

BUSINESS DATA MANAGEMENT PROJECT

ATMA MALIK MEDICAL STORE ,KOKAMTHAN

“Enhancing B2C Pharmacy Performance through
Data-Driven Solutions”

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ABOUT ATMA MALIK MEDICAL STORE ,KOKAMTHAN

- Atma Malik Medical Stores, run by Atma Malik Dhyapeeth in Kokamthan (7 km from Shirdi), is a key pharmacy for nearby communities, located near a highway and village hospital.
- The store faces challenges like poor record-keeping, seasonal demand shifts, overstocking, and stockouts—leading to wasted money and customer dissatisfaction.
- This project aims to improve inventory management by tracking best-selling products, spotting demand patterns, and reducing slow-moving stock. The goal is to ensure medicines are always available, cut unnecessary costs, and help the store serve its community more effectively.



PROBLEM STATEMENT

1. Inventory Loss Due to Expired Stock

Unsold and expired medicines pile up because of weak stock tracking and over-purchasing, causing waste and blocking working capital.

2. Demand Mismatch During Peak Periods

Sudden demand spikes from travelers and seasonal visitors (due to proximity to Shirdi) lead to stockouts, hurting revenue and customer trust.

3. Misalignment with Local Needs

Lack of insight into villagers' regular requirements means essentials often run out, while less-needed items sit idle on shelves.



