Drug Distribution and Market Trend Report

Submitted To: Sir Tayyub Shaheen

Submitted By: Rabia Nasir

Date of Submission: 01-07-2024

Objectives:

- To analyze the data related to drug sales and usage to derive actionable insights.

- This report provides a comprehensive analysis of drug distribution and market trends.

- It offers valuable insights into the pharmaceutical industry, utilizing data visualization tools to highlight key trends and patterns.

- Identify key trends and patterns in drug sales.

- Understand the impact of various factors on drug usage.

- Provide recommendations based on the findings

Data Overview:

Data Source:

- Database : Drugs
- Surveys : Patient usage survey
- Public Health Records in CSV files

Data Variables:

- Drug Name: The name of the drug.
- Sales Volume: The quantity of drugs sold.
- Usage Frequency: How often the drug is used by patients.
- Demographics: Age, gender, and location of users

Data Preparation:

Cleaning	Transformation	Visualization

➧ **Cleaning**: Removed duplicate records and handled missing values by using median imputation.

➧ **Transformations**: Aggregated sales data monthly and normalized usage frequency.

➧ **Tools Used**: Power BI for data visualization and analysis.

Key Metrics and KPIs:

- **Metric 1**: Total Sales Volume - Total number of units sold.

- **Metric 2**: Average Usage Frequency - Average times a drug is used per patient per month.

- **KPI 1**: Sales Growth rate.

- **KPI 2**: Patient Adherence Rate.

Visuals:

- **Metric 1**: Total Sales Volume - Total number of units sold.

- **Metric 2**: Average Usage Frequency - Average times a drug is used per patient per month.

- **KPI 1**: Sales Growth rate.

- **KPI 2**: Patient Adherence Rate.
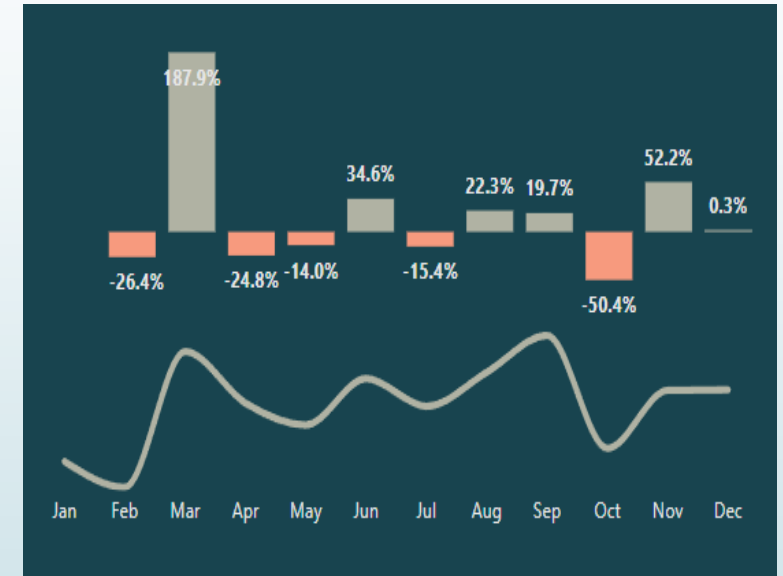
Dashboard 1:
(Top/Bottom Analysis)

- 1. Overall Sales Metrics

  - - Quantity sold, cost of goods sold (COGS), revenue, profit, and profit margin with comparing current month vs previous month

- 2. Performance of Top and Bottom Drugs:

  - - Identification of dynamic top drugs by Different Measures and the percentage contributions

