

KPIs

Total Providers

11.41K

Total States

44

Total Cities

4259

Total Contract Hours

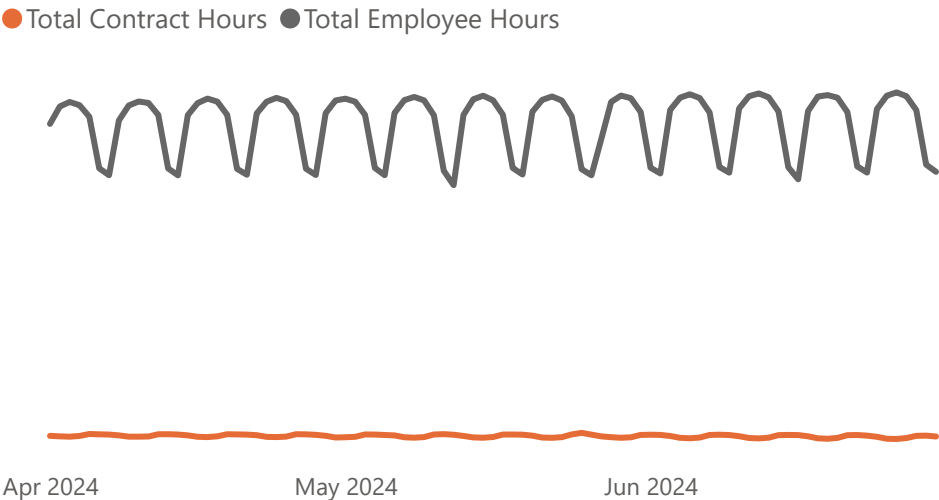
25M

Total Employee Hours

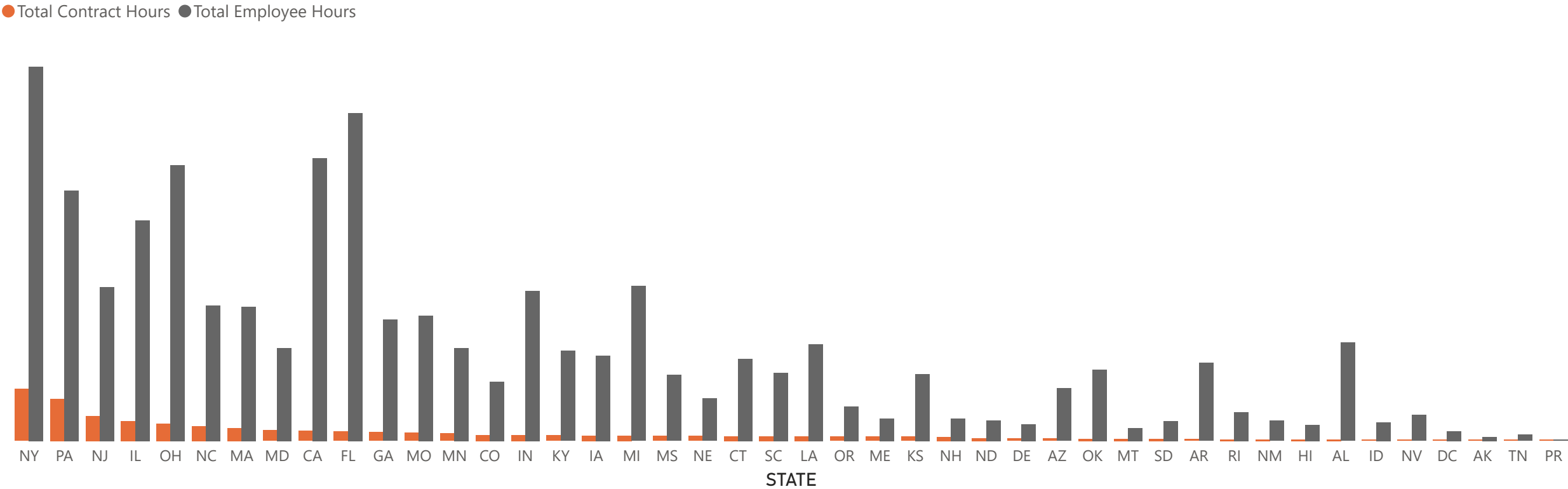
309.04M

| Provider Name                              | State | City        | Staff-to-Resident Ratio |
|--|-------|-------------|-------------------------|
| ST CATHERINE OF SIENA                      | NJ    | CALDWELL    | 0.00                    |
| WHITE RIVER HEALTHCARE                     | AR    | CALICO ROCK | 0.00                    |
| BEAR MOUNTAIN AT WORCESTER                 | MA    | WORCESTER   | 0.00                    |
| LINCOLN HEALTH CARE CENTER                 | CO    | HUGO        | 0.03                    |
| SYLVIA G THOMPSON RESIDENCE CENTER, INC    | MO    | SEDALIA     | 0.05                    |
| CASS COUNTY MEDICAL CARE FACIL             | MI    | CASSOPOLIS  | 0.07                    |
| THE MASSACHUSETTS VETERANS HOME AT CHELSEA | MA    | CHELSEA     | 0.09                    |
| IRON RIVER CARE CENTER                     | MI    | IRON RIVER  | 0.09                    |
| SEVILLE CARE CENTER                        | MO    | SALEM       | 0.14                    |
| AVOYELLES MANOR NURSING HOME               | LA    | DUPONT      | 0.14                    |
| COUNTRYSIDE ESTATES                        | OK    | WARNER      | 0.16                    |
| Total                                      |       |             | 3.46                    |

Staffing Trend Over Time



Contractor vs Employee Usage by State



## **Part 1: CMS Data Exercise**

### **1. Optimize Staff-to-Resident Ratios:**

- Focus on improving the staff-to-resident ratios in facilities with low ratios. For example, facilities like St. Catherine of Siena (NJ) and White River Healthcare (AR) have a ratio of 0.00. Implementing targeted recruitment and retention strategies in these areas can help improve care quality.

### **2. Increase Contract Hours in High-Demand States:**

- States like New York, Pennsylvania, and New Jersey show high usage of contract hours. Increasing the availability of contract staff in these states can help meet the demand and reduce the burden on permanent employees.

### **3. Enhance Employee Retention Programs:**

- With a total of 309.04 million employee hours, focusing on employee satisfaction and retention programs can help maintain a stable workforce. Consider implementing regular feedback mechanisms, professional development opportunities, and competitive compensation packages.

### **4. Leverage Data for Strategic Planning:**

- Utilize the detailed data on staffing trends over time to forecast future staffing needs. This can help in proactive planning and ensuring that staffing levels are adequate to meet the anticipated demand.

### **5. Focus on Understaffed Facilities:**

- Facilities like Lincoln Health Care Center (CO) and Sylvia G Thompson Residence Center (MO) have low staff-to-resident ratios. Prioritize these facilities for staffing improvements to ensure residents receive adequate care.

## **Part 2: SQL Test**

### **1. Customer name, product name, and total amount for sales in the last 30 days**

```
SELECT
    c.customer_name,
    p.product_name,
    s.total_amount
FROM Sales s
JOIN Customers c ON s.customer_id = c.customer_id
JOIN Products p ON s.product_id = p.product_id
WHERE s.sale_date >= CURRENT_DATE - INTERVAL '30 days';
```

## **2. Total revenue by product category in the last year**

```
SELECT
    p.category,
    SUM(s.total_amount) AS total_revenue
FROM Sales s
JOIN Products p ON s.product_id = p.product_id
WHERE s.sale_date >= CURRENT_DATE - INTERVAL '1 year'
GROUP BY p.category;
```

## **3. Customers who made purchases in 2023 and are in the "West" region**

```
SELECT DISTINCT c.customer_id, c.customer_name, c.sales_region
FROM Sales s
JOIN Customers c ON s.customer_id = c.customer_id
WHERE EXTRACT(YEAR FROM s.sale_date) = 2023
AND c.sales_region = 'West';
```

## **4. Total sales, total quantity sold, and total revenue for each customer**

```
SELECT
    c.customer_name,
    COUNT(s.sales_id) AS total_sales,
    SUM(s.quantity) AS total_quantity,
    SUM(s.total_amount) AS total_revenue
FROM Sales s
JOIN Customers c ON s.customer_id = c.customer_id
GROUP BY c.customer_name;
```

## **5. Top 3 customers by total revenue in 2023**

```
SELECT
    c.customer_name,
    SUM(s.total_amount) AS total_revenue
FROM Sales s
JOIN Customers c ON s.customer_id = c.customer_id
WHERE EXTRACT(YEAR FROM s.sale_date) = 2023
GROUP BY c.customer_name
ORDER BY total_revenue DESC
LIMIT 3;
```

#### **6. Rank products by total sales quantity in 2023**

```
SELECT
    p.product_name,
    SUM(s.quantity) AS total_quantity_sold,
    RANK() OVER (ORDER BY SUM(s.quantity) DESC) AS rank
FROM Sales s
JOIN Products p ON s.product_id = p.product_id
WHERE EXTRACT(YEAR FROM s.sale_date) = 2023
GROUP BY p.product_name;
```

#### **7. Categorize customers as "New" (signed up in the last 6 months) or "Existing"**

```
SELECT
    customer_name,
    sales_region,
    CASE
        WHEN sign_up_date >= CURRENT_DATE - INTERVAL '6 months' THEN 'New'
        ELSE 'Existing'
    END AS category
FROM Customers;
```

#### **8. Total sales per month for the last 12 months**

```
SELECT
    TO_CHAR(s.sale_date, 'YYYY-MM') AS month_year,
    SUM(s.total_amount) AS total_sales
FROM Sales s
WHERE s.sale_date >= CURRENT_DATE - INTERVAL '12 months'
GROUP BY month_year
ORDER BY month_year;
```

#### **9. Product categories that generated more than \$50,000 in revenue in the last 6 months**

```
SELECT
    p.category,
    SUM(s.total_amount) AS total_revenue
FROM Sales s
JOIN Products p ON s.product_id = p.product_id
WHERE s.sale_date >= CURRENT_DATE - INTERVAL '6 months'
GROUP BY p.category
HAVING SUM(s.total_amount) > 50000;
```

**10. Sales where total\_amount doesn't match expected value (quantity \* price)**

```
SELECT
  s.sales_id,
  s.quantity,
  p.price,
  s.total_amount,
  (s.quantity * p.price) AS expected_value
FROM Sales s
JOIN Products