Ensure Claims and Provider Data Quality for Analytics
Agenda

- Applying the Scientific Method to Data Quality

- A Five Step Approach to Testing Data Quality
  - Structural & Layout Compliance
  - Key Field Completeness and Uniqueness
  - Code and Value Validity
  - Data Reasonableness and Appropriateness
  - Referential Integrity
The Scientific Method can be applied to a data quality assurance process.

The process should be:
- Thorough
- Repeatable
- Timely
- Intuitive
- Responsive (feedback loop)

Applying the Scientific Method to Data Quality Analysis
Data Quality Assurance (QA)

1. Structural & Layout Compliance
2. Key field Completeness & Uniqueness
3. Code & Value Validity Standard and Required Maps Crosswalks
4. Data Reasonableness & Appropriateness
5. Referential Integrity Between related fields across files

- A 5-Step approach ensures detection of data errors, absence, abnormalities and inconsistencies.
- Key ratios and distributions based on industry standards and experience
- Trend analysis from cycle to cycle
Data Quality Assurance Tools and Techniques

Select the right mix of data tools for efficient processing, analysis and communication

- Data Analysis: SAS, Python, SQL …
- Statistical packages: SAS, R, SPSS …
- Data Visualization: Tableau, Domo, Power BI …
Key Field Completeness And Uniqueness

Select key fields to measure completeness and consistency

Drill down to second level attributes to identify outliers and investigate unexpected volume shifts
Check data elements and values against industry standard references.

This will also require payer-specific references for state-specific and MCO-specific values.
Data Reasonability and Appropriateness

Control Total Run Chart:
- # of Claims

Run Chart:
- % Difference in average cost per claim

Run Chart:
- % Difference in total cost per claim
Referential Integrity Between Datasets, Tables and Fields

Test the integrity between multiple data sets.
(e.g. Provider/Member/Claims)
Q&A

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