

Speakers



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TECHNICAL BLUEPRINT 2.0

BCDA - Beneficiary Claims Data API

The Beneficiary Claims Data API (BCDA) is an Application Programming Interface provided by the Centers for Medicare & Medicaid Services (CMS) that enables Accountable Care Organizations (ACOs) and other model entities to retrieve Medicare claims data for their beneficiaries

AGENDA

01

Explanation

What is BCDA in comparison to other data pulls?

02

Use Cases

What cases can I start with?

03

How To

How to pull the data?

04

Considerations

What are the resources needed to get data?

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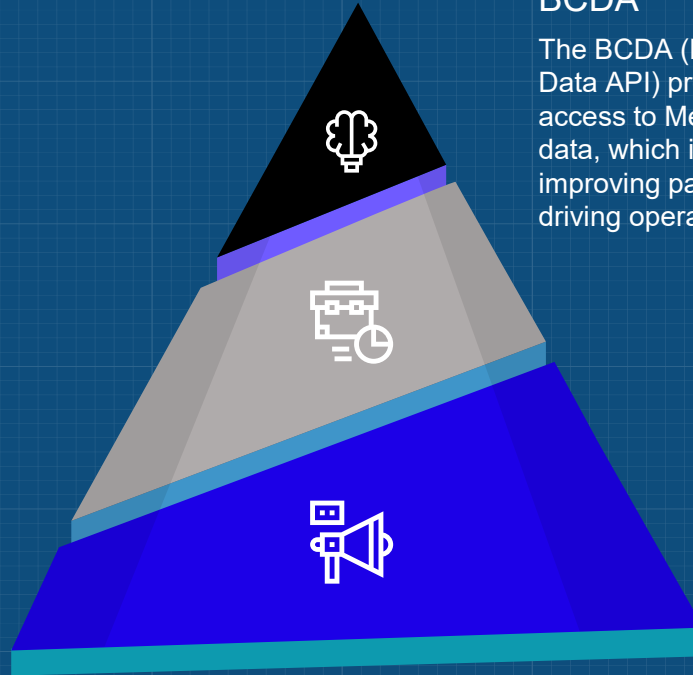
01

Explanation

Gabe Orthous

CMS DATA

CCLF
CCLFs are packages of 12 files containing claims and beneficiary data sent monthly to organizations participating in specific healthcare models.



BCDA

The BCDA (Beneficiary Claims Data API) provides more timely access to Medicare claims data, which is crucial for improving patient care and driving operational efficiencies.

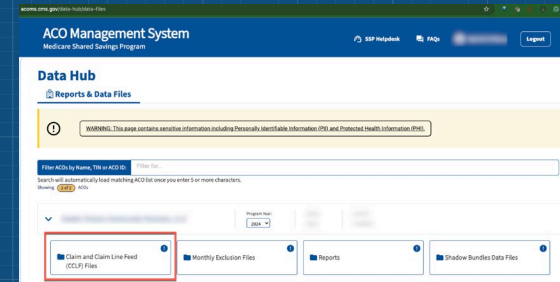
CMS Reports

Focus particularly on the Aggregate Expenditure/Utilization Report (EXPU) and the Beneficiary Expenditure Utilization Report (BEUR).

Other External FHIR APIs

CCLF

- CCLF stands for Claim and Claim Line Feeds. CCLFs are packages of **12 files containing claims** and beneficiary data sent monthly to organizations participating in specific healthcare models.
- CCLFs are generated for assigned or aligned beneficiaries who haven't opted out of data sharing or been administratively suppressed. Substance abuse data is not included per CMS policy.
- CCLF files are typically delivered mid-month and contain data from the prior calendar month. For instance, files sent in February 2023 include claims data finalized in January 2023.
 - The 12 files in a CCLF package cover various aspects of healthcare claims and beneficiary information



BCDA provides the CCLF to BCDA Data Dictionary to customers to facilitate their data mapping process.

BCDA – Key Features

- Data Retrieval: ACOs can use BCDA to download bulk claims data for their attributed beneficiaries every week, rather than monthly. This provides more up-to-date information for care coordination and analysis.
- Provides bulk Medicare claims data (Parts A, B, and D) for assigned or assignable beneficiaries
- Uses the FHIR (Fast Healthcare Interoperability Resources) standard for data exchange
- Offers more timely access to claims data compared to previous methods
- Allows system-to-system communication, reducing manual intervention
- This API follows the workflow outlined by the [FHIR Bulk Data Export Proposal](#) using the HL7 FHIR Standard. Claims data is provided as FHIR resources in [NDJSON](#) format.

