Prepared by LYDIA DONKOR

MEDX PHARMACY

Product, Customer Behavior and Sales Trend Analysis

# BUSINESS OVERVIEW

MedX Pharma is a leading pharmaceutical sales and distribution company operating across states in the US. The company partners with healthcare distributors, hospitals, and retail pharmacies to ensure timely delivery of high-quality medicines. MedX handles a wide range of pharmaceutical products, manages multiple warehouses, and works with sales representatives and third-party distributors to expand market reach and fulfill demands.

# PROBLEM STATEMENT

MedX Pharma has been collecting sales, customer and distribution data in flat files in Excel without a structured system for extracting insights. With increasing product lines, expanding customer base, and rising operational complexity, the management finds it difficult to monitor performance and identify top-performing products, sales reps, and regions. The lack of a centralised reporting solution limits their ability to make timely, data-driven decisions.

**AIM OF PROJECT**

* Transform MedX flat file data into a normalised and structured data model using Power BI.
* Build an interactive dashboard to analyse product sales, customer behavior and sales trend.
* Enable data-driven decision-making and improve visibility into sales and distribution operations.

**DATA MODEL**

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# VISUALISATION

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# Tailored Analysis

# 1. CUSTOMER ANALYSIS

# Key Insights:

# Total Revenue: MedX pharmacy had $12.21 million with a 10.31% Month over Month increase and $11.07 million from the previous month. This is a healthy revenue trend.

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# Top Customer Types by Revenue:

# Clinics (27.90%)

# Hospitals (27.52%)

# Wholesalers (23.73%)

# Pharmacies (20.85%)

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Customer Distribution:

* 50 customers and 10 distributors which suggests an average of 5 customers per distributor.
* Average discount of 7.40% is decent for pharmaceutical / medical sales if volume justifies it.

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A map of the united states

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Geographical Insights: Some states show stronger customer presence/revenue, but a few have low or no activity.

Top 10 Customers: Top customer (Rivera Gilbert) alone brought in $357,000. This suggests a potential revenue concentration risk.

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# 2. PRODUCT ANALYSIS

**Key Insights:**

Product Portfolio: 200 products managed by 20 sales reps across 3 warehouses.

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Product Category Revenue:

* Antiseptics (26.95%) and Vaccines (21.21%) are the top categories.
* Antibiotics are underperforming (14.73%).

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Warehouse Performance: Warehouse C handles 67.28% of orders which indicates potential over- reliance.

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Top 5 Products: Paracetamol and Fluconazole are top earners, with $343,000 and $324,000 respectively.

Distributor Revenue: Johnson PLC ($1.38 million) leads, followed closely by Wagner and Nichols. Top 10 distributors generate around similar revenue bands.

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**3. SALES TREND ANALYSIS**

**Key Insights:**

Revenue Fluctuation: Revenue peaks in April, July, and December; a sharp dip in May and June.

December shows the highest revenue which may be due to possible seasonal boost.

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Order Trends: October has the highest order volume (454) while June has the lowest order volume (353).

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Sales Rep Performance:

Top Performer: David Cox ($704,387 revenue from 273 orders)

# Bottom Performer: Robert Bauer had the least revenue ($520,344 revenue from 228 orders). Close revenue range is observed across bottom reps, but high order counts showing inefficiency or lower value per order.

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# Recommendations

1. Revenue Diversification: Strengthen revenue in underperforming customer types, product categories, and geographic regions.

2. Operational Risk Mitigation: Reduce over-reliance on single warehouse, product category, or high-value clients.

3. Sales Performance Boost: Tailor rep KPIs to emphasize high-value sales, not just volume; reward efficiency.

4. Data-Driven Expansion: Use the insights from state and distributor data to guide marketing and expansion efforts.