

# Mapping Medicare Data into State APCDs

Challenges and Lessons Learned



# MEET OUR EXPERTS



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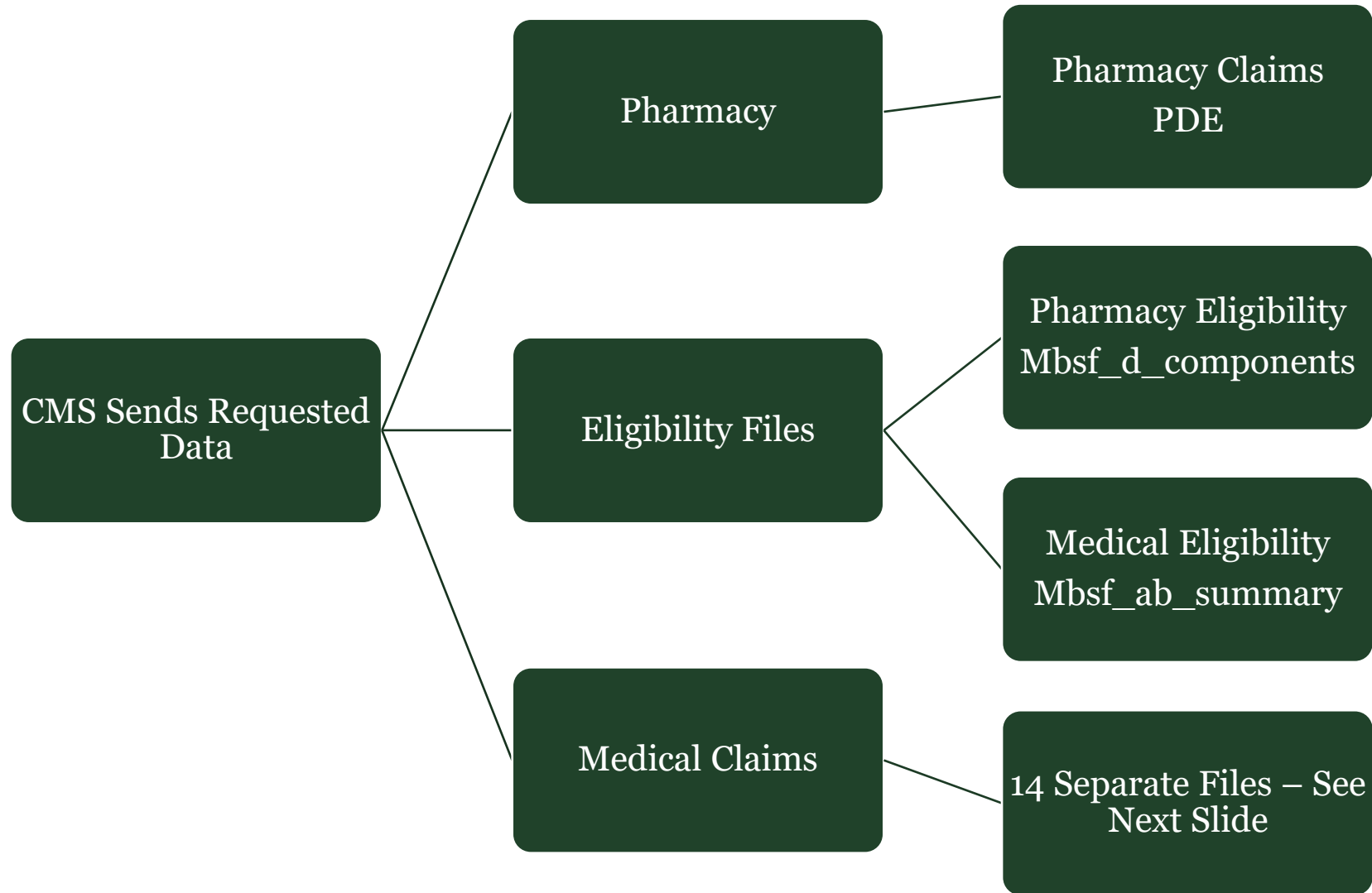
# BACKGROUND