Difference between adjudicated and non-adjudicated claims?

Adjudicated claims are finalized claims that have been processed by payers, reflecting the full payment and adjustment information. These are critical for understanding final payments and cost reconciliation.

Non-adjudicated claims are preliminary claims that have not yet been fully processed. They provide early insights into services rendered but may lack complete financial details.

BCDA primarily delivers non-adjudicated claims, offering early indicators of care but requiring validation through later adjudication processes.

Only
REACH

Claims Data Availability

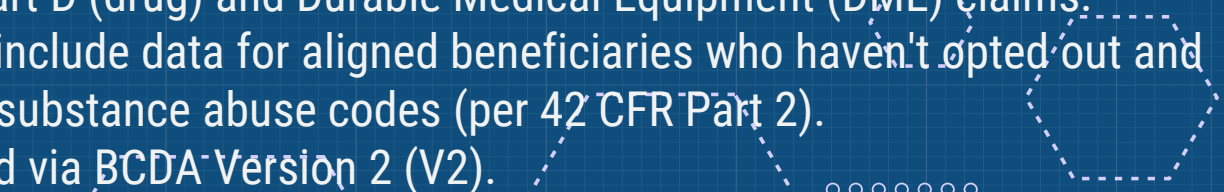
- BCDA provides fully adjudicated Medicare claims data (Parts A, B, and D).
- Claims availability depends on how quickly they are submitted, processed, and approved.
- The Affordable Care Act (Section 6404) mandates Medicare Fee-for-Service claims be submitted within 12 months of service.
- CMS typically receives claims 3-4 weeks after care is provided.
- Claims may undergo multiple rounds of processing (adjustments, edits, cancellations) before approval.
- Data becomes available via the API only after claims are approved.
- **BCDA updates data weekly, while Claim and Claim Line Feed (CCLF) files are updated monthly.**
- Data refresh delays will be communicated through the BCDA Google Group.

Are you MSSP? Want pre-adj claims? Email: SharedSavingsProgram@cms.hhs.gov.

BCDA Files

1. [Explanation of Benefit](#)
2. [Patient](#)
3. [Coverage](#)
4. [Claim](#) ← REACH
5. [ClaimResponse](#) ←

BCDA Partially Adjudicated Claims (REACH)

- BCDA Partially Adjudicated Claims provides faster access to Medicare claims, reducing the wait from up to 14 days to 2-4 days for Parts A and B Fee-for-Service (FFS) claims.
 - Partially adjudicated claims are in the Medicare system but not yet fully processed or paid by CMS.
 - REACH ACOs with BCDA credentials can access additional data through two new Fast Healthcare Interoperability Resource (FHIR®) types: Claim and Claim Response.
 - The enhancement adds data to existing fields in BCDA, supporting care coordination.
 - Includes Fee-for-Service claims from institutional (FISS) and professional (MCS) systems, excluding Part D (drug) and Durable Medical Equipment (DME) claims.
 - Filters claims only to include data for aligned beneficiaries who haven't opted out and excludes claims with substance abuse codes (per 42 CFR Part 2).
 - Data must be retrieved via BCDA Version 2 (V2).
- 

What's In the Files

The ExplanationOfBenefit (EOB) resource type provides similar information to what is provided in CCLF files 1-7. The EOB files contain lines within an episode of care, including where and when the service was performed, the diagnosis codes, the provider who performed the service, and the cost of care.

