# **Data Quality Assessment Report**

Dataset: fact\_txn

Generated: 2025-10-17 09:46:33

#### **Executive Summary**

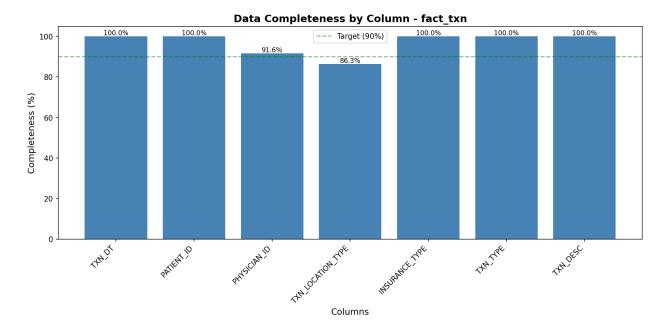
| Metric                | Value         |
|-----------------------|---------------|
| Overall Quality Score | 98.7%         |
| Quality Grade         | A (Excellent) |
| Total Records         | 115,274       |
| Total Columns         | 7             |
| Completeness Score    | 96.84%        |
| Consistency Score     | 99.87%        |
| Validity Score        | 100%          |

#### **Data Quality Visualization**



# 1. Data Completeness Analysis

| Column            | <b>Total Records</b> | Non-Null | Null Count | Null % | Completeness |
|-------------------|----------------------|----------|------------|--------|--------------|
| TXN_DT            | 115,274              | 115,274  | 0          | 0.0%   | 100.0%       |
| PATIENT_ID        | 115,274              | 115,274  | 0          | 0.0%   | 100.0%       |
| PHYSICIAN_ID      | 115,274              | 105,555  | 9,719      | 8.43%  | 91.57%       |
| TXN_LOCATION_TYPE | 115,274              | 99,479   | 15,795     | 13.7%  | 86.3%        |
| INSURANCE_TYPE    | 115,274              | 115,274  | 0          | 0.0%   | 100.0%       |
| TXN_TYPE          | 115,274              | 115,274  | 0          | 0.0%   | 100.0%       |
| TXN_DESC          | 115,274              | 115,274  | 0          | 0.0%   | 100.0%       |



### 2. Data Consistency Analysis

**Duplicate Records: 152 (0.13%)** 

#### **Format Issues Detected:**

| Column   | Issue      | Affected Rows |
|----------|------------|---------------|
| TXN_DESC | Mixed case | 115274        |

#### 3. Data Validity Analysis

| Column            | Data Type | Unique Values | Unique % |
|-------------------|-----------|---------------|----------|
| TXN_DT            | object    | 2,030         | 1.76%    |
| PATIENT_ID        | int64     | 4,020         | 3.49%    |
| PHYSICIAN_ID      | float64   | 25,343        | 21.99%   |
| TXN_LOCATION_TYPE | object    | 48            | 0.04%    |
| INSURANCE_TYPE    | object    | 5             | 0.0%     |
| TXN_TYPE          | object    | 4             | 0.0%     |
| TXN_DESC          | object    | 53            | 0.05%    |

# **Statistical Summary for Numeric Columns**

| Column       | Min | Max     | Mean     | Median  | Std Dev | Outliers |
|--------------|-----|---------|----------|---------|---------|----------|
| PATIENT_ID   | 1   | 4020    | 2396.16  | 2501.0  | 1054.0  | 0 (0.0%) |
| PHYSICIAN_ID | 1.0 | 25343.0 | 14116.74 | 14998.0 | 7265.22 | 0 (0.0%) |

### **5. Data Timeliness Analysis**

| Column | Earliest Date       | Latest Date         | Date Range (Days) |
|--------|---------------------|---------------------|-------------------|
| TXN_DT | 2016-12-31 00:00:00 | 2022-07-22 00:00:00 | 2,029             |