Agenda

• Patient Cost Transparency (PCT) Use Case:
  – Overview
  – Timeline & Current State
  – Project Team

• PCT Implementation Guide (IG)
  – Workflow
  – Profiles

• Reviewer Links

• Reference Implementations

• Testing

• How to get involved
PATIENT COST TRANSPARENCY (PCT)
USE CASE
Project Focus

To ensure the success of the industry’s shift to Value Based Care

Transform out of Controlled Chaos:
Develop *rapid multi-stakeholder* process to identify, exercise and implement initial use cases.

Collaboration:
*Minimize* the development and deployment of *unique solutions.*
*Promote* industry wide standards and adoption.

Success Measures:
Use of FHIR®, implementation guides and pilot projects.
Da Vinci Patient Cost Transparency (PCT)

Use Case Summary

Goal:
• Develop a **standard data exchange** in support of patient cost transparency for devices, services and collection of services using **FHIR APIs** for exchange of data

Objectives:
• Ability to communicate **good faith estimates (GFE)** for single service, collection of services, and items from **provider to payer**
• Ability to communicate **advanced explanation of benefits (AEOB)** prior to scheduled service or upon request to **patient** and optionally, to **provider**
• Support current and future regulations and enable compliance

Overview: [https://whova.com/portal/webapp/chfc_202207/Agenda/2477591](https://whova.com/portal/webapp/chfc_202207/Agenda/2477591)
Da Vinci Patient Cost Transparency (PCT) Timeline Review

Note: in 2019, Da Vinci Members gained approval for the PCT Project Scope Statement (PSS)

**Da Vinci PCT Member Discovery Begins**
- Q1 2021

**Open Community Weekly Meetings Start**
- Q1 2021

**Requirements Gathering GFE & AEOB Begins**
- Q2 2021

**FHIR Gap Analysis, Profile and Operation Development**
- Q3 2021

**PCT Testing at Da Vinci Testing Event**
- Oct 2021

**Final Updates to Implementation Guide (IG) and Reference Implementation (RI)**
- Dec 2021

**No Surprises Act (NSA) as part of Consolidated Appropriations Act (CAA) Evaluation and Alignment to Scope**
- Q4 2020

**Transparency in Coverage Final Rule Drops**
- Q4 2020

**Draft IG and RI Built**
- Q2 2021

**HL7 Jan Ballot (Community Feedback)**
- Jan 2022

**Goal: PCT STU1* Publicaton Q4 2022**

- HL7 Jan Connectathon Testing
- Ballot Reconciliation Began

**Collaboration with X12 Increases**

*STU = Standard for Trial Use

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# Project Team

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Co-Lead and Da Vinci Project Manager</td>
<td>Vanessa Candelora</td>
<td>Point of Care Partners</td>
</tr>
<tr>
<td>Project Co-Lead (Payer)</td>
<td>Alice O'Carroll</td>
<td>GuideWell / FL Blue</td>
</tr>
<tr>
<td>Project Co-Lead (Provider)</td>
<td>RCM &amp; IT</td>
<td>Providence</td>
</tr>
<tr>
<td>Project Co-Lead (Vendor)</td>
<td>Jacob Woodford</td>
<td>Epic</td>
</tr>
<tr>
<td>Lead Analyst</td>
<td>Mary Kay McDaniel</td>
<td>HL7</td>
</tr>
<tr>
<td>IG and RI Lead</td>
<td>Corey Spears</td>
<td>MITRE</td>
</tr>
<tr>
<td>RI Support/Co-Lead</td>
<td>Joseph Minieri</td>
<td>MITRE</td>
</tr>
<tr>
<td>PMO/Technical Director</td>
<td>Viet Nguyen, MD</td>
<td>Stratametrics, LLC</td>
</tr>
<tr>
<td>PMO/Program Manager</td>
<td>Jocelyn Keegan</td>
<td>Point of Care Partners</td>
</tr>
</tbody>
</table>
PCT IMPLEMENTATION GUIDE (IG)
Da Vinci Patient Cost Transparency (PCT) Implementation Guide

Balloted STU Implementation Guide: build.fhir.org/ig/HL7/davinci-pct/

Benefits:
- Interoperability
- Easier implementation
- Align your internal processes/technology/data with future industry standards
- Setup for success with coming regulation
Good Faith Estimate and Advanced EOB
Triggered by Request or Scheduled Service

Phase 1

- Good Faith Estimate (to Payer) and Advanced Explanation of Benefits (Payer to Patient)
- Starting Trigger for Phase 1 IG is the GFE Submit to the Payer
- Support for the Return AEOB to Provider is not outlined in CAA Law but Da Vinci agrees it’s critical for health equity
- FHIR<>X12 mapping (supported and published by X12)
- The IG is meant to facilitate the necessary data sharing to meet the legislative and future regulatory requirements without limiting provider and payer implementation.