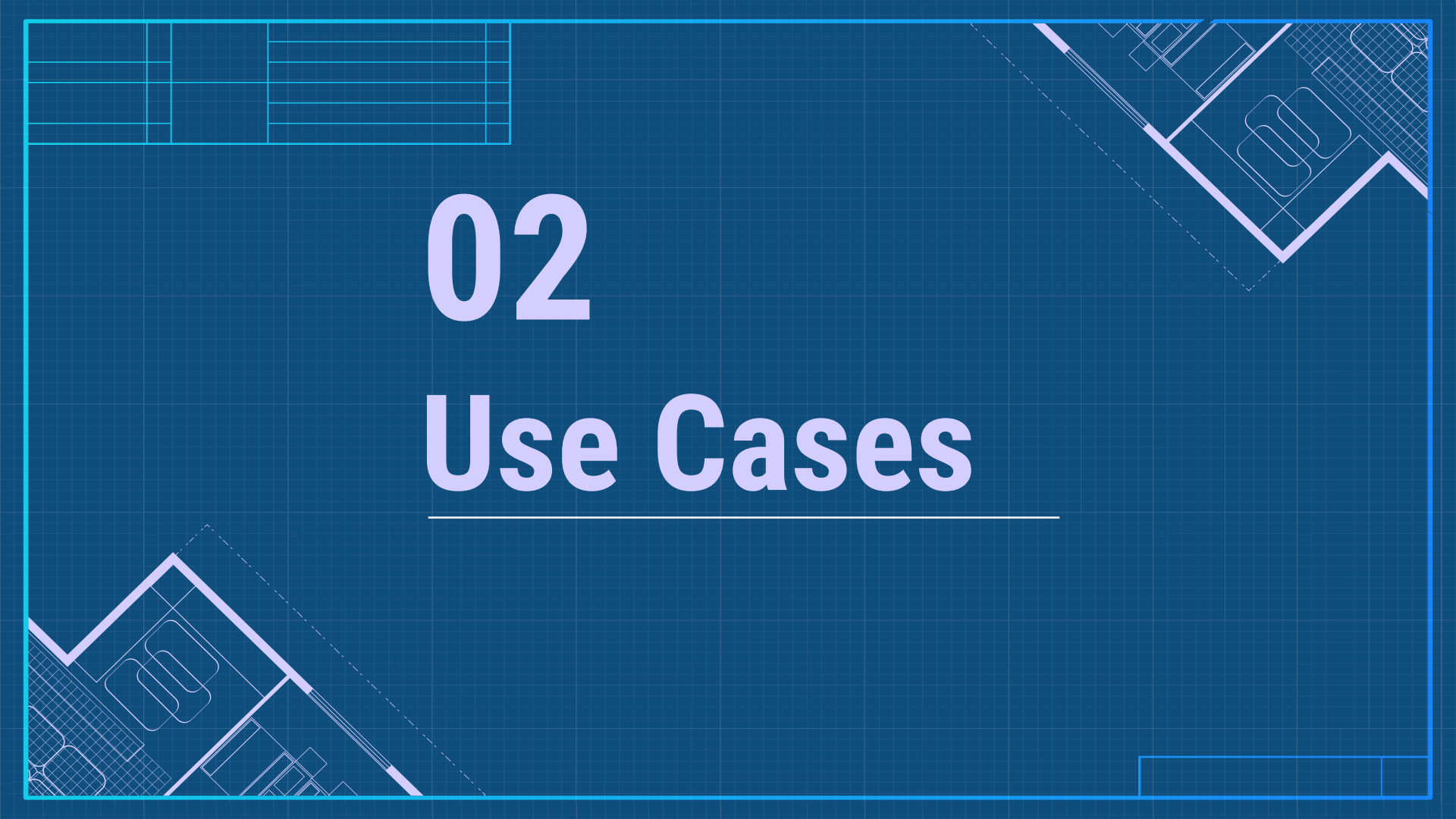
The Patient resource type provides similar information to what is provided in CCLF files 8 and 9. This is where you get your information about who your beneficiaries are, their demographic information, and updates to their patient identifiers.

The Coverage resource type provides information about beneficiaries' insurance coverage, including information about dual coverage.

For partially adjudicated claims two FHIR resources are available to REACH ACOs: Claim and ClaimResponse.

The Claim resource type provides information about professional and institutional claims providers submit for payment, including the services that beneficiaries receive.

The ClaimResponse resource type provides information about a claim's adjudication status and results process.

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02

Use Cases

BCDA

The BCDA (Beneficiary Claims Data API) provides more timely access to Medicare claims data, which is crucial for improving patient care and driving operational efficiencies. **The ROI for using BCDA** can manifest in:

- Reduced lag time: Access to near real-time data allows for more accurate decision-making and improved care coordination, reducing unnecessary admissions and interventions.
- Improved population health management: BCDA data supports timely identification of high-risk patients, allowing for more proactive interventions.
- Financial savings: More accurate and timely data helps with better financial forecasting, reducing costs associated with over-utilization, fraud, and waste.
- Patient-level alerts: Identifying high-risk patients in real-time for interventions like hospital admissions or emergency department usage.
- Timely claims data helps care coordinators track patient needs and care gaps more accurately.

BCDA does not replace but rather **supplements** CCLF (Claim and Claim Line Feed). While CCLF offers historical claims data, BCDA provides near real-time claims for more immediate decision-making. Using BCDA alongside CCLF helps ACOs strike a balance between having a comprehensive historical dataset and gaining access to more current claims data for **quicker interventions**.

```
> curl -d " " -X POST "%BCDA_API_URL%/auth/token" --user %BCDA_CLIENT_ID%:%BCDA_CLIENT_SECRET% -H "accept: application/json"
```

Improve Revenue Cycle Management

Improve revenue cycle management and value-based care performance projections with more timely access to CMS claims data. Compared to CCLF, which is updated monthly, BCDA is updated weekly.

