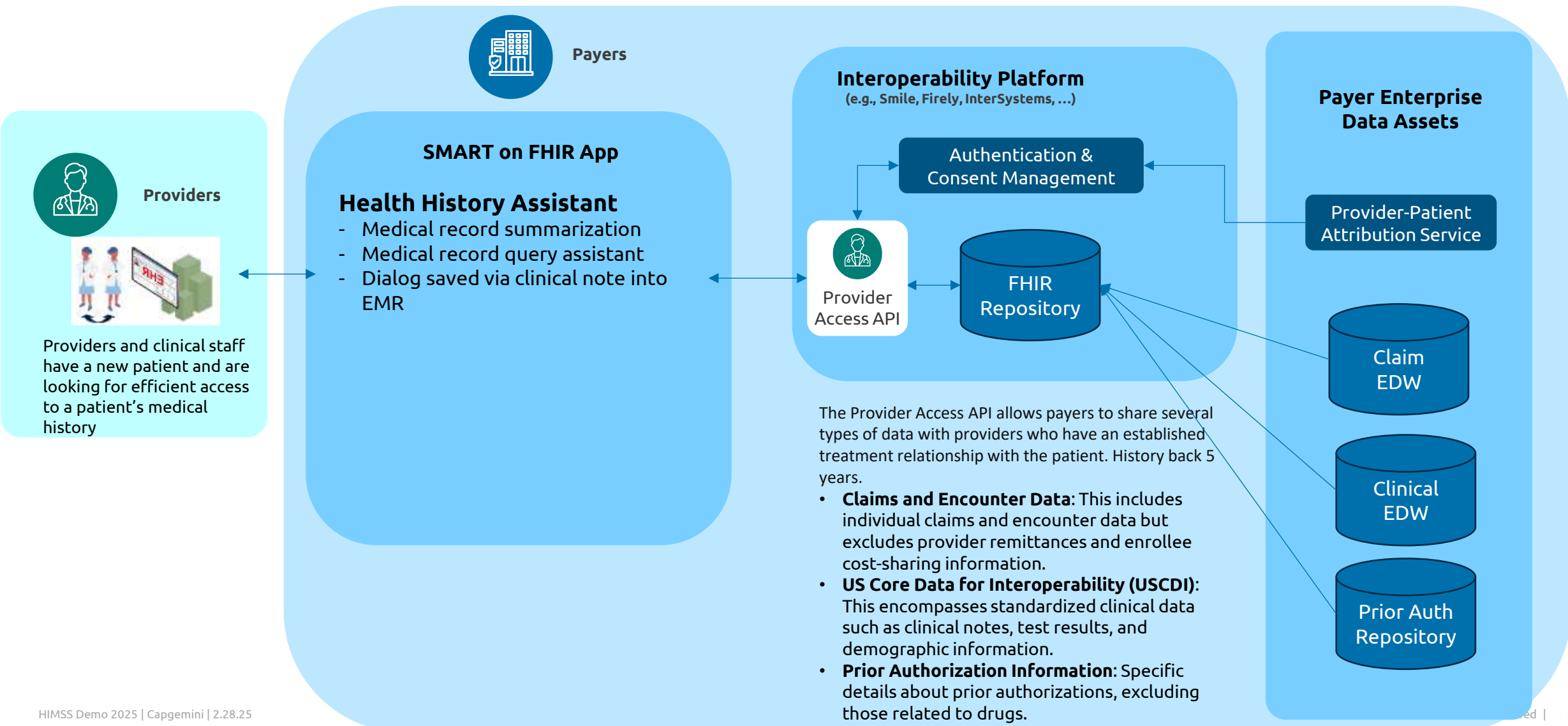
CMS 0057-F APIs + GenAI Can Help

- Payers naturally aggregate data due to claims. Payer to Payer API helps to consolidate data across a member's payers

- Provider Access API allows provider to request member data going back to 2016. This data can augment patient provided history on intake form

- Large volume of data returned by Provider Access API could overwhelm the provider. Use a GenAI assistant to produce a tailored, natural language summary of the available data.

- Allow the practitioner to ask follow-up questions to gather the relevant data for their intake process.

