

Data Analytics Report for CP's Dental Services

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Executive Summary

This report presents a data-driven analysis of patient activity, service utilization, and operational performance at CP's Dental Services. The goal is to improve scheduling efficiency, maximize revenue, enhance patient experience, and guide strategic marketing decisions.

1. Patient Flow & Appointment Analysis

Objective: Optimize scheduling, reduce idle time, and increase patient turnover.

Key Insight:

- Peak appointment hours are 10 AM–1 PM on weekdays. Afternoon slots (especially 2 PM–4 PM on Thursdays and Fridays) remain underutilized.

Recommendations:

- Implement rotational shifts to align staff availability with peak demand.
- Offer incentives (e.g., discounts or loyalty points) for off-peak bookings.
- Introduce SMS/email reminders to reduce no-shows and cancellations.

Data Source: Appointment logs with date, time, and status columns analyzed using Excel Pivot Tables and COUNTIFS formulas.

2. Revenue Breakdown by Service

Objective: Understand which services generate the most profit.

Key Insight:

- Tooth fillings generate the highest revenue.
- Dental Braces have the lowest revenue generated

Recommendations:

- Run targeted social media campaigns to promote high-margin services.
- Consider bundling offers like "Whitening + Tooth Gems" to drive demand.

Data Source: Revenue data by service type summarized using SUMIFS and visualized via bar charts.

3. Customer Segmentation

Objective: Target the right audience with the right offer.

Key Insight:

- Ages <18 consultations and crown& bridge.
- Ages 26-35 frequently choose Tooth whitening and Tooth fillings.

Recommendations:

- Create age-specific promotions.
- Customize social media ads targeting teens vs. adults.

Data Source: Patient demographics linked with service history and analyzed using Pivot Tables and filters.

4. Service Utilization Trends

Objective: Predict demand and manage inventory/staffing.

Key Insight:

- Braces and check-ups spike during school holidays (April, August, December).

Recommendations:

- Pre-stock materials and align staffing before peak periods.
- Offer early-bird bookings for holiday periods.

Data Source: Historical appointment and service data visualized using Excel trend lines and bar graphs.

5. Marketing Performance Analysis

Objective: Measure what brings in patients.

Key Insight:

- Facebook and walk in referrals lead to higher spend and better return rates.

Recommendations:

- Increase ad spend on Facebook and Walk in referrals
- Introduce exclusive online offers to boost engagement.

Data Source: Referral source data analyzed with COUNTIFS and Pivot Tables.

6. Digital Record Keeping & Dashboarding

Objective: Improve decision-making speed and accuracy.

Key Insight:

- Manual report generation delays decision-making.

Recommendations:

- Build a Power BI dashboard connected to Excel for real-time updates.
- Include KPIs like daily bookings, revenue, return rate, and service popularity.

Implementation: Use Power BI to link to Excel files stored in OneDrive or SharePoint.

7. Customer Retention & Loyalty Tracking

Objective: Keep patients coming back.

Key Insight:

- Only 30% of patients return within 6 months.

Recommendations:

- Launch a "Smile Loyalty Card" offering discounts after multiple visits.
- Send routine SMS/email reminders for checkups and cleanings.

Data Source: Appointment history and patient ID tracking using COUNTIFS to monitor return frequency.

Conclusion

By leveraging Excel and Power BI, CP's Dental Services can make informed decisions to enhance operational efficiency, revenue, and patient satisfaction. Implementing the above recommendations will foster sustainable growth and improve the clinic's competitive edge.

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