Part D Event Derived Variables

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Overview of Derived Variables

- Why created?
- Who creates?
- Which variables are derived and how?
Frequently Repeated Acronyms

- CCW – Chronic Condition Warehouse
- PDE – Prescription Drug Event
- HPMS - Health Plan Management System
- TrOOP – True Out of Pocket Spending
- ICL – Initial Coverage Limit
- OOPT – Out-of-Pocket Threshold
Why are Derived Variables Needed?

- Due to Part D Federal Regulation, CMS is taking additional steps to safeguard beneficiary, pharmacy, and prescriber privacy and plans’ commercially sensitive data.

- External researchers are not able to link PDE data to other files such as the Prescription Drug Plan Formulary, Pharmacy Network, and Pricing Information.
How Protecting Sensitive Data?

- CMS will link PDE data to other databases to minimize the need to send identifiers for data linkage purposes. CMS will not release unencrypted beneficiary, plan, prescriber, or pharmacy identifiers.

- Event cost data elements (ingredient cost, dispensing fee, and sales tax) will be aggregated. Beginning in 2010, vaccine administration fee is included.
CCW Part D Event Derived Variables

- Buccaneer creates the CCW PDE Derived Variables to include in the PDE data.
- Gross Drug Cost
- Benefit Phase
- Prior Authorization Indicator
- Tier ID
- Quantity Limit Indicator
- Maximum Step Number
CCW Part D Event Derived Variables

Location of variables

  - All derived variables
- Part D Event File 2010
  - Gross Drug Cost
  - Benefit Phase
- Formulary File 2010 onward
  - Prior Authorization Indicator
  - Tier ID
  - Quantity Limit Indicator
  - Maximum Step Number
Medicare Part D Standard Benefit, 2010

**Total Drug Spending at ICL**
- $2,830

**Total Drug Spending at deductible limit**
- $310

- **TrOOP Spending**
  - $4,550
  - $940
  - $310
  - $0

- **Total drug spending at OOP threshold**
  - $6,440

- **Coverage Gap ($3,610)**
  - Enrollee Pays 100%

- **Catastrophic**
  - Medicare Pays 80%
  - Plan Pays 15%

- **Deductible ($310)**
  - Enrollee Pays 100%

- **Plan Pays 75%**

- **Enrollee Pays 25%**
CCW PDE Derived Variables

Benefit Phase

Data sources

- Part D Enrollment Data - the plan beneficiary selected
- CCW extract of plan information from CMS Health Plan Management System (HPMS)
  - The type of organization (variables include plan type, org type, demo type)
  - The particular benefit structure for each plan (e.g., defined standard benefit; variables include amounts for deductible, ICL (Initial Coverage Limit) and OOPT (Out Of Pocket Threshold))

- PDE data
  - The benefit phase determination for every Part D event is made by accumulating all of the PDE costs for the beneficiary
CCW PDE Derived Variables

Benefit Phase

Overview of Methodology

For each beneficiary with covered Part D events:

1. Prescription drug events are sorted in service date order;

2. Gross drug costs and true out-of-pocket costs (TrOOP) are accumulated;

3. For each covered Part D event, the accumulated gross drug costs are compared to the deductible, ICL and TrOOP costs; and these are compared to OOPT and assigned a benefit phase value.
## CCW PDE Derived Variables