As an example, organizations can leverage BCDA for improve timeliness and visibility into key cost and utilization metrics including PMPM, ED/1000 or Acute Admits/1000

Improved Medical Visit Visibility

Leverage BCDA to create a more robust picture of a patient's recent visit history which can help to reduce fragmented or duplicative patient care and further improve revenue cycle management. Examples include:

- Identification of new, recent diagnoses coded by a specialist
- Reducing duplication of services such as testing, labs, etc.,
- Identify when an annual wellness visit occurred but was not correctly billed for (also has revenue cycle implications)

Track DME Utilization

Organizations can leverage BCDA to track trends in DME utilization over time and improve patient identification and care coordination. For example, organizations can:

1. Analyze claims data to identify trends in DME utilization and patient outcomes
2. Identify patients who could benefit from DME but are not currently utilizing it
3. Enhance care coordination among providers by ensuring providers involved in patient's care are aware of potential DME benefits

Event Notification

Leverage BCDA partially adjudicated claims (REACH) to trigger provider and care team alerts/actions. For organizations using ADT data today, this would be similar. Examples of how this can be useful include:

- Development of dashboards and/or provider and care team alerts that identify recent discharges to improve timely follow-up post-discharge and reduce readmission likelihood.
- Development of dashboard and/or alerts to notify providers and care teams when a patient has visited the ED to trigger patient outreach about appropriate ED utilization or enrollment in Care Management/Care Coordination programs.

Reducing Low Value Care

Organizations can leverage BCDA to intervene and monitor on potentially low-value or unnecessary patient care. As an example, an affiliated specialist might order a carotid endarterectomy procedure for a patient who is not having neurologic symptoms which would not be the recommended course of action. In this example, organizations could use:

- BCDA partially adjudicated claims to trigger an alert for the primary care provider and improve real-time feedback for the specialist and follow-up care planning for the patient.
- BCDA partially and fully adjudicated claims could be used to create dashboards that track this type of care over time and develop initiatives to educate ordering providers

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03

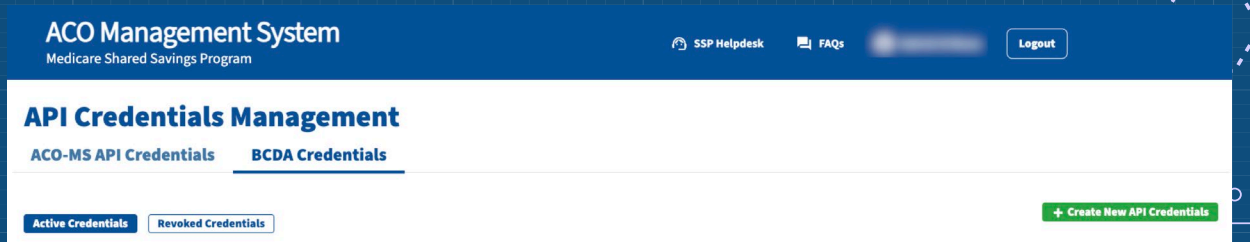
How To

Gabe Orthous

Getting Started

Integrating BCDA with existing systems requires substantial IT infrastructure and data management expertise. Compliance and security: Handling near real-time claims data necessitates strict compliance with HIPAA and other data privacy regulations.

- To use BCDA, ACOs need to:
 - Obtain BCDA credentials from the ACO Management System – AKA ACOMS (for Medicare Shared Savings Program ACOs) or the 4i portal (for REACH ACOs and Kidney Care models)
- Implement the API in their systems, following the FHIR bulk data export specification
- Use the API to authenticate, request data, check job status, and download the claims data



ACOMS – What's your Secret

Create New API Credentials

Enter the following information

1 ACO & Key Information

Enter an ACO and following information for generating the API Key.

*Select ACO:
Please Select

*Client Credentials Name:
ANY

*Client Name:
ANY

*IP Address:
EXTERNAL

Please enter valid ip address

(You may add up to eight unique IP addresses individually.
IP Address may take up to 60 minutes to White-list)

2 Resources

Select the scopes for the resources. The resources will get automatically selected for the selected scopes.