ABOUT DATA

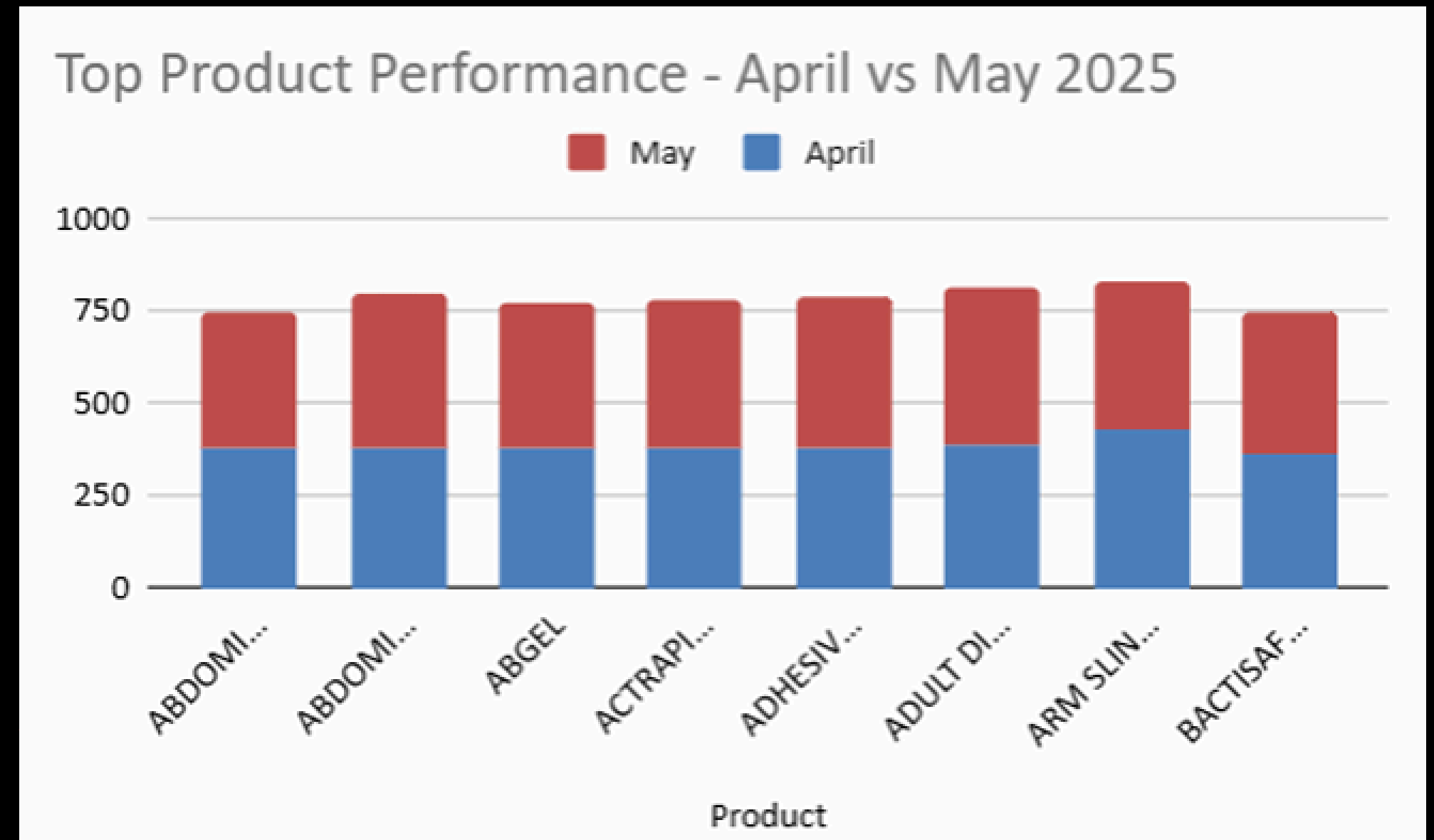
- Transactional data from Atma Malik Medical Stores (April 1 – May 31, 2025).
- Dataset size: 4,185 individual sales entries.
- Data stored in Microsoft Excel sheets.
- Cleaning and preprocessing performed.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Invoice No	Date	Customer Name	Address	Prescribed By	Product	Batch	Expiry	Qty	MRP	Unit Price	Total Price	CGST (6%)	SGST (6%)	Grand Total
2	INV2004	01/04/2025	Kiana More	62, near Bus Stand, Len Dr. V. Patil		BACTISAFE 10*10	A52304	03/25	2	750	675	1350	81	81	1512
3	INV2005	01/04/2025	Bhavin Londhe	H.No. 338, near Bus Sta Dr. G. Shinde		BACTISAFE 10*10	A52304	03/25	1	750	675	675	40.5	40.5	756
4	INV2005	01/04/2025	Bhavin Londhe	H.No. 338, near Bus Sta Dr. G. Shinde		ACTRAPID PEN	PR70HE	11/26	1	626.78	564.1	564.1	33.85	33.85	631.8
5	INV2005	01/04/2025	Bhavin Londhe	H.No. 338, near Bus Sta Dr. G. Shinde		ADULT DIAPER M	012	02/28	1	500	450	450	27	27	504
6	INV2006	01/04/2025	Faiyaz Lavate	98/590, near Bus Stand Dr. V. Patil		ACTRAPID PEN	PR70HE	11/26	1	626.78	564.1	564.1	33.85	33.85	631.8
7	INV2006	01/04/2025	Faiyaz Lavate	98/590, near Bus Stand Dr. V. Patil		ABDOMINAL DRAIN	2213539H	07/27	2	498	448.2	896.4	53.78	53.78	1003.96
8	INV2006	01/04/2025	Faiyaz Lavate	98/590, near Bus Stand Dr. V. Patil		BACTISAFE 10*10	A52304	03/25	2	750	675	1350	81	81	1512
9	INV2006	01/04/2025	Faiyaz Lavate	98/590, near Bus Stand Dr. V. Patil		ARM SLING M	MEDIUM	01/26	1	429	386.1	386.1	23.17	23.17	432.44
10	INV2006	01/04/2025	Faiyaz Lavate	98/590, near Bus Stand Dr. V. Patil		ABDOMINAL DRAIN	2213539H	07/27	2	498	448.2	896.4	53.78	53.78	1003.96
11	INV2006	01/04/2025	Faiyaz Lavate	98/590, near Bus Stand Dr. V. Patil		ARM SLING M	MEDIUM	01/26	1	429	386.1	386.1	23.17	23.17	432.44
12	INV2007	01/04/2025	Zeeshan Shinde	20, beside Primary Heal Dr. V. Patil		ADHESIVE TAPE	23A139	06/27	1	939	845.1	845.1	50.71	50.71	946.52
13	INV2007	01/04/2025	Zeeshan Shinde	20, beside Primary Heal Dr. V. Patil		ABDOMINAL BELT	MEDIUM	01/26	2	349	314.1	628.2	37.69	37.69	703.58
14	INV2007	01/04/2025	Zeeshan Shinde	20, beside Primary Heal Dr. V. Patil		ADHESIVE TAPE	23A139	06/27	2	939	845.1	1690.2	101.41	101.41	1893.02
15	INV2007	01/04/2025	Zeeshan Shinde	20, beside Primary Heal Dr. V. Patil		ADULT DIAPER M	012	02/28	2	500	450	900	54	54	1008
16	INV2008	01/04/2025	Miraan Gaikwad	06, opposite Grampancl Dr. G. Shinde		BACTISAFE 10*10	A52304	03/25	1	750	675	675	40.5	40.5	756
17	INV2008	01/04/2025	Miraan Gaikwad	06, opposite Grampancl Dr. G. Shinde		BACTISAFE 10*10	A52304	03/25	1	750	675	675	40.5	40.5	756
18	INV2008	01/04/2025	Miraan Gaikwad	06, opposite Grampancl Dr. G. Shinde		ABGEL	0123002	12/26	1	395	355.5	355.5	21.33	21.33	398.16
19	INV2008	01/04/2025	Miraan Gaikwad	06, opposite Grampancl Dr. G. Shinde		ADULT DIAPER M	012	02/28	1	500	450	450	27	27	504
20	INV2008	01/04/2025	Miraan Gaikwad	06, opposite Grampancl Dr. G. Shinde		ABDOMINAL DRAIN	2213539H	07/27	1	498	448.2	448.2	26.89	26.89	501.98
21	INV2008	01/04/2025	Miraan Gaikwad	06, opposite Grampancl Dr. G. Shinde		ABGEL	0123002	12/26	1	395	355.5	355.5	21.33	21.33	398.16
22	INV2009	01/04/2025	Shanaya Shinde	H.No. 528, next to 2P Sc Dr. S. Kulkarni		BACTISAFE 10*10	A52304	03/25	2	750	675	1350	81	81	1512
23	INV2009	01/04/2025	Shanaya Shinde	H.No. 528, next to 2P Sc Dr. S. Kulkarni		ADULT DIAPER M	012	02/28	2	500	450	900	54	54	1008
24	INV2009	01/04/2025	Shanaya Shinde	H.No. 528, next to 2P Sc Dr. S. Kulkarni		ABGEL	0123002	12/26	1	395	355.5	355.5	21.33	21.33	398.16