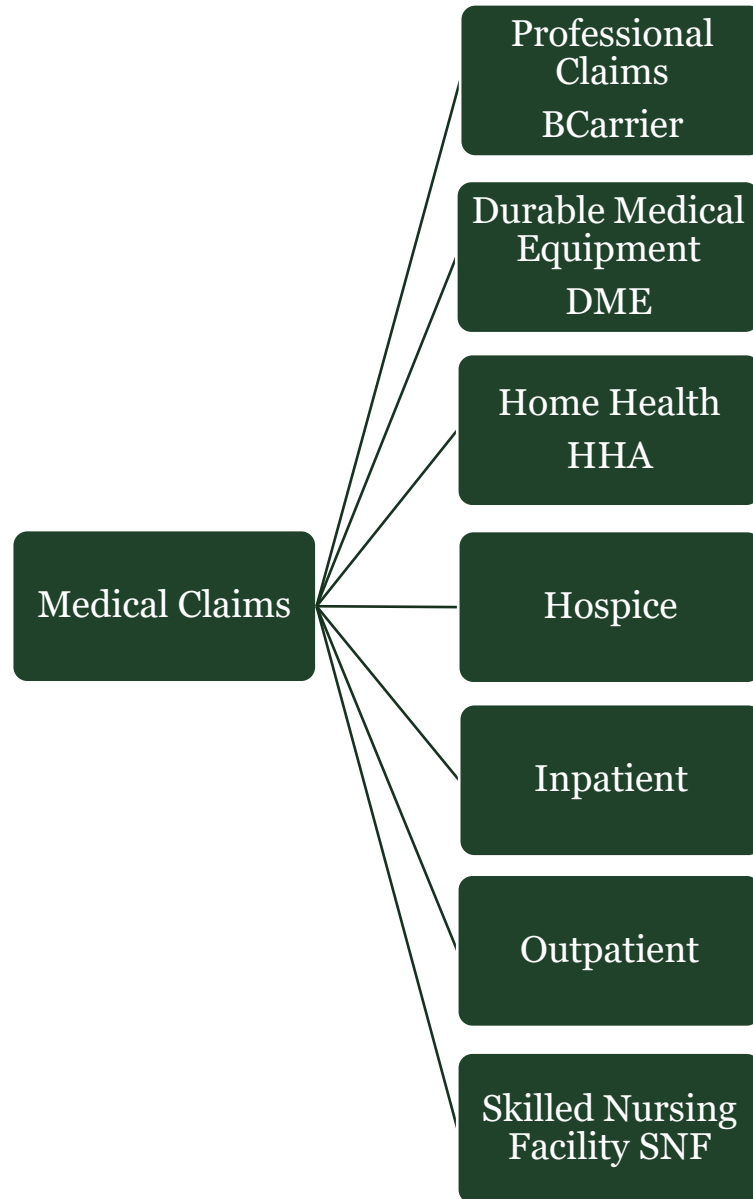
# CMS Medicare Data

- Over the past decade, the Centers for Medicare and Medicaid Services (CMS) approved the “liberation” of Medicare data and created a process for states to request and integrate Medicare data into their APCDs.
- Medicare does not submit claims data to any state, but states can apply to CMS for Medicare Original data and then the data can become part of a state’s APCD through the Qualified Entity Certification Program.
- Since 2012, 27 entities have been approved to receive Medicare data through this program, including a handful of entities representing state APCDs.
  - <https://www.qemedicaredata.org/>
  - [https://www.qemedicaredata.org/apex/Certified\\_QEs](https://www.qemedicaredata.org/apex/Certified_QEs)

# File Format as Received



# File Format as Received, Cont.



- Seventeen different files come in for medical claims from CMS
  - Each of the seven types of medical claims has a header level file and a claim line level file with potentially different fields in each file.
- The medical claims are the most challenging to use



# Challenges

- Minimal guidance from CMS on aligning data with existing claims data
- Shifting data file fields/formats from CMS and inclusion of new fields within the same data layout between releases
- Different Data Submission Guides or Intake File Layouts among different state APCDs
- Deciding between three approaches:
  1. **Standalone** – files used as received from CMS for analysis
  2. **Full Integration** – mapping directly to a state’s APCD DSG format only
  3. **Partial integration** – mapping to an analytic structure that includes both the state’s APCD format as well as additional Medicare specific fields

# Pros and Cons of Each Approach

Approach	Data Management		Data User	
	Pro	Con	Pro	Con
Standalone	<ul style="list-style-type: none"> <li>• Easiest to accomplish.</li> <li>• Involves no transformation of data after loaded and verified as complete.</li> </ul>	<ul style="list-style-type: none"> <li>• Not available for extract to external users.</li> </ul>	<ul style="list-style-type: none"> <li>• Full access to all fields even those that are not required to be submitted as part of the given state's APCD.</li> <li>• Full control over how CMS data are integrated with the larger APCD for each analysis.</li> </ul>	<ul style="list-style-type: none"> <li>• Complicated to use and access.</li> <li>• High level of expertise needed to understand all available fields.</li> <li>• Not quickly comparable to other APCD payers.</li> <li>• No unified approach to how CMS data are transformed for analysis.</li> </ul>



# Pros and Cons of Each Approach

Approach	Data Management		Data User	
	Pro	Con	Pro	Con
Full Integration to APCD Submission Format	<ul style="list-style-type: none"> <li>• Allows for easy extract of the data to external data users.</li> <li>• Format of the data already decided by the state.</li> </ul>	<ul style="list-style-type: none"> <li>• Requires transformation of data to line level format.</li> <li>• Regular updates needed in code for new CMS format and naming conventions.</li> <li>• Field may not have an equivalent in the data submission format.</li> </ul>	<ul style="list-style-type: none"> <li>• Easy to compare CMS data with other APCD payers' data.</li> <li>• Requires moderate expertise in the difference between CMS submissions and private payer/third party administrator submissions of Medicare Claims covered in the CMS data.</li> </ul>	<ul style="list-style-type: none"> <li>• APCD submission fields may not have an equivalent in the CMS data.</li> <li>• Loss of individual analyst control over how data are transformed for analysis.</li> </ul>