Select the following:

BCDA

BCDA - API



8 IP Addresses
(make sure they are
external Ips)

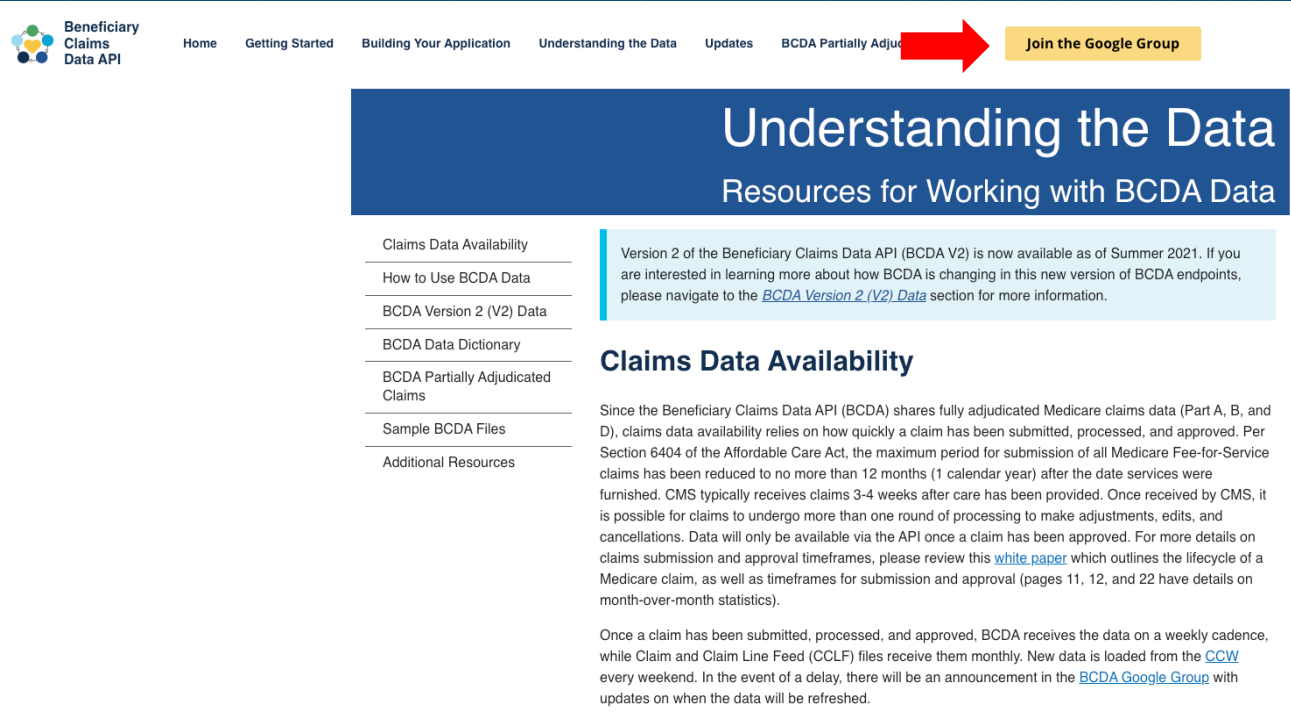
Other challenges to consider?

Data reconciliation: Because BCDA provides non-adjudicated claims, there may be a need for post-adjudication reconciliation, especially for financial reporting.

Resources

bcda.cms.gov

groups.google.com/g/bc-api



The screenshot shows the top navigation bar of the BCDA website. On the left is the logo for 'Beneficiary Claims Data API'. The navigation menu includes: Home, Getting Started, Building Your Application, Understanding the Data, Updates, and BCDA Partially Adjudicated. A red arrow points from the 'BCDA Partially Adjudicated' link to a yellow button labeled 'Join the Google Group'.

Understanding the Data

Resources for Working with BCDA Data

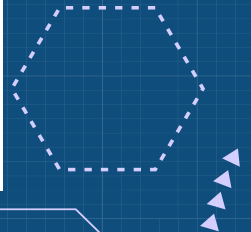
- Claims Data Availability
- How to Use BCDA Data
- BCDA Version 2 (V2) Data
- BCDA Data Dictionary
- BCDA Partially Adjudicated Claims
- Sample BCDA Files
- Additional Resources

Version 2 of the Beneficiary Claims Data API (BCDA V2) is now available as of Summer 2021. If you are interested in learning more about how BCDA is changing in this new version of BCDA endpoints, please navigate to the [BCDA Version 2 \(V2\) Data](#) section for more information.