(Pic 1 :- Cleaned Data

Product Performance Analysis - April vs May 2025

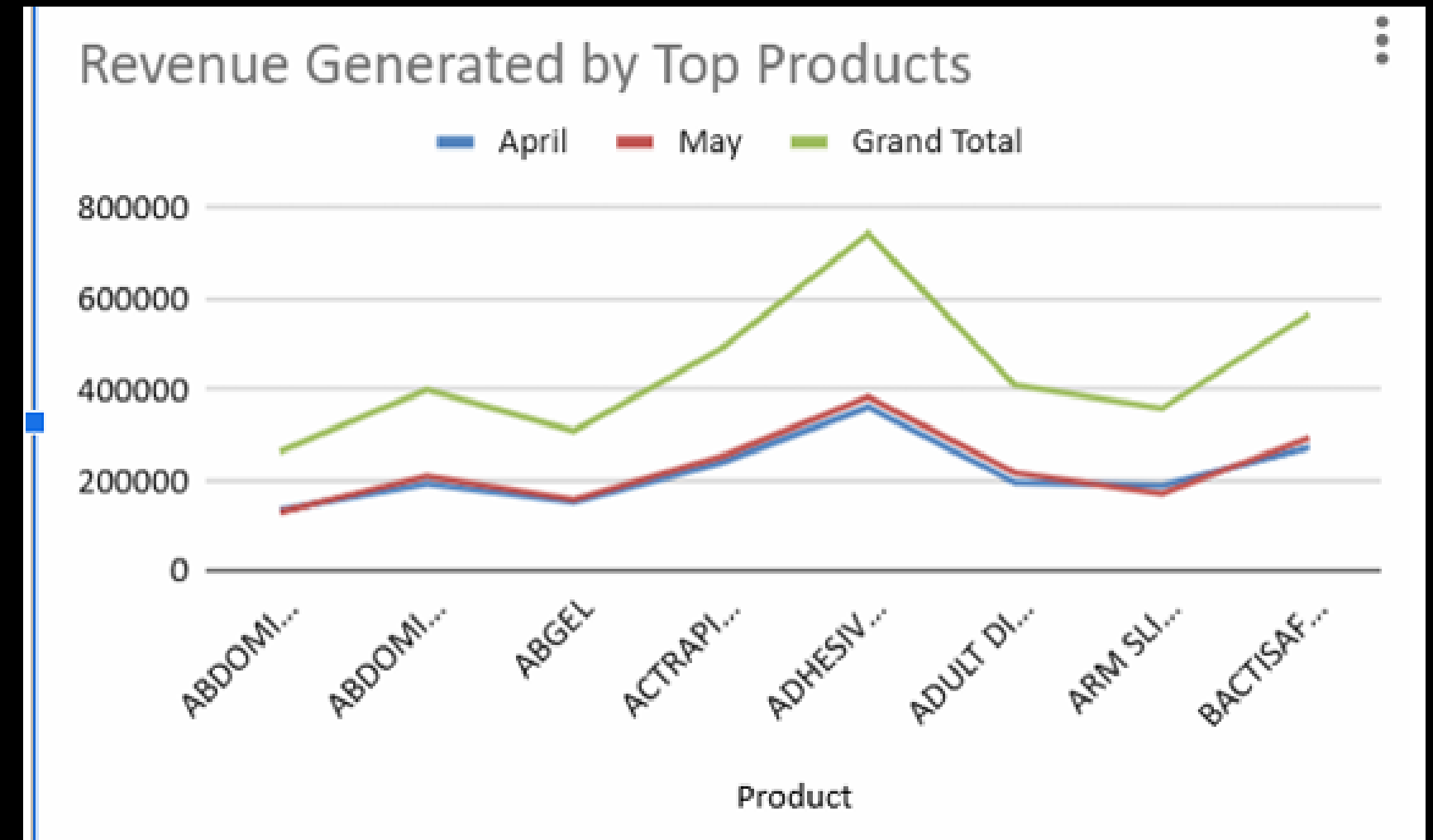
- Adhesive Tape was the top performer with 785 units sold, showing 6.0% growth (381 → 404 units).
- Arm Sling M declined by 8.8%, dropping from 433 units in April to 395 in May.
- Adult Diaper M grew strongly by 11.2%, increasing from 385 to 428 units.
- Bactisafe 10*10 recorded the lowest sales volume with 748 units total.
- Overall sales performance was positive, with May exceeding April by 3.6% (3,189 vs 3,079 units).