  - - Overview of the Dynamic Top and underperforming customers by Different Measures and the percentage contributions
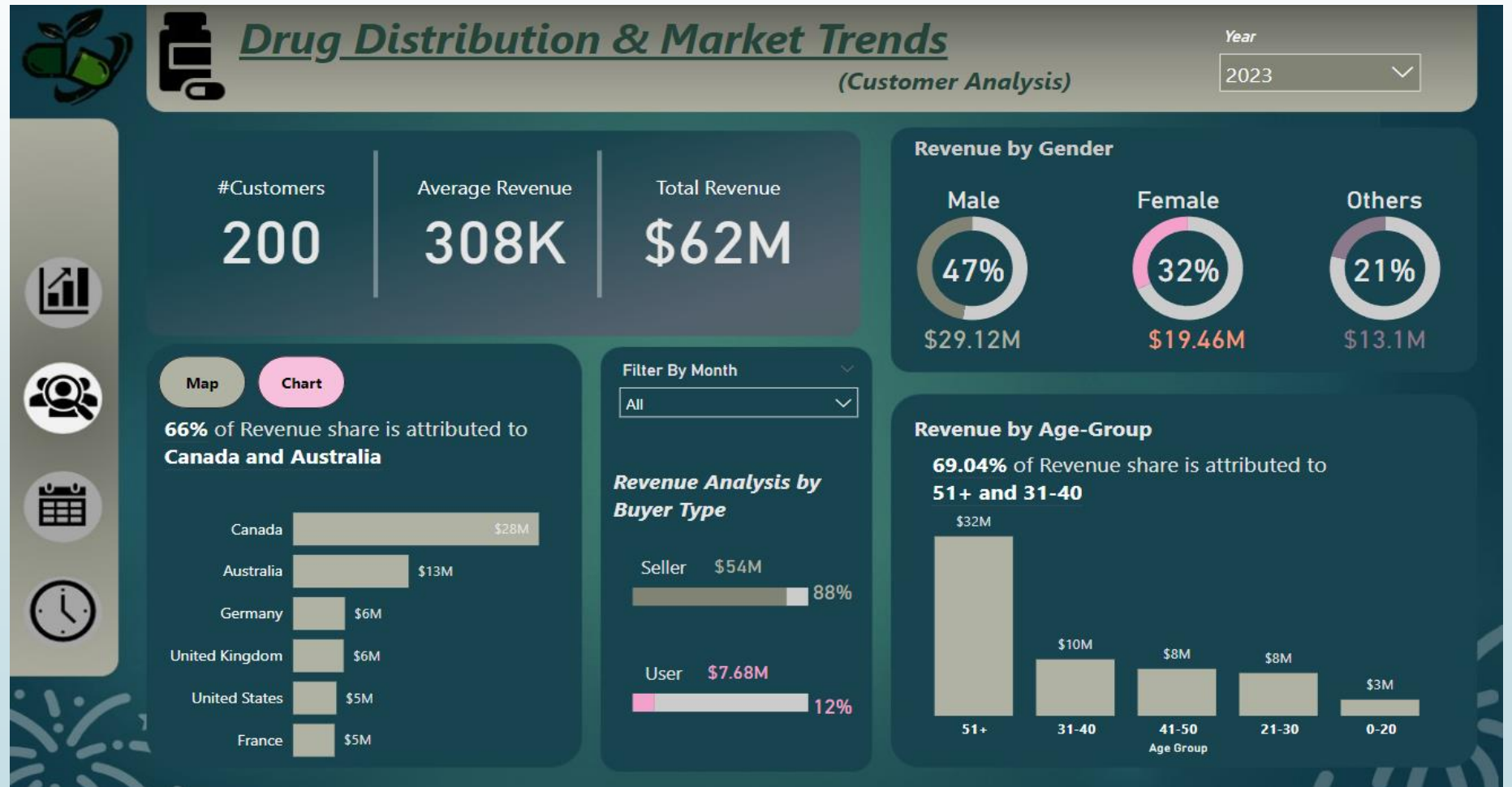
Dashboard 1:
(Top/Bottom Analysis)
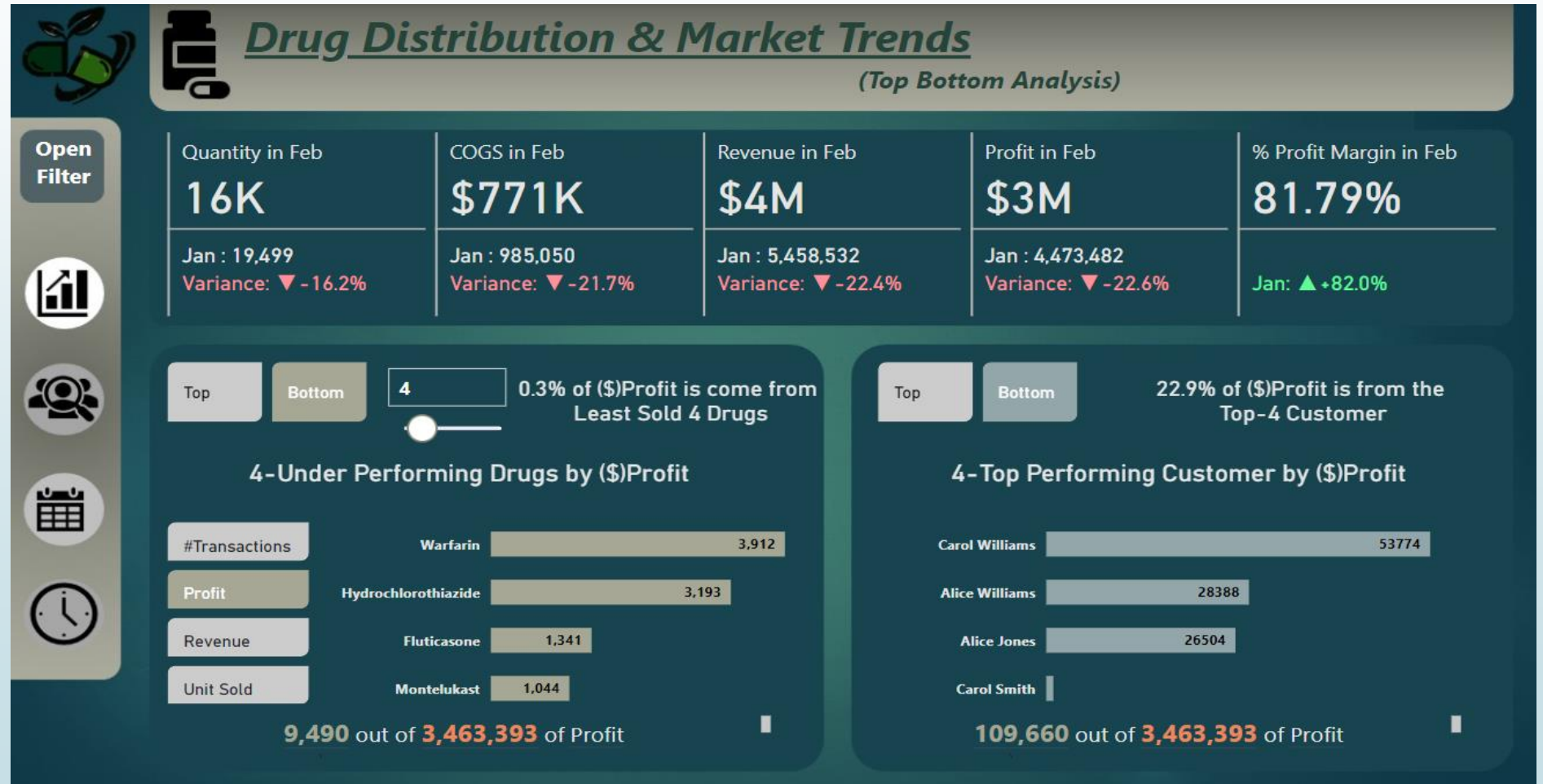
Dashboard 2: (Customer Analysis)