Claims Data Availability

Since the Beneficiary Claims Data API (BCDA) shares fully adjudicated Medicare claims data (Part A, B, and D), claims data availability relies on how quickly a claim has been submitted, processed, and approved. Per Section 6404 of the Affordable Care Act, the maximum period for submission of all Medicare Fee-for-Service claims has been reduced to no more than 12 months (1 calendar year) after the date services were furnished. CMS typically receives claims 3-4 weeks after care has been provided. Once received by CMS, it is possible for claims to undergo more than one round of processing to make adjustments, edits, and cancellations. Data will only be available via the API once a claim has been approved. For more details on claims submission and approval timeframes, please review this [white paper](#) which outlines the lifecycle of a Medicare claim, as well as timeframes for submission and approval (pages 11, 12, and 22 have details on month-over-month statistics).

Once a claim has been submitted, processed, and approved, BCDA receives the data on a weekly cadence, while Claim and Claim Line Feed (CCLF) files receive them monthly. New data is loaded from the [CCW](#) every weekend. In the event of a delay, there will be an announcement in the [BCDA Google Group](#) with updates on when the data will be refreshed.



The background of the slide is a dark blue grid with white architectural floor plan lines. The lines represent walls, rooms, and corridors, with some areas shaded in a lighter blue. The grid is composed of small squares, and the floor plan lines are thicker and more prominent.

04

Considerations

Infrastructure

1

People

Resources & Capabilities: IT staff skilled in working with APIs to integrate BCDA into existing platforms, whether EHRs, data warehouses, or analytics platforms.

2

Process

Data Management & Governance: Secure, scalable storage and processing systems to handle incoming claims data efficiently.

3

Technology

Analytical tools: To process and generate actionable insights from the claims data in real-time.

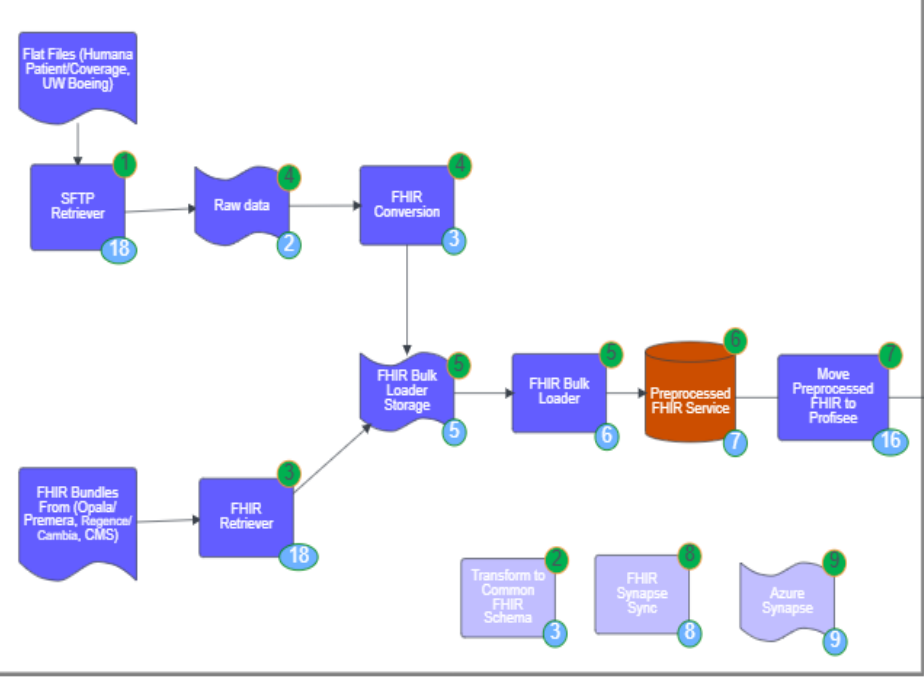
- Buy
- Build
- Rent

EHR integration: While not every organization incorporates BCDA into their EHR, those that do benefit from immediate, **actionable data embedded into the clinician workflow.**