(Pic 2 :- Product Performance Analysis - April vs May 2025)

Revenue Generation Analysis

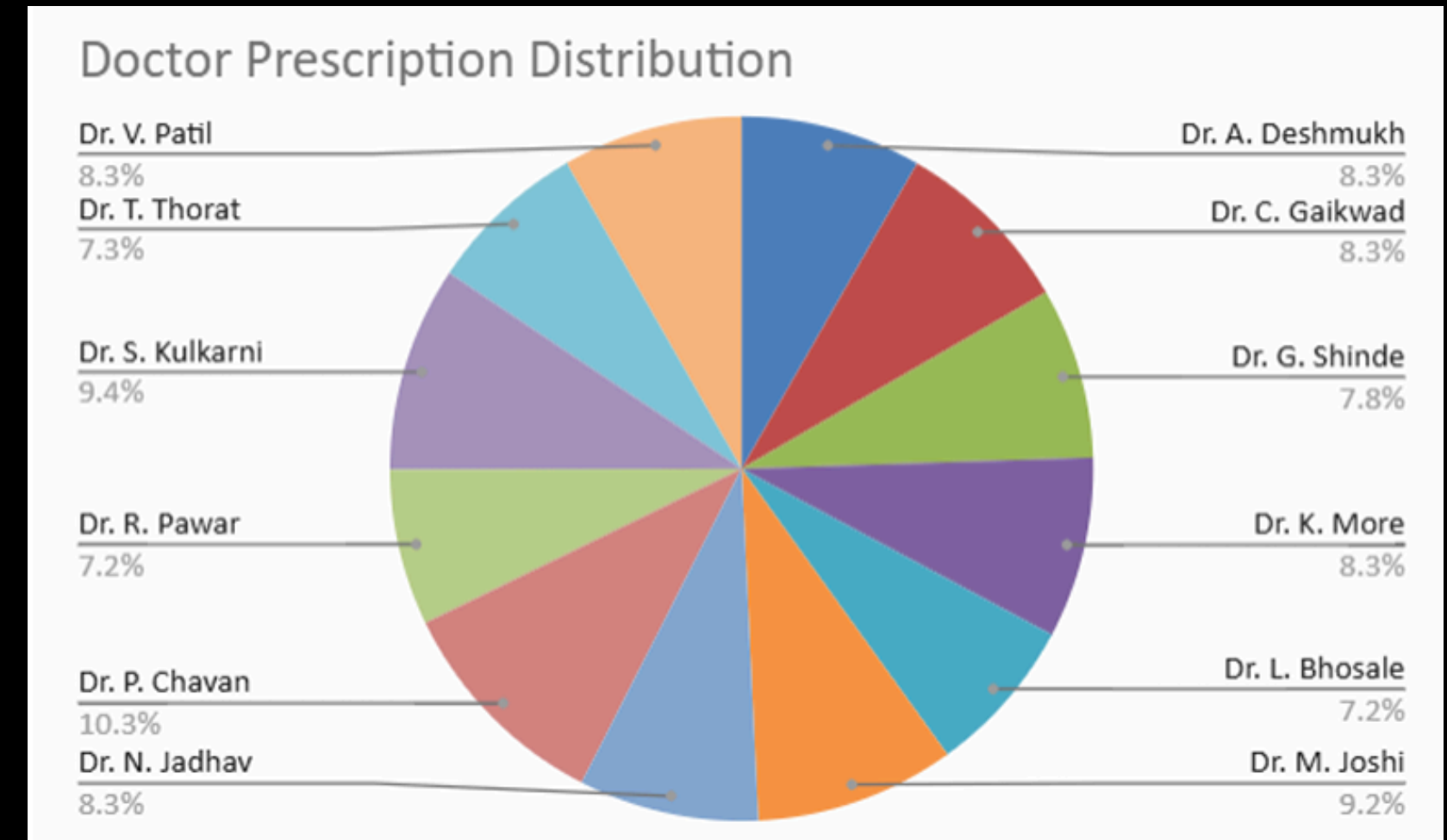
- Adhesive Tape generated the highest revenue at ₹743,012.90 with 6.0% growth.
- Bactisafe 10*10 earned ₹565,488 despite lower unit sales, showing effective premium pricing.
- Actrapid Pen showed steady growth, rising from ₹238,186 to ₹251,453.80 (5.6%), totaling ₹489,639.80.
- Adult Diaper M contributed ₹409,752 with strong 11.2% growth.
- Arm Sling M recorded declining revenue with an 8.8% decrease.
- Total revenue was ₹3,537,192.48, with May (₹1,807,954.80) outperforming April (₹1,729,237.68) by 4.6%.