Note: There are no HIPAA mandated transactions for PCT. There are transactions that HIPAA mandates for OTHER transactions (claims) that can support PCT transactions too.

AEOB = Advanced Explanation of Benefits
PCT Profiles
Good Faith Estimate (GFE) Bundle

- Patient – Information about the person to receive the service(s)
- Coverage – The coverage the services are to be paid under
- Payer - The organization providing the coverage
- Good Faith Estimate – (Pre) claim for expected services
  - Each represents a billing provider
  - Institutional or Professional
  - Includes service dates, diagnoses, procedures, and charges
  - Each references Practitioner and/or Organization resources in the bundle including:
    - Billing Provider
    - Payee Provider
    - Care Team Providers
    - Servicing Facility / Location
- Supports one or multiple (pre) claims to represent multiple billing providers in one GFE Bundle
PCT Profiles
Advanced Explanation of Benefit (AEOB) Bundle

- An AEOB Bundle is created in response to a GFE Bundle
- Patient – Information about the person to receive the service(s)
- Coverage – The coverage the services are to be paid under
- Payer - The organization providing the coverage
- Advance Explanation of Benefits – Estimated pseudo adjudication of a (pre) claim
  - Institutional and Professional
  - Reference to GFE
  - Billing Provider (Organization or Practitioner)
  - Pseudo Adjudication Amounts (eligible, deductible, copay, coinsurance, etc.)
  - Applicability of Medical Management Requirements (e.g., prior auth, step therapy, concurrent review)
- Supports multiple AEOBs, each addressing one or more GFEs
**DRAFT AEOB to Provider**

**Key Takeaway:** GFE Submitter receives the Patient AEOB from Payer including a “side car” GFE with details for the billing provider(s).

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**Diagram:**
- **GFE Submitter**
  - **GFE Bundle**
    - **Billing Provider n (BPn)**
    - **davinci-pct-gfe-bundle**
- **Patient AEOB**
  - **Original GFE**
    - **Billing Provider n (BPn)**
  - **Payer Processed Estimate**
    - **davinci-pct-gfe-bundle** (embedded or external url)
  - **SAME Data**
- **Patient AEOB**
  - **Original GFE**
    - **Billing Provider n (BPn)**
  - **Payer Processed Estimate**
    - **davinci-pct-aeb**
REVIEWER LINKS
Da Vinci Community Resources
Get Involved!

Use Case confluence site:
https://confluence.hl7.org/display/DVP/Patient+Cost+Transparency

Implementation Guide:
PCT Continuous integration: https://build.fhir.org/ig/HL7/davinci-pct/

Project Scope Statement:
Project Scope Statement approved by HL7 (FM Sponsor, PIE co-sponsor)

Zulip Chat
https://chat.fhir.org/#narrow/stream/301151-Da-Vinci.20PCT

Join Us: Weekly community calls on Fridays, 11am – 1pm ET
(Listed on HL7 Calendar under Financial Management)
REFERENCE IMPLEMENTATIONS
Reference Implementations

Reference Implementation Source Repo (Apache 2.0 license)

Server: https://github.com/HL7-DaVinci/test-pct-payer
HAPI-based Java Application

Client: https://github.com/HL7-DaVinci/pct-client
JavaScript/React based App

Hosted Implementations:

Server: https://davinci-pct-payer.logicahealth.org/fhir

Client: https://davinci-pct-client.logicahealth.org/
PCT Server RI (MITRE)

Server: [https://davinci-pct-payer.logicahealth.org/fhir](https://davinci-pct-payer.logicahealth.org/fhir)

Patient Cost Transparency Reference Implementation Payer Server

This server provides a complete implementation of the FHIR Specification using a 100% open source software stack.

This server is built from a number of modules of the HAPI FHIR project, which is a 100% open-source (Apache 2.0 Licensed) Java based implementation of the FHIR specification.

Server: PCT Reference Implementation Server

Software: [https://github.com/HL7-Da Vinci/test-pct-payer](https://github.com/HL7-Da Vinci/test-pct-payer) - 1.0.1

FHIR Base: [http://localhost:8080/fhir](http://localhost:8080/fhir)

Server Actions:

- Retrieve the server's conformance statement.
- Retrieve the update history across all resource types on the server.