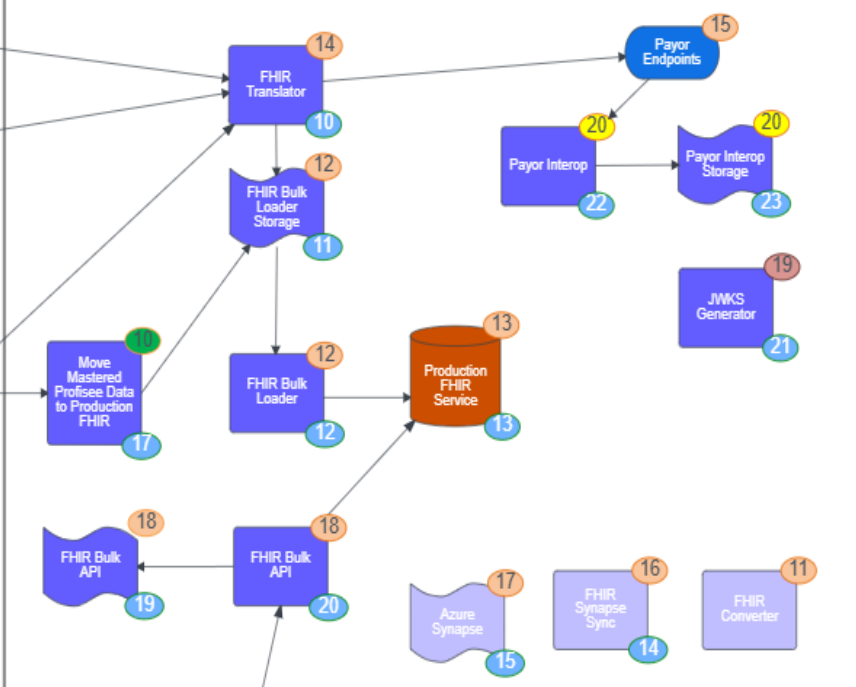
```
> curl -d " " -X POST "%BCDA_API_URL%/auth/token" --user  
%BCDA_CLIENT_ID%:%BCDA_CLIENT_SECRET% -H "accept: application/json"
```

Scaling Infrastructure 201

Preprocessing Environment



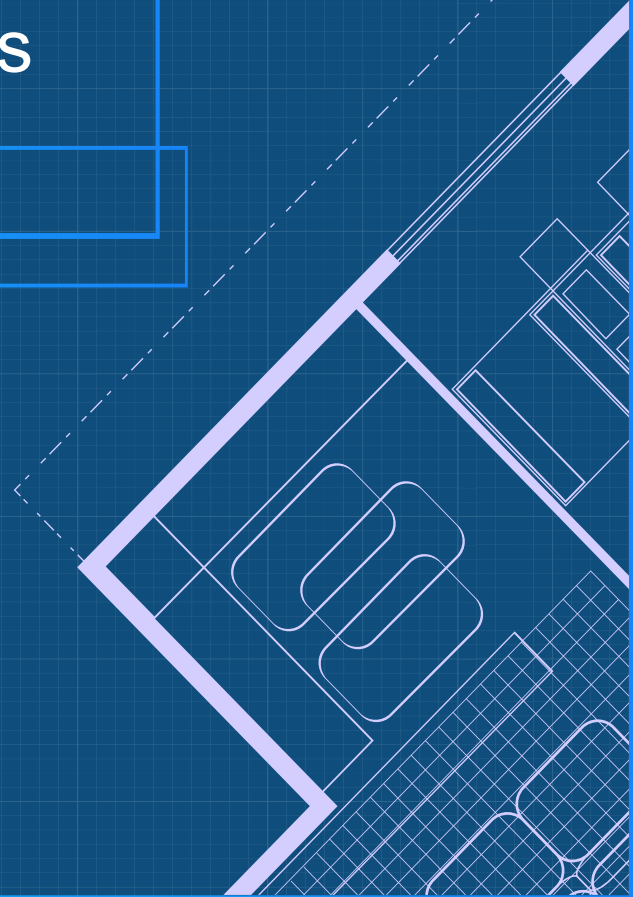
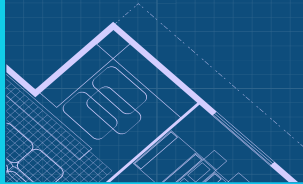
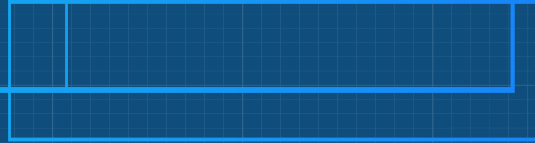
Post Processing / DEQM Environment



APIM



Scaling Standards Based APIs beyond BCDA



CMS Claims-Based FHIR APIs

BCDA is one of several CMS APIs that offer Medicare claims data sharing in FHIR format.

Check out these other CMS APIs for more information:



The Data at the Point of Care API enables healthcare providers with claims data to fill-in gaps in patient history at the point of care and deliver high quality care to Medicare beneficiaries.

DPC



The Blue Button 2.0 API enables beneficiaries to connect their Medicare claims data to the applications, services, and research programs they trust.