- Capture summary of history and Q&A dialog as a clinical note which can be edited and added to the EMR record
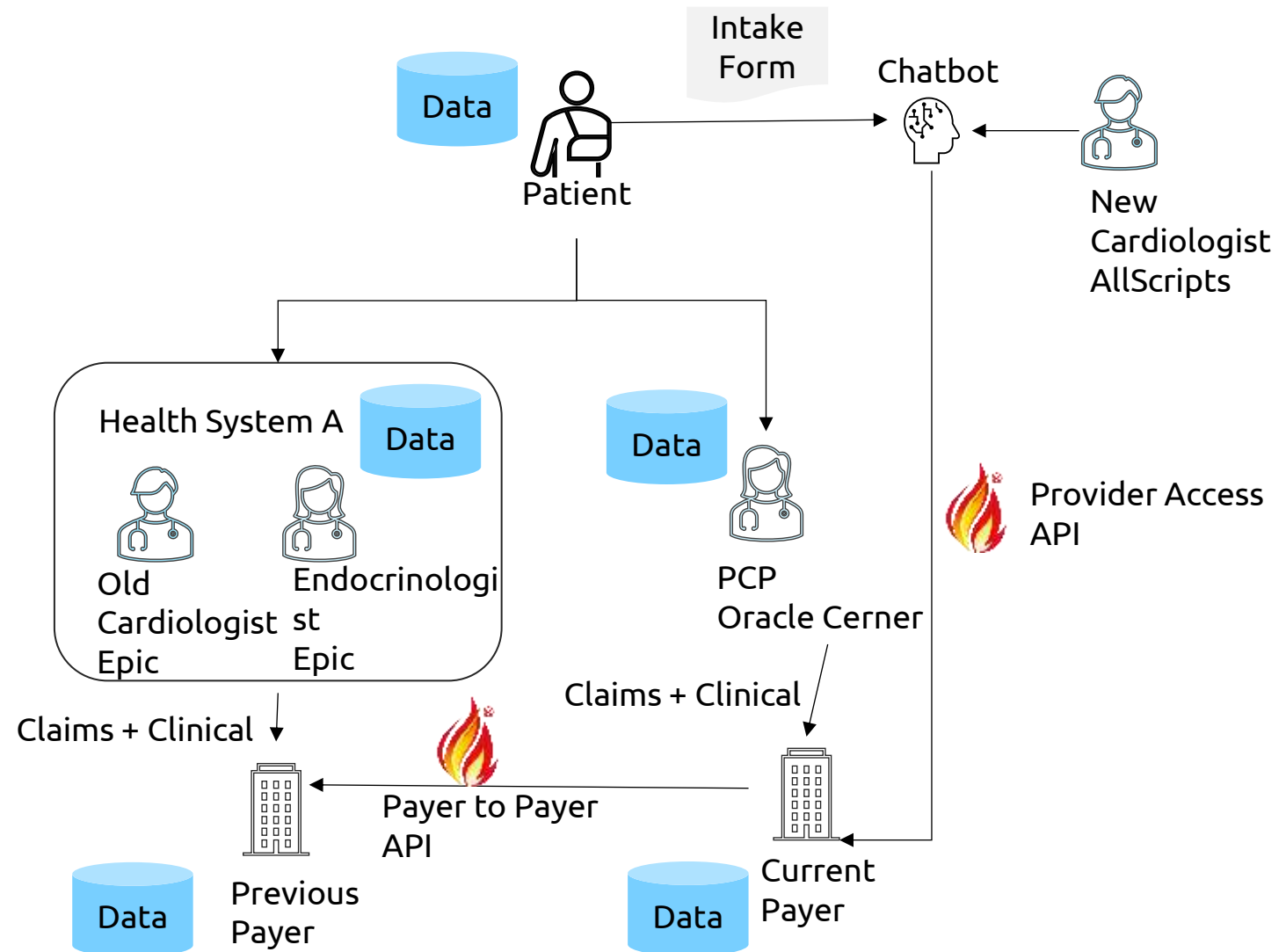
High Level Solution Diagram

Health History Assistant – Summarize patient records and support follow up questions from clinician user

Providers

Providers and clinical staff have a new patient and are looking for efficient access to a patient's medical history

Payers

SMART on FHIR App

Health History Assistant
- Medical record summarization
- Medical record query assistant
- Dialog saved via clinical note into EMR

Interoperability Platform
(e.g., Smile, Firely, InterSystems, ...)

Authentication & Consent Management

Provider Access API

FHIR Repository

Payer Enterprise Data Assets

Provider-Patient Attribution Service

Claim EDW

Clinical EDW

Prior Auth Repository

The Provider Access API allows payers to share several types of data with providers who have an established treatment relationship with the patient. History back 5 years.

- **Claims and Encounter Data**: This includes individual claims and encounter data but excludes provider remittances and enrollee cost-sharing information.
- **US Core Data for Interoperability (USCDI)**: This encompasses standardized clinical data such as clinical notes, test results, and demographic information.
- **Prior Authorization Information**: Specific details about prior authorizations, excluding those related to drugs.

Technical Architecture – Health History Assistant

Provider Burden Reduction

- Seamless integration into existing clinical workflow
- Easy access to comprehensive patient history, enabled via FHIR and GenAI
- Reduced cognitive load for summarization
- No clicks!

Innovation By Integration

- Highly configurable – chunking algos, vector models, inference models, context augmentation approaches can be tuned/swapped out for specific use cases & users
- Leverage EHR interoperability integration mechanisms e.g. CDS Hooks, SMART apps

Trust = Security + Accuracy + Privacy

- Grounding for accuracy
- Patient context is not retained by LLM
- Industry standard security controls – mTLS, OAuth 2.0, data encryption at rest and in-transit, etc
- Consent management

RAG – Retrieval Augmented Generation

	RAG	Long Context
Extraction completeness	Better for details	Better for summaries
Token cost	Lower	Higher
Latency	Depends on use case	Depends on use case
Implementation effort	Harder	Easier

Long Context