Post a bundle containing multiple resources to the server and store all resources within a single atomic transaction.
### Patient Cost Transparency Client

**Client:** [https://davinci-pct-client.logicahealth.org/](https://davinci-pct-client.logicahealth.org/)

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### GOOD FAITH ESTIMATE

**AEOB:** Initial Response from GFE Submission

**AEOB:** Query at 7/19/2022, 11:19:37 AM

#### Bundle

**ID:** 262

**Identifier:** 0de1e02f-18a0-412c-a9f5-c037191d001

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### Patient Information

#### Demographics:
- **Name:** Eve Beethoven
- **Birthdate:** 1955-07-23
- **Gender:** female
- **Telephone:** 781-946-4949 (mobile phone)
- **Address:** 222 Burlington Road, Bedford MA 01730

#### Insurance:
- **Payor:** Umbrella Insurance Company
- **Subscriber:** PFP123450000 (Self)
- **Member ID:** coverage1001
- **Plan:** Promin Family Plus Plan
- **Coverage Period:** 2021-01-01 to 2022-01-01

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### Advanced Explanation of Benefits

**ID:** 263

**Created:** Jul 19, 2022 11:19 AM

**Outcome:** complete

#### Totals:
- **Paid to Provider:** 447.11 USD
- **Allowance:** 89.42 USD

#### Details:
- **Submitting Provider:** GFE Service Help INC. (Submitter-Org-1)

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### Advance Explanation of Benefits Table

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>SERVICE DESCRIPTION</th>
<th>SERVICE DATE</th>
<th>QUANTITY</th>
<th>PAID TO PROVIDER</th>
<th>SUBMITTED AMOUNT</th>
<th>ELIGIBLE AMOUNT</th>
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</thead>
<tbody>
<tr>
<td>70551</td>
<td>Magnetic resonance (eg. proton) imaging, brain (including brain stem)</td>
<td>2022-07-21</td>
<td>1</td>
<td>266.00 USD</td>
<td>266.00 USD</td>
<td>266.00 USD</td>
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<tr>
<td>99413</td>
<td>Magnetic resonance (eg. proton) imaging, brain (including brain stem)</td>
<td>2022-07-20</td>
<td>1</td>
<td>181.11 USD</td>
<td>181.11 USD</td>
<td>181.11 USD</td>
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*THIS IS NOT A BILL*
Testing Tools and Support

Build and Validate With Touchstone

AEGIS Touchstone for Testing. You can:
- Have your own private Touchstone sandbox
- Join the Da Vinci Organization

Step 1: Create a User and join an Organization
Step 2: Set up your Test System.
Step 3: Executing Test Setups.
Step 4: Review your results.

Touchstone provides detailed feedback on the results of your test execution.

Go to: Open Testing Tools - Build and Validate with Touchstone

For all our Implementer Support tools, go to:
https://confluence.hl7.org/display/DVP/Da+Vinci+Implementer+Support
<table>
<thead>
<tr>
<th>Test Script</th>
<th>Version</th>
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<th>Tests</th>
<th>Validator</th>
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<tr>
<td>FHIRSandbox DaVinci/FHIR4-0-1-PCT/FHIR4-0-1-PCT/DAVinci-Anywhere-claimTransact</td>
<td>1</td>
<td>Patient Cost Transparency - DA Vinc i Scenario - GFE submit operation is POSTed with a Bundle containing a single or multiple GFEs of type Institutional (constructed as Claim resources) plus referenced resources. Expected response is an empty Bundle with a uuid for later use in AE OB inqury.</td>
<td>2</td>
<td>FHIR 4.0.1 Da Vinci</td>
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<tr>
<td>FHIRSandbox DaVinci/FHIR4-0-1-PCT/FHIR4-0-1-PCT/DAVinci-Anywhere-claimTransact</td>
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</tr>
<tr>
<td>FHIRSandbox DaVinci/FHIR4-0-1-PCT/FHIR4-0-1-PCT/DAVinci-Anywhere-claimTransact</td>
<td>2</td>
<td>Patient Cost Transparency - DA Vinc i Scenario - AE OB Inquiry Outcome Not Complete - System inquires on the AE OB with the expectation that the Outcome value is equal to any value of 'complete', 'error', 'partial', or 'queued'. PreCondition: A GFE submit operation has been completed and a Bundle has been returned with a uuid that is used in the AE OB inqury.</td>
<td>1</td>
<td>FHIR 4.0.1 Da Vinci</td>
</tr>
<tr>
<td>FHIRSandbox DaVinci/FHIR4-0-1-PCT/FHIR4-0-1-PCT/DAVinci-Anywhere-claimTransact</td>
<td>2</td>
<td>Patient Cost Transparency - DA Vinc i Scenario - AE OB Inquiry Outcome Complete - System inquires on the AE OB with the expectation that the Outcome value is 'Complete'. The resulting response will be evaluated against the PCT profiles. PreCondition: A GFE submit operation has been completed and a Bundle has been returned with a uuid that is used in the AE OB inqury.</td>
<td>1</td>
<td>FHIR 4.0.1 Da Vinci</td>
</tr>
<tr>
<td>FHIRSandbox DaVinci/FHIR4-0-1-PCT/FHIR4-0-1-PCT/DAVinci-Anywhere-claimTransact</td>
<td>1</td>
<td>Patient Cost Transparency - Test Entered Dynamic - GFE submit operation is POSTed with a Bundle containing a single or multiple GFEs of type Institutional (constructed as Claim resources) plus referenced resources. Expected response is a resource with a uuid for later use in AE OB inqury.</td>
<td>2</td>
<td>FHIR 4.0.1 Da Vinci</td>
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</table>
# Da Vinci Use Case Working Sessions