BB 2.0

The logo for the AB2D API consists of the letters "AB2D" in a bold, blue, sans-serif font. The number "2" is replaced by a blue heart shape.

The AB2D API provides stand-alone PDP sponsors with Medicare Parts A and B claims data for their active enrollees.

AB2D

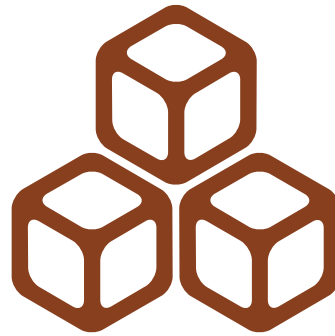
DA VINCI PROJECT: PROJECT CHALLENGE

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

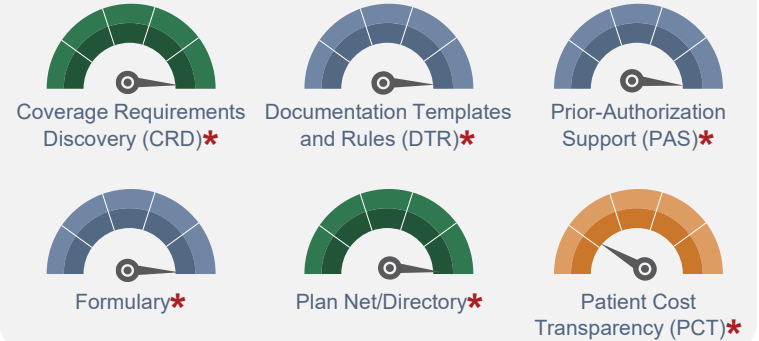
Use of FHIR[®], **implementation** guides and pilot projects

USE CASE & IG READINESS

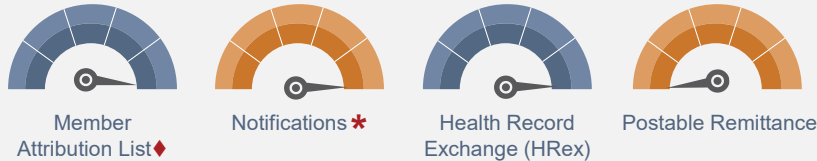
Clinical Data Exchange



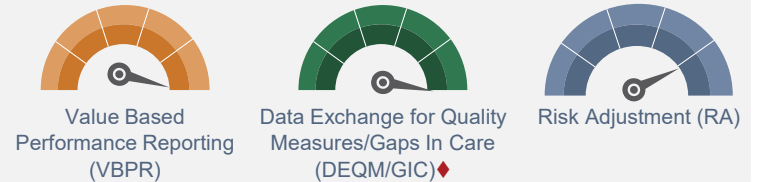
Coverage, Transparency & Burden Reduction



Foundational Assets

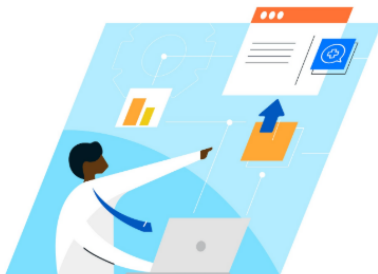


Quality & Risk



- * Referenced in or supports Federal Regulation
- ♦ Aligned with expected Federal Regulation
- + Guide Paused and Core Functionality moved to PDex
- 🕒 Dial denotes progress in current STU Phase

FHIR Technical Resources



Learn about FHIR

Resources about FHIR from CMS and our partners at HL7® and the Office of the National Coordinator for Health IT (ONC).

FHIR 101

- [General Introduction to FHIR](#)
- [FHIR Acronyms Explained](#)
- [FHIR 101 for the Policy Community](#)

<https://www.cms.gov/priorities/key-initiatives/burden-reduction/interoperability>

APPENDIX

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Overview of Expense Reports

- The EXPU provides an **aggregated** view of expenditures and utilization patterns for an ACO's assigned beneficiary population. Delivered as an Excel file (.xlsx).
- The BEUR complements the EXPU by offering beneficiary-level expenditure data. This detailed breakdown enables ACOs to analyze spending patterns for individual beneficiaries, supporting more targeted interventions and care management strategies. Delivered as a CSV file (.csv).
- Both EXPU and BEUR derive data from various claims, including hospital inpatient and outpatient, SNF, physician/supplier, home health, DME, and hospice. Additionally, they incorporate Non-Claims Based Payments (NCBPs), such as care management fees, for a comprehensive financial picture.
- Both reports provide ACOs with the essential tools to monitor and analyze healthcare expenditures at both aggregate and beneficiary levels.