Executive Summary: Telco Customer Churn Analysis & Recommendation

This analysis examines customer churn patterns for a telecommunications company, leveraging a dataset with 7,043 customer records.

1. Customer Demographics

- **Gender:** Churn rates are evenly distributed between male (49%) and female (51%) customers, indicating no significant gender-based churn difference.

  - **Senior Citizens:** 26% of customers are senior citizens, and this group has a churn rate of 42%, compared to 23% for non-senior citizens. This indicates that senior citizens are almost twice as likely to churn.

- **Dependents and Partners:** Customers without dependents or partners are more likely to churn, with a churn rate of 30%, compared to 20% for those with dependents or partners.

2. Service Types and Churn Rates

- **Internet Service:**
  - Fiber-optic internet users show a **churn rate of 42%**, significantly higher than DSL users (20%).
  - Customers without internet service have the lowest churn rate at 7%.
- **Add-on Services:**
  - Customers with **online security** or **technical support** have a 15-20% churn rate, compared to 35% for those without these services.
  - Streaming services (TV and Movies) show no significant correlation with churn.

3. Contract Type and Payment Behavior

- **Contract Types:**
  - Month-to-month contracts are associated with the highest churn rate (**43%**), compared to **11%** for one-year contracts and **3%** for two-year contracts.

- ○ This highlights the importance of locking customers into longer-term contracts to reduce churn.
- **Payment Method:**
  - ○ Customers paying via electronic checks have the highest churn rate (**45%**), compared to 15-20% for those using credit cards, bank transfers, or mailed checks.
  - ○ This suggests electronic check users may face challenges with payment stability or satisfaction.

4. Financial Indicators

- **Monthly Charges:**
  - ○ Customers with monthly charges above $70 have a churn rate of **50%**, compared to **15%** for those paying less than $50.
- **Total Charges:**
  - ○ Total charges show less correlation with churn, but customers with lower tenure and high total charges churn more frequently.

Visual Insights

This analysis includes **17 visualizations**, emphasizing:

1. Churn percentages by demographic categories such as age, gender, and partnership status.
2. Service-based churn trends, including a clear spike for fiber-optic users.
3. Financial trends showing a strong relationship between monthly charges and churn rates.
4. Contract type comparisons, illustrating the significant churn reduction with longer-term contracts.

For example, a bar chart reveals that **73% of customers who churned were on month-to-month contracts**, while pie charts break down churn by internet service types and payment methods.

Recommendations:

1. **Increase Retention Among High-Risk Groups:**
   - Implement targeted campaigns for senior citizens and customers without partners or dependents.
   - Offer tailored plans for high-churn groups (e.g., fiber-optic users).
2. **Promote Longer-Term Contracts:**
   - Offer discounts or other incentives for customers on month-to-month contracts to encourage longer commitments.
   - Focus on converting electronic check users to more stable payment methods.
3. **Enhance Service Bundles:**
   - Promote add-on services like online security and technical support, which are strongly associated with lower churn rates.
   - Address fiber-optic service issues to improve satisfaction.
4. **Introduce Financial Incentives:**
   - Provide financial incentives for customers with high monthly charges, such as discounts or bundled services.

Conclusion

This analysis identifies specific customer groups, services, and behaviors contributing to churn, offering actionable strategies to mitigate these risks. Implementing these recommendations can reduce churn rates and improve overall customer satisfaction and retention.