**Join Us!**

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Schedule</th>
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<tbody>
<tr>
<td>Burden Reduction (CRD/DTR/PAS) - Wednesday</td>
<td>Wednesdays at 11am Eastern</td>
</tr>
<tr>
<td>Notifications</td>
<td>First Wednesday of the month at 12pm Eastern</td>
</tr>
<tr>
<td>Clinical Data Exchange (CDex) Health Record Exchange Framework (HRex) included</td>
<td>Wednesdays at 2pm Eastern</td>
</tr>
<tr>
<td>Member Attribution List (ATR)</td>
<td>Wednesdays biweekly at 3pm Eastern</td>
</tr>
<tr>
<td>Risk Adjustment (RA)</td>
<td>Thursdays at 3pm Eastern</td>
</tr>
<tr>
<td><strong>Patient Cost Transparency (PCT)</strong></td>
<td><strong>Fridays at 11am Eastern</strong>*</td>
</tr>
<tr>
<td>Payer Data Exchange (PDex, Formulary, PlanNet)</td>
<td>Fridays at 12pm Eastern</td>
</tr>
<tr>
<td>PDex Formulary STU2</td>
<td>Fridays at 2pm Eastern</td>
</tr>
<tr>
<td>Burden Reduction (CRD/DTR/PAS) - Friday</td>
<td>Fridays at 3pm Eastern</td>
</tr>
</tbody>
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*2 hours per week

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**Conference Call Sign Up**

- **HL7 Conference Call Center** - check the HL7 calendar for cancellations/changes!
- **Da Vinci Conference Call Sign Up Instructions**
- Note: There is no invitation, add to your own calendar
- **HL7 Da Vinci General Inquiries:**
  
  DaVinciPMO@pocp.com
Questions?

Contact Us:  
Davincipmo@pocp.com
Acronyms

- **PCT** – Patient Cost Transparency
- **CAA** - Consolidated Appropriations Act, 2021 or H.R. 133 – Law passed by Congress in Dec. 2020
- **NSA** - No Surprises Act - part of the CAA that is designed to prohibit surprise medical bills
- **GFE** – The Good Faith Estimate is a notification of expected charges for a scheduled or requested item or service
- **AEOB** – Advanced Explanation of Benefits - The No Surprises Act requires that group health plans and health insurance issuers provide advance cost estimates, called advanced explanations of benefits (advanced EOBs), for scheduled services or upon request
- **TiC** – Transparency in Coverage – CMS-9915-F Rule that impacts Payers
- **Convening Provider / Convening Facility** - provider or facility who receives the initial request for a good faith estimate from an individual and who is or, in the case of a request, would be responsible for scheduling the primary item or service
- **Co-Provider / Co-Facility** - provider or facility other than a convening provider / facility that furnishes items or services that are customarily provided in conjunction with a primary item or service
- **Period of Care** - the day or multiple days during which the good faith estimate for scheduled or requested item or service are furnished or are anticipated to be furnished

Additional Terms and Concepts in PCT IG here
https://build.fhir.org/ig/HL7/davinci-pct/use_cases.html#terms-and-concepts
Patient Cost Transparency (PCT)

Implementation Guide (STU1)
- https://github.com/HL7/davinci-pct

Hosted Reference Implementation
- Server: https://davinci-pct-payer.logicahealth.org/
- Client: https://davinci-pct-client.logicahealth.org/

Reference Implementation Code (Apache 2.0 license)
- Server: https://github.com/HL7-DaVinci/test-pct-payer
- Client: https://github.com/HL7-DaVinci/pct-client

Test Scripts
- https://touchstone.aegis.net/touchstone/testdefinitions?selectedTestGrp=/FHIRSandbox/DaVinci/FHIR4-0-1-PCT

Confluence
- https://confluence.hl7.org/display/FHIR/CMS+2022+-+07+Da+Vinci+Patient+Cost+Transparency+%28PCT%29+Track
- https://confluence.hl7.org/display/FHIR/CMS+2022+-+07+FHIR+Connectathon+3