# Pros and Cons of Each Approach

Approach	Data Management		Data User	
	Pro	Con	Pro	Con
Partial Integration	<ul style="list-style-type: none"> <li>• Allows for easy extract of the data to external data users.</li> <li>• Fields in the CMS data that don't have an equivalent can be integrated into the data warehouse. For example, payment fields only available at the CMS medical claims header level can have an equivalent field in the analytic structure.</li> </ul>	<ul style="list-style-type: none"> <li>• Requires the highest level of effort and quality control.</li> <li>• Specialty logic beyond what exists for the private payer submitted data is required.</li> <li>• Additional data structures are required.</li> </ul>	<ul style="list-style-type: none"> <li>• Additional fields can be added that are important to data users.</li> <li>• Medicare specific data are more readily available for analysis and less data transformation is required.</li> <li>• Nuances specific to the Medicare Data can be integrated into a state's APCD making for more completed analysis especially for those who are dual eligible.</li> <li>• Moderate to high level of expertise required to use additional fields.</li> </ul>	<ul style="list-style-type: none"> <li>• Data for CMS are transformed differently than other APCD data (especially between the claim line and header level).</li> <li>• Some of the additional fields may not have equivalents in the broader APCD.</li> </ul>

# SOLUTION – CASE STUDY



# Eligibility Standalone – As Submitted

- The CMS Medical Eligibility file (Mbsf\_ab\_summary) has information specific to the administration of Medicare Original and Medicare Advantage Plans.
- Knowing which individuals in the APCD have different types of Medicare coverage can help inform important analysis
- Below are two keys fields that are available in the raw CMS data.

Buy In Indicator has the following values:

Code	Code value
0	Not entitled
1	Part A only
2	Part B only
3	Part A and Part B
A	Part A state buy-in
B	Part B state buy-in
C	Part A and Part B state buy-in

Reference: <https://www.resdac.org/cms-data/variables/medicare-entitlementbuy-indicator>

HMO Indicator has the following values:

Code	Code value
0	Not a member of HMO
1	Non lock-in, CMS to process provider claims
2	Non-lock-in, group health organization (GHO; MA plan) to process in plan Part A and in area Part B claims
4	Fee-for-service participant in case or disease management demonstration project
A	Lock-in, CMS to process provider claims
B	Lock-in, GHO to process in plan Part A and in area Part B claims
C	Lock-in, GHO to process all provider claims

Reference: <https://www.resdac.org/cms-data/variables/hmo-indicator>

# Eligibility Full Integration – APCD Submission Format

- Requirements to transform the eligibility data from CMS to one row per member per month in the standard data submission format
- Led to a loss of information from original fields but made records easily comparable across different payers

## CMS fields (Buy In and HMO Indicators)

### Intermediary Calculation (Not Visible)

1. The Med\_Elig flag is set as follows (1 – FFS Medicare, 0 – MA Medicare, -99 – No medical coverage):
2. If the BUY IN indicator is not 0 and the HMO Indicator is 0 or 4 or “, then it is set to 1
3. If HMO Indicator is ‘1’, ‘2’, ‘A’, ‘B’ or ‘C’ then it is set to 0
4. If the BUY IN indicator or HMO Indicator is NULL (meaning there was no MBSF\_AB\_SUMMARY Record, but there was a Part D record) then the flag is -99
5. Otherwise it will be set to -99.

### To create the Insurance Product Type code in the Data Submission Guide Format:

1. When Med\_Elig = 1 and Buy In is 1, 3, A, or C then ‘MA’ (Prioritize MA over MB)
2. When Med\_Elig = 1 and Buy In is 2 or B then ‘MB’
3. When Med\_Elig = 0 then ‘16’
4. When Med\_Elig is NULL and Rx\_Elig = 1 then ‘MD’
5. When Med\_Elig is NULL and RX\_Elig <> 1 then NULL

# Eligibility Partial Integration – Additional Analytic Structures

- Adding an additional field to the analytic views to indicate Medicare Part B coverage since this was lost in the coding to the Insurance Product Type Field.
- Can be accessed through the analytic view for each member eligibility record
- Helps maintain richness of CMS data without requiring detailed knowledge of the CMS submitted data

**To create the Medicare Part B Indicator:**

1. When Med\_Elig = 1 and Buy In is 2, 3, B or C then '1'
2. Else '0'

# Hybrid Approach

**Base Tables** –  
Contain all data as  
received from CMS  
(Standalone)

**Valid Views** – all  
data in standard  
submission format  
(Full Integration)

**Analytic Views** –  
data in views provide  
additional access to  
CMS Medicare  
specific fields  
(Partial Integration)



# Best Practices

1

Clear documentation showing how each file type is mapped directly to corresponding APCD submission fields.

2

Regular updates scheduled to ensure all relevant fields are added from CMS data and to monitor changes to CMS format.

3

Expertise among data users about differences between CMS data and those data coming from private insurance payer and third-party administrators.

4

State APCD partner on how to map CMS data to the Common Data Layout.

Thank You.

