



Technical Documentation for Insurance Claims Dashboard

This documentation provides a thorough understanding of the data models and the technical aspects of the Insurance Claims Dashboard, ensuring users and developers can effectively utilize and maintain the dashboard.

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1. Introduction

The Insurance Claims Dashboard is designed to provide insights into the claims process of Health Services. It includes key metrics such as approval and denial rates, total claims, and financial data on claimed and paid amounts. This documentation covers the technical aspects of the data models and the Power BI dashboard, ensuring a comprehensive understanding of the components and their functions.

2. Data Sources

- **Claims Data:** The primary data source is a database containing detailed records of insurance claims.
- **Payer Information:** Data on various payers, including approval and denial rates.
- **Financial Data:** Details on claimed and paid amounts for each claim.

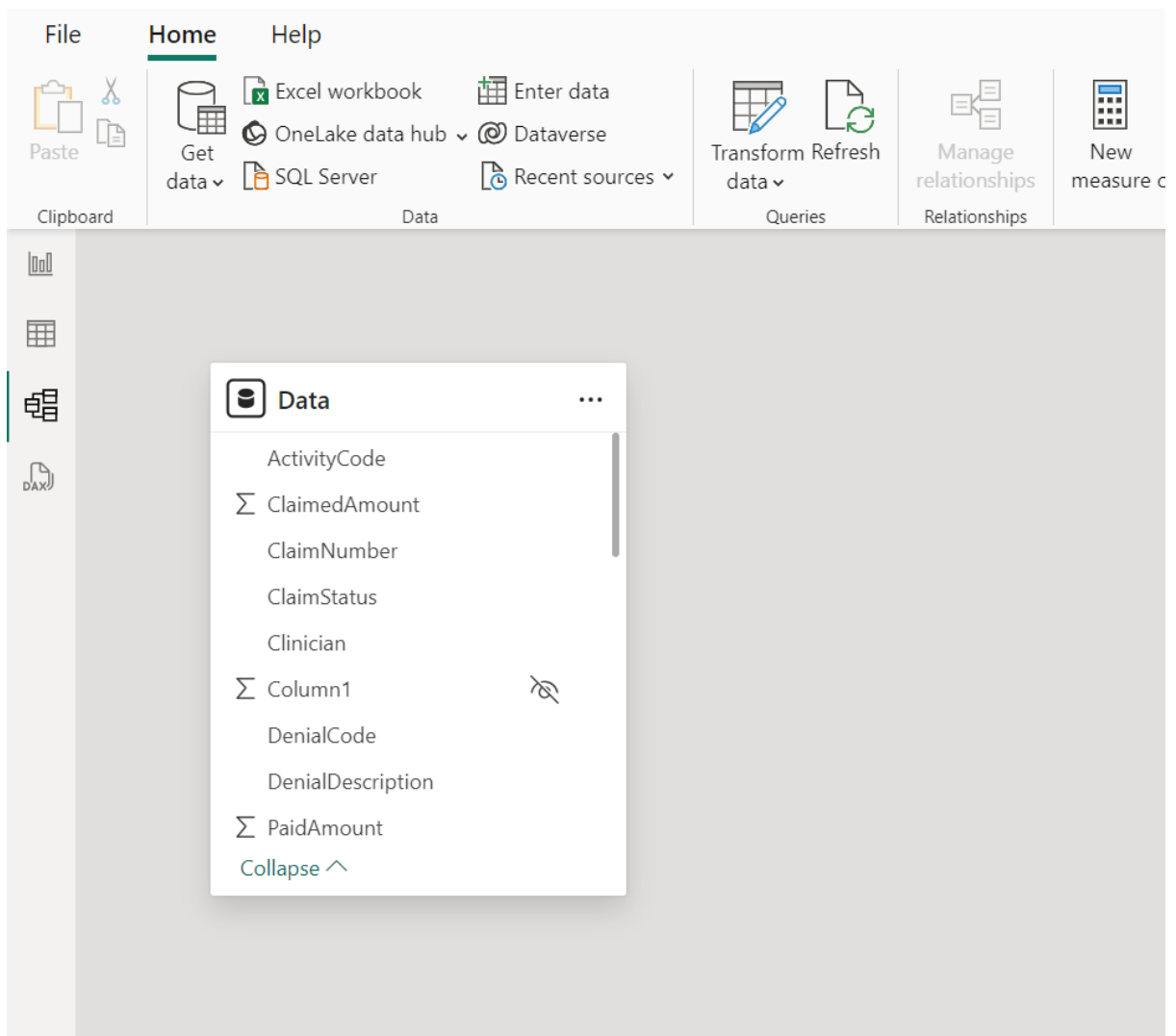
3. Data Model

3.1 Data Tables

- **Claims:**
 - **Columns:** ClaimID, ClaimAmount, PaidAmount, ClaimStatus, PayerID, SubmissionDate, ApprovalDate, DenialDate
 - **Description:** Contains information on each claim, including financial amounts and status.
- **Payers:**
 - **Columns:** PayerID, PayerName, ApprovalRate, DenialRate
 - **Description:** Details of each payer, including performance metrics.
- **Financials:**
 - **Columns:** ClaimID, ClaimedAmount, PaidAmount
 - **Description:** Financial data related to the claims.

3.2 Relationships

- **Claims to Payers:** Many-to-One relationship on PayerID.
- **Claims to Financials:** One-to-One relationship on ClaimID.



4. Measures and Calculations

4.1 Key Performance Indicators (KPIs)

- **Approval Rate:**

Structure	Formatting	Properties	Calculations
<input checked="" type="checkbox"/>			1 Approval % = <code>DIVIDE(COUNTROWS(FILTER(Data,Data[ClaimStatus] = "Approved")),COUNTROWS(Data))</code>

- **Denial Rate:**

Structure	Formatting	Properties	Calculations
<input checked="" type="checkbox"/>			1 Denial % = <code>DIVIDE(COUNTROWS(FILTER(Data,Data[ClaimStatus] = "Denied")),COUNTROWS(Data))</code>

- **Total Claims Submitted:**

Structure	Formatting	Properties	Calculations
<input checked="" type="checkbox"/>			1 Total Claims Submitted = <code>COUNT(Data[ClaimNumber])</code>

- **Total Approved Claims:**

Structure	Formatting	Properties	Calculations
<input checked="" type="checkbox"/>			1 Total Approved Claims = <code>COUNTROWS(FILTER(Data, Data[ClaimStatus] = "Approved"))</code>

- **Total Denied Claims:**

Structure	Formatting	Properties	Calculations
<input checked="" type="checkbox"/>			1 Total Denied Claims = <code>COUNTROWS(FILTER(Data, Data[ClaimStatus] = "Denied"))</code>

5. Dashboard Visuals

5.1 Overview

- **KPI Tiles:** Approval Rate, Denial Rate, Total Claims Submitted, Total Approved Claims, Total Denied Claims.
- **Pie Chart:** Total Claimed vs Total Paid Amounts.
- **Bar Charts:** Approval Percentage by Payer, Number of Claims per Payer, Approved Claims by Payer, Denied Claims by Payer.

5.2 Detailed Descriptions

- **KPI Tiles:** Display key metrics at a glance for quick insight into the performance of the claims process.
- **Pie Chart:** Visual representation of the proportion between claimed and paid amounts.
- **Approval Percentage by Payer:** Bar chart showing the approval rates for each payer.
- **Number of Claims per Payer:** Bar chart illustrating the volume of claims submitted by each payer.
- **Approved Claims by Payer:** Bar chart depicting the number of claims approved by each payer.
- **Denied Claims by Payer:** Bar chart indicating the number of claims denied by each payer.

6. User Interaction and Filtering

- **Dropdown Filters:** Allow users to filter data by Payer, Clinician, and Denial Code.
- **Clickable Elements:** Some visuals offer drill-through capabilities to view more detailed data.

7. Security and Access Control

- **Row-Level Security (RLS):** Implemented to ensure that users can only see data relevant to their roles and permissions.
- **Access Control:** Managed through Power BI service, ensuring only authorized personnel can access and modify the dashboard.

8. Maintenance and Updates

- **Data Refresh:** Scheduled data refreshes to ensure the dashboard reflects the most current information.
- **Version Control:** Maintain versions of the dashboard for tracking changes and updates.
- **Error Handling:** Regular checks and monitoring to handle data discrepancies and ensure accuracy.