### Benefit Phase

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>blank</td>
<td>Event is for a non-covered drug as indicated by the Drug Coverage Status Code</td>
</tr>
<tr>
<td>XX</td>
<td>Contract and Plan ID on the PDE does not link to the Plan Characteristics File</td>
</tr>
<tr>
<td>NA</td>
<td>The plan on the event does not report benefit information.</td>
</tr>
<tr>
<td>DD</td>
<td>Deductible phase</td>
</tr>
<tr>
<td>DP</td>
<td>Straddle claim between the Deductible and Pre-ICL phases</td>
</tr>
<tr>
<td>DI</td>
<td>Straddle claim between the Deductible and ICL (Gap) phases</td>
</tr>
<tr>
<td>DC</td>
<td>Straddle claim between the Deductible and Catastrophic phases</td>
</tr>
<tr>
<td>PP</td>
<td>Pre-ICL phase</td>
</tr>
<tr>
<td>PI</td>
<td>Straddle claim between the Pre-ICL and ICL phases</td>
</tr>
<tr>
<td>PC</td>
<td>Straddle claim between the Pre-ICL and Catastrophic phases</td>
</tr>
<tr>
<td>II</td>
<td>ICL (coverage gap or “donut hole”) phase</td>
</tr>
<tr>
<td>IC</td>
<td>Straddle claim between the ICL and Catastrophic phases</td>
</tr>
<tr>
<td>CC</td>
<td>Catastrophic phase</td>
</tr>
</tbody>
</table>
CCW PDE Benefit Phase

- Gap
- Catastrophic

Year: 2008, 2009, 2010
CCW PDE Derived Variables

- Describing experience with benefit structure
  - Considerations:
    » Some beneficiaries do not use any PDEs
    » Some do not have plans that submit benefit structure information
    » Not all plans offer the standard benefit
    » Benefit Phase will be blank for those events with Drug Coverage Status of “E” or “O” (enhanced or over-the-counter)
PDE Variables of Medication Utilization Management
Utilization Management Variables

- Indicate whether the product is subject to utilization management tools
- Derived from the formulary file
Utilization Management Variables

- Quantity limit: plans limit the numbers (or amounts) of a drug in a given time period
- Prior authorization: preapproval is required before coverage
- Step therapy (maximum step number): specified drugs should be tried before moving to other drugs
Utilization Management Variables

- Product-specific information within a plan
- PDE variables can be used to examine whether the level of utilization of a specific medication is influenced by the application of management tools
Utilization Management Variables

- Prior Authorization Indicator
- Tier ID
- Quantity Limit Indicator
- Maximum Step Number

Data Sources
- CMS Health Plan Management System (HPMS)
- PDE Plan Contract and Benefit Package
- Plan Formulary
- Uses end-of-year snapshot
CCW PDE Derived Variables

- CCW is not able to match all event records to either a formulary or a plan benefit record.
- For these cases, the following derived variables will be found with values of NA or XX.
  - NA = NDC does not link to formulary
  - XX = Unable to link to plan
- About 4% of records fall into the NA or XX categories.
CCW PDE Derived Variables

Prior Authorization Indicator Values

- **1** = The drug is subject to prior authorization
- **0** = Either a) the drug is not subject to prior authorization or b) the plan is not required to submit a formulary so there are no restrictions on the drug
- About **1.25%** of PDE records are identified as needing prior authorization
CCW PDE Derived Variables

Tier ID Values

- 1-max = The tier on the plan's formulary associated with the drug on the PDE or if the plan is not required to submit a formulary then TIER_ID is assigned a value of '1'
CCW PDE Derived Variables

Tier ID Values

- 01  66.19%
- 02  24.08%
- 03  05.27%
- 04  00.35%
- 05  00.10%
- 06  00.01%
CCW PDE Derived Variables

Quantity Limit Indicator Values

- **1 = The drug has quantity limits**
- **0 = Either a) the drug does not have quantity limits or b) the plan is not required to submit a formulary so there are no restrictions on the drug**
- Approximately 25% of records indicated the event had quantity limits
CCW PDE Derived Variables

Maximum Step Number Values

- **Blank** = Either a) the drug is not part of a Step Therapy Group or b) the drug is on Step 1 of a Step Therapy Group (i.e., not restricted) or c) the plan on the PDE is not required to submit a formulary, so there are no restrictions on the drug

- **2-max** = The maximum step on the plan's formulary associated with the drug on the PDE

  - Blank ~94%
  - 02 ~2%
Resources

- CMS Guide to Requests for Medicare Part D Prescription Drug Event (PDE) Data
  - https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCoverage/PrescriptionDrugCovGenIn/Downloads/GuidePartDv3-3-17-09-2.pdf
- CCW Part D Data User Guide