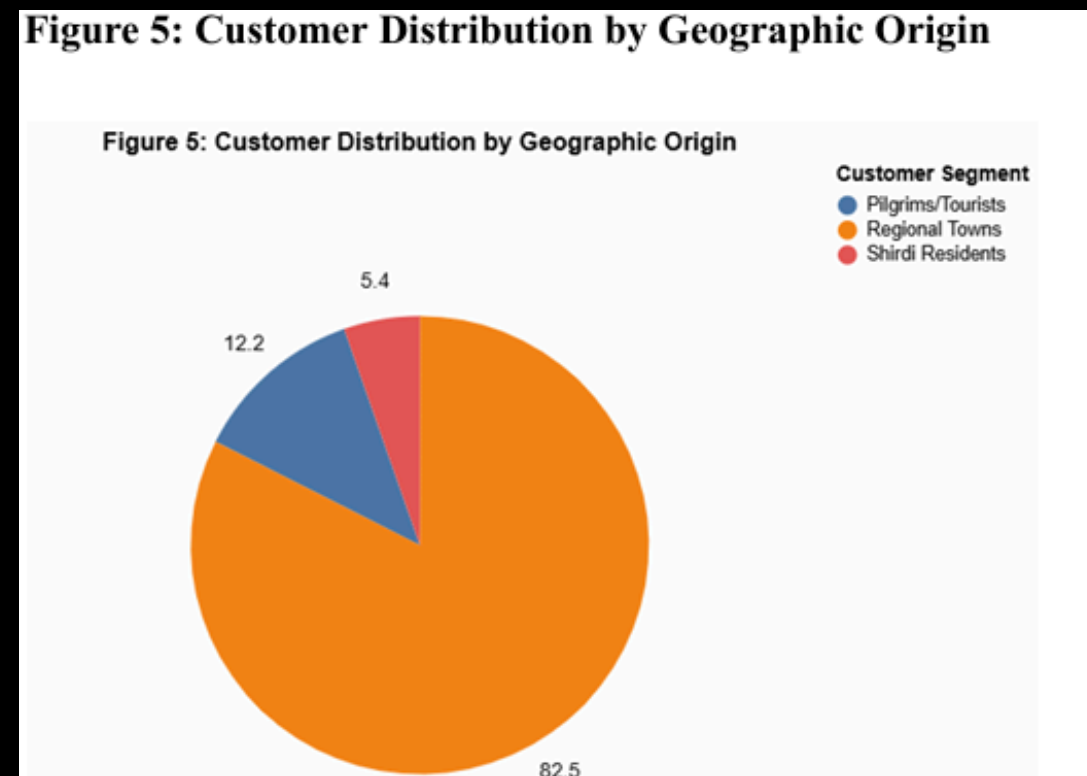
(Pic 3 :- Revenue Generation Analysis)

Doctor Prescription Distribution Analysis

- Top 5 doctors account for 64% of total prescriptions, ensuring healthy diversification.
- Prescription patterns indicate a strong focus on chronic disease management (diabetes, hypertension).
- Acute care prescriptions show seasonal variation.
- Consistent demand exists for preventive healthcare products.
- Doctor reputation strongly correlates with prescription volume



