Analysis of Monthly Flu Trends and Costs

The provided data, spanning from 1946 to August 2025, reveals a clear, non-cyclical, upward trend in both the volume of Flu cases and their associated treatment costs. While flu activity was historically very low (1 to 7 cases per month) from 1946 to 2002, the period since 2003 shows increasing frequency of high-case months, culminating in a significant surge in the most recent years.

**Peak Season Identification**

1. Peak Month in Terms of Cases

The highest recorded monthly case volume occurred in August 2025, with 22 cases.

This recent peak is closely followed by:

June 2025 (21 cases)

July 2025 (19 cases)

May 2019 and April 2024 (17 cases each)

The data strongly suggests a recent, concentrated peak during the mid-year months of June, July, and August (Q3).

2. Peak Month in Terms of Cost

The highest recorded Total Flu Treatment Cost occurred in April 2024, with a cost of 5,859.88.

This peak cost is followed by:

August 2025 (5,607.42)

August 2014 (5,195.09)

The peak cost month (April 2024) does not perfectly align with the absolute peak case month (August 2025). This discrepancy indicates that while the volume of cases is highest in Q3 (June-August 2025), the average cost per case can be highest in other periods (e.g., April 2024), likely due to a higher complexity of treatment, greater use of specialized resources, or different cost structures during that specific month. And, also Four patient was treated for free in June 2025 which made the total cost for the month not aligning with the number of cases.

**Strategic Financial Insight**

The financial planning department should be aware of two distinct patterns:

Peak Volume Season (Operational Risk): The June-August (Q3) window represents the period of highest patient load and demand for resources (staffing, bed capacity, supplies). The massive increase to 22 cases in August 2025 indicates a severe, recent escalation in flu activity that warrants immediate attention.

Peak Expenditure Month (Financial Risk): The highest single-month cost was recorded in April 2024 (s5,859.88). While recent months like August 2025 are close, this suggests that the April period can represent an acute financial risk, possibly requiring the highest allocation for expensive treatments.

Recommendation for Budget Forecasting:

The budget for flu treatment should be substantially increased and focused on the June-August (Q3) period to account for the peak volume. However, the budget modeling must also allocate a contingency fund in the April-May (Q2) period to cover potential high-cost treatments, as demonstrated by the April 2024 expenditure spike. The recent three-month surge in 2025 (June, July, August) strongly suggests the new peak season is mid-year.