- 1. Customer Demographics and Sales Distribution:
  - Total number of customers and average revenue per customer.
  - Revenue distribution by country and key statistics on buyer type.

- 2. Revenue by Demographics:
  - Breakdown of revenue by gender and age group.

- 3. Geographical Insights:
  - Highlighting the revenue share from top 2 countries
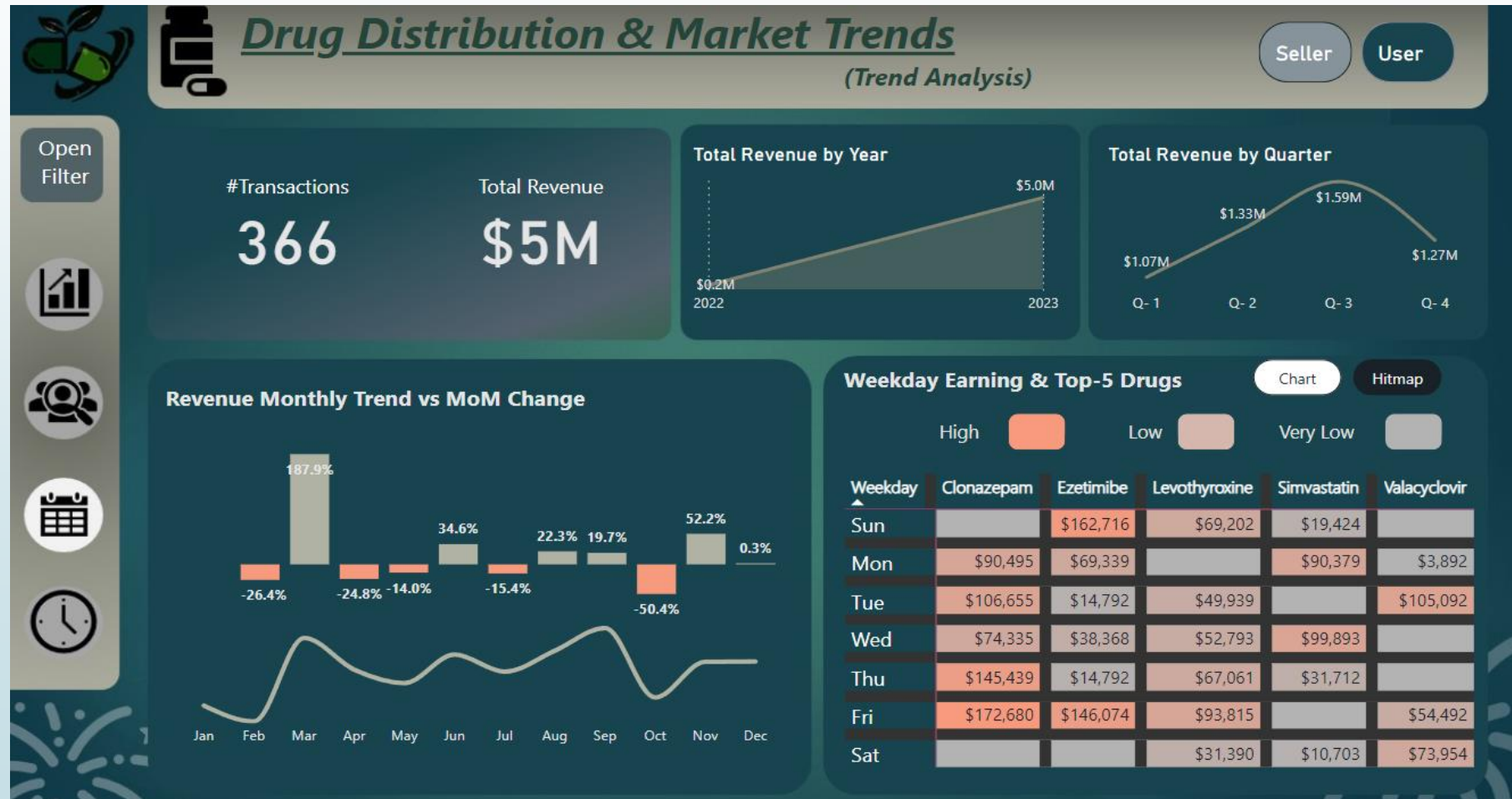
Dashboard 2:
(Customer Analysis)

Dashboard 3:
(Trend Analysis)

- 1. Revenue and Transaction Trends:
  - Yearly and quarterly revenue trends.
  - Number of transactions and total revenue (KPI).

- 2. Month-over-Month Revenue Changes:
  - Detailed analysis of revenue changes for each month (Monthly Trend).

- 3. Weekday Sales Analysis:
  - Breakdown of revenue by weekdays and identification of top drugs sold per day.

Dashboard 3:
(Trend Analysis)

Dashboard 4:
(Trend by Fiscal Year)

- 1. Revenue by Year Hierarchy Analysis:
    - Revenue by Day, by Quarter, by Month and by Year in a single visual

- 2. Revenue and Transaction Trends:
    - Yearly and quarterly revenue trends.
    - Number of transactions and total revenue (KPI).

- 3. Quarter-over-Quarter Revenue Changes by Fiscal Month:
    - Detailed analysis of revenue changes for each month (Monthly Trend).

Dashboard 4:
(Trend by Fiscal Year)
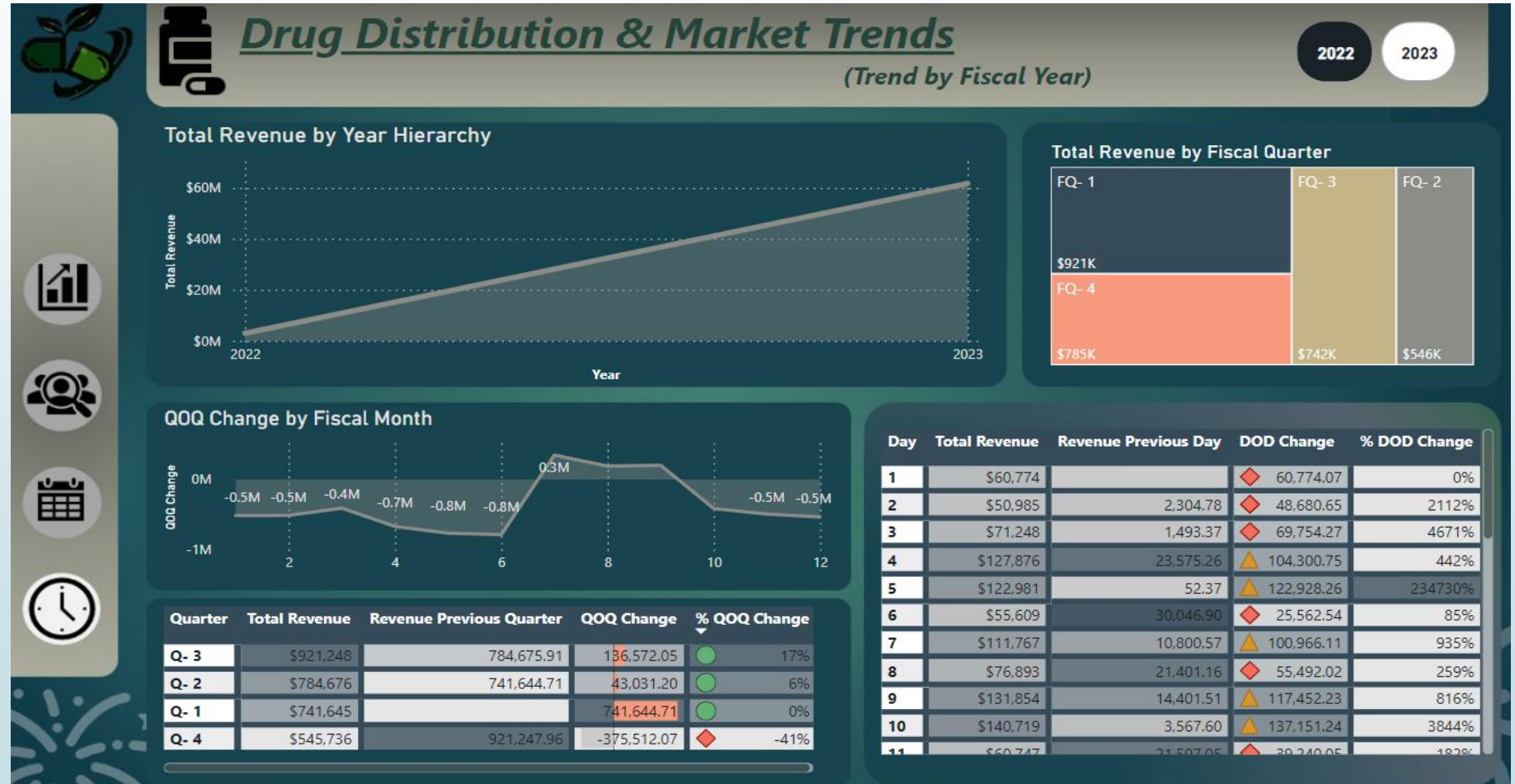
Detailed Findings:

- **Area of Interest 1**: Impact of age on drug adherence.
  - **Visual**: Adherence Rate by Age Group bar chart.
  - **Insight**: Older age groups have lower adherence rates.

- **Area of Interest 2**: Sales performance of different drugs.
  - **Visual**: Sales Volume by Drug Type pie chart.
  - **Insight**: Drugs with top performance.

Thank You

For your time and interest in my analysis report