(Pic 4 : Doctor Prescription Distribution Analysis)



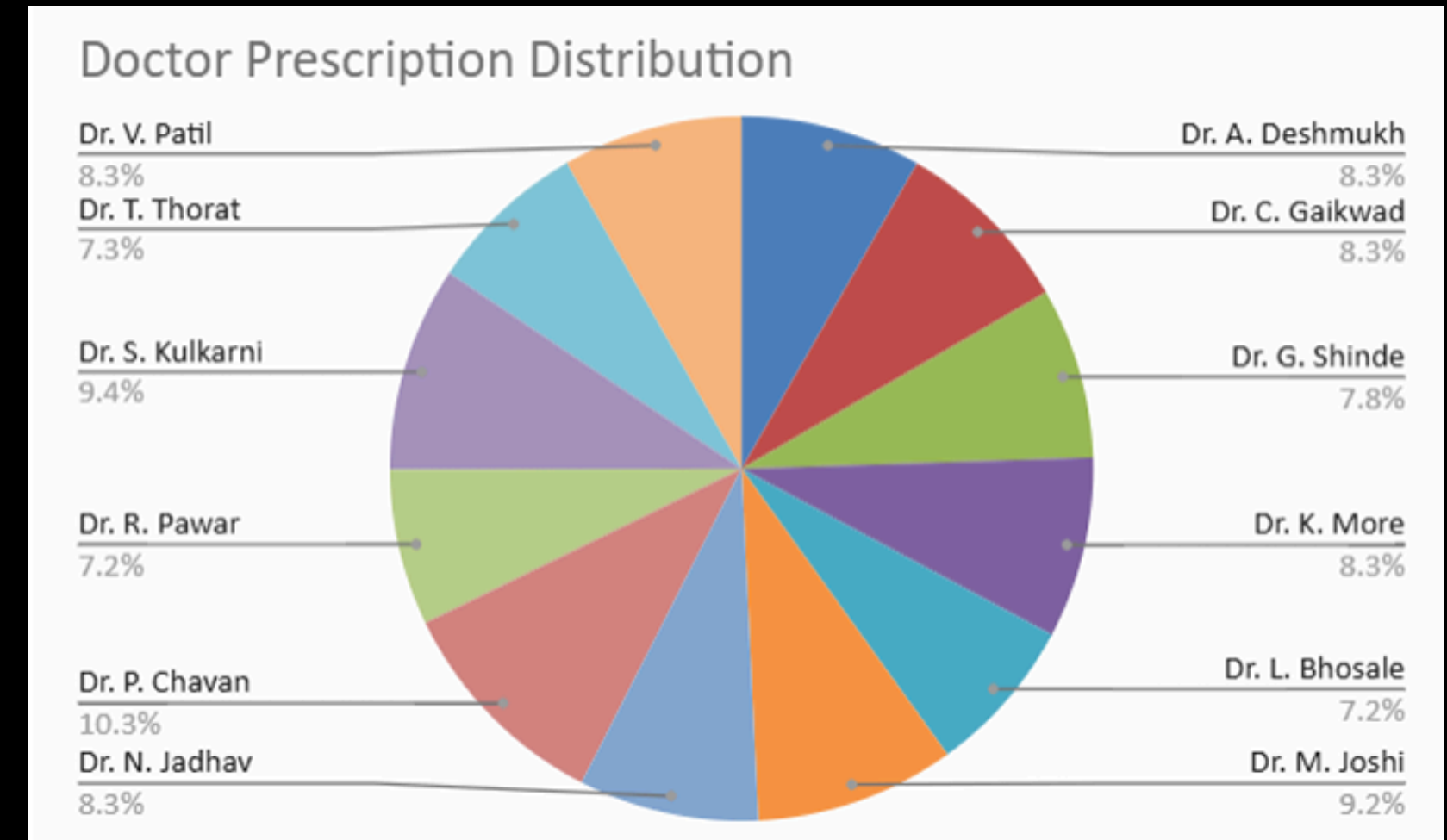
(Pic 5 :- Customer Demographic and Geographic Analysis Type)

