

Data Quality: ADIT™

WHY

use ADIT?

Data quality is critical to the utility of any data set but requires an extensive and detailed set of analyses. To improve the efficiency of this process, JEN developed its Automated Data Integration Tool known as ADIT™. ADIT automates many of the routine functions of data extract, load and transformation, and provides a series of quality reports that enable the data quality specialist to quickly identify data anomalies and other unexpected patterns of service utilization, enrollment or disenrollment.

WHAT

is ADIT?

ADIT is a data transformation and profiling tool that runs on multiple servers with the capability of interfacing with a variety of programs such as SAS and Java.

FUNCTIONS

of ADIT:

- Imports files in a wide variety of formats, including variable length
- Schedules jobs for automated processing
- Facilitates data viewing
- Creates and stores Input-Output data dictionaries
- Standardizes fields based on pre-existing library established for Medicaid and Medicare or any other user specifications
- Conducts extensive quality checks to assure data completeness and continuity
- Implements field transformations based on the validation and transformation rules established
- Self documents all activities so there is a clear audit trail of activities completed and results

DELIVERABLES

with purchase of ADIT

- ADIT system with perpetual license for use
- Embedded SAS code designed to perform quality checks
- Profiling steps configured for the customer's needs
- Medicaid and Medicare job templates which can be used immediately or saved for future use when these data are available.
- ADIT upgrades and bug fixes if maintenance option is also purchased

Quality checks conducted on databases that use ADIT

Data quality is typically a function of the specific data source and can vary over time within a data source. Therefore, for all data imported by JEN, ADIT performs checks on each payer/carrier, for each year. Additional monthly detail is analyzed for the data completeness/continuity checks.

The quality checks are designed to provide a complete arc of data testing, offering the maximum amount of information on the usability of the data for research purposes in the context of detailed information on the underlying data.

Applying a testing regime which includes a full narrative arc allows ADIT to answer the question of how the data performs in a real world application with enough underlying detail to understand anomalous results. The following checks are performed in a standard ADIT installation:

1. field level reviews

- a. numeric fields are subject to univariate analysis
- b. alphanumeric fields are subject to value missing/validity checks
- c. alphanumeric fields are profiled by number of unique values and top-50 in frequency values

2. record level checks for completeness/continuity

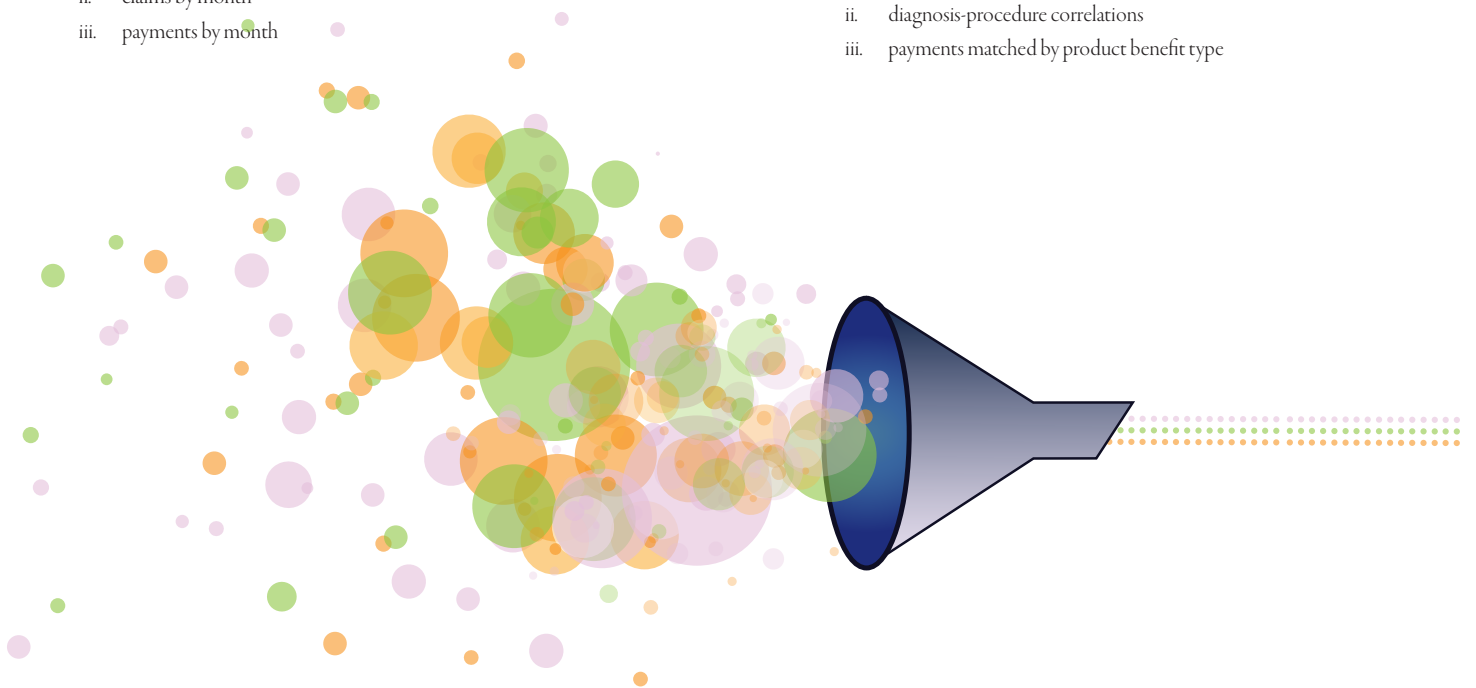
- a. Records are profiled by date of service and date of payment to check for continuity and reasonableness
 - i. users by month
 - ii. claims by month
 - iii. payments by month

3. file level checks

- a. analysis of record duplications and adjudication
- b. claim and eligibility integration
- c. claim and provider integration

4. data source level checks

- a. data integrated across eligibility, claims and product by person id
- b. data integrated across eligibility, claims and product by provider id
- c. benchmark testing using
 - i. diagnosis-ndc correlations
 - ii. diagnosis-procedure correlations
 - iii. payments matched by product benefit type



Data informing policy since 1985