Customer Demographic and Geographic Analysis

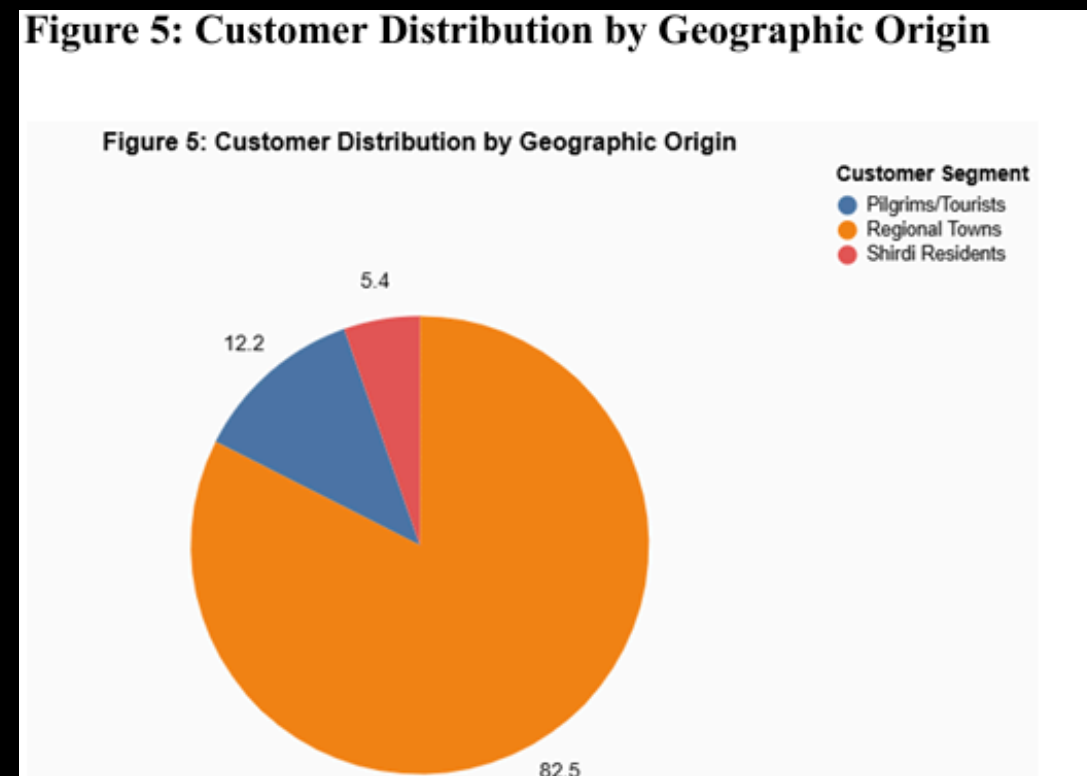
- Average transaction values: Shirdi Residents ₹4,802.22, Pilgrims/Tourists ₹4,705.01, Regional Towns ₹4,607.52.
- Shirdi Residents and Pilgrims spend slightly more per transaction despite fewer overall transactions.

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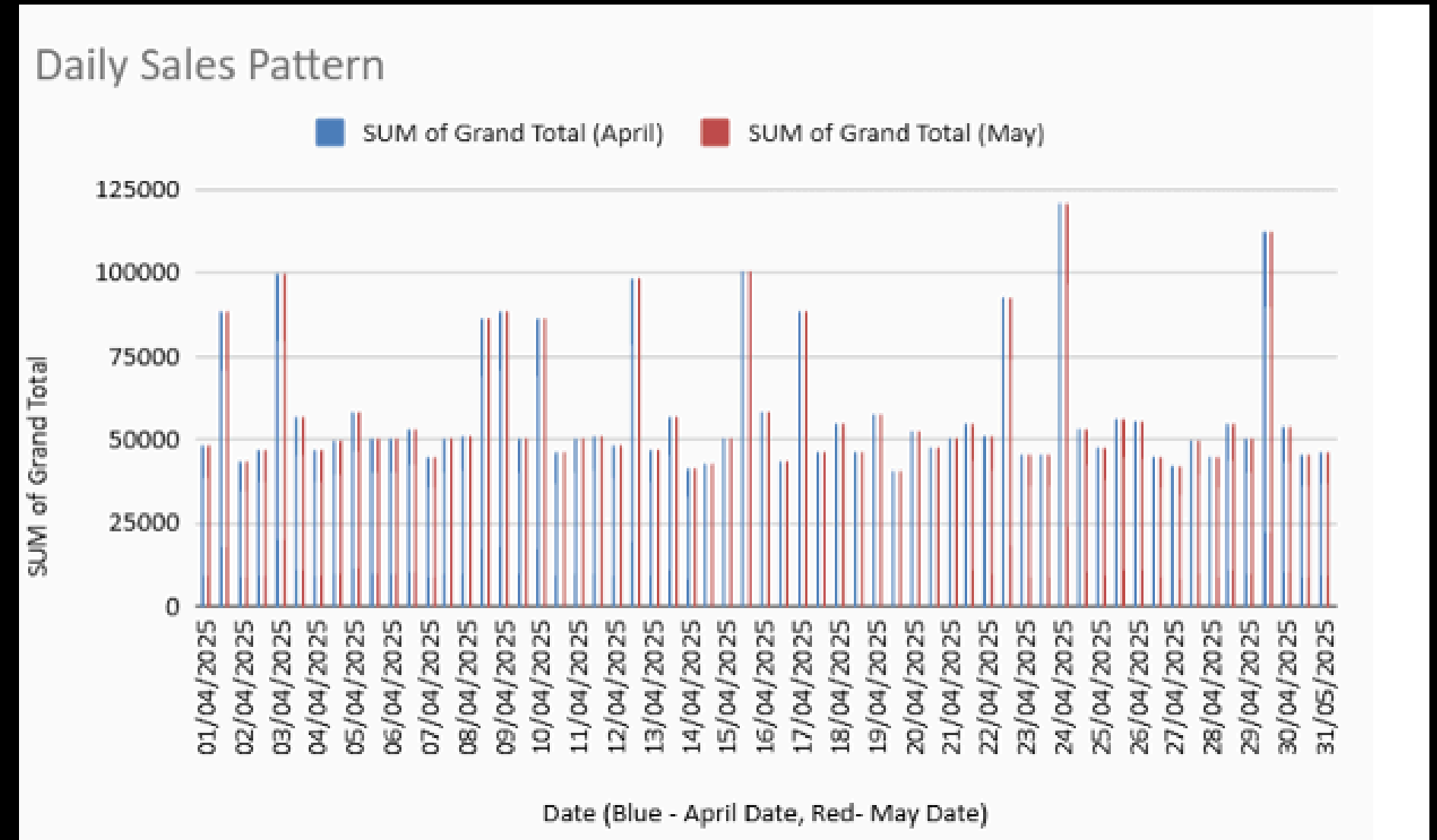
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Daily Sales Performance Analysis

- April 24th recorded the peak sales at ₹120,788.80, likely linked to festival periods.
- May 29th was the second-highest day with ₹112,441.82.
- Mid-month periods showed stronger performance overall.
- Daily averages improved from ₹57,574.25 in April to ₹58,321.45 in May (1.3% increase).
- Lowest sales were on April 14th (₹41,000.08) and May 19th (₹40,911.48).
- Sales consistently remained above ₹40,000 daily, indicating operational stability.



(Pic 6 :- Daily Sales Performance Analysis)

Inventory Management and Stock Analysis

- Category A: Top 20% products generating 80% revenue (High priority inventory)
- Category B: Middle 30% products contributing 15% revenue (Moderate priority)
- Category C: Bottom 50% products representing 5% revenue (Low priority management)

Current inventory analysis reveals:

- Fast-moving products: Well-managed stock levels
- Seasonal products: Require dynamic stocking strategies
- Emergency medications: Adequate safety stock maintenance
- Specialty items: Potential for reduction in stock levels

Figure 6: Product Category Performance Matrix

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product	product_category	average_monthly_revenue	monthly_revenue_cv	total_revenue
ABDOMINAL BELT	Category C	₹131,746.63	2.45%	₹263,493.26
ABDOMINAL DRAIN NO 28	Category C	₹199,788.04	6.04%	₹399,576.08
ABGEL	Category C	₹154,087.92	2.19%	₹308,175.84
ACTRAPID PEN	Category B	₹244,819.90	3.83%	₹489,639.80
ADHESIVE TAPE	Category B	₹371,506.45	4.14%	₹743,012.90
ADULT DIAPER M	Category C	₹204,876.00	7.48%	₹409,752.00
ARM SLING M	Category C	₹179,027.30	6.49%	₹358,054.60
BACTISAFE 10*10	Category C	₹282,744.00	5.29%	₹565,488.00

(Pic 7 :- Inventory Management and Stock Analysis)

RECOMMENDATIONS

- Optimize Inventory – Use ABC classification, set smart reorder points, and build festival stock buffers.
- Boost Festival Sales – Create bundles, run pre-festival promotions, and apply dynamic pricing.
- Enhance Customer Loyalty – Tiered rewards, refill reminders, home delivery, and feedback system.
- Go Digital – Implement inventory, barcoding, customer database, and automated reorders.

IMPACT

Implementing solutions can lead to:

- Revenue Growth – 15–20% increase from better inventory and festival strategies.
- Operational Efficiency – 25–30% faster inventory turnover and fewer stockouts.
- Customer Loyalty – Retention rate rising from 68% → 80%, with higher transaction values.
- Doctor Engagement – 20% more prescriptions through stronger professional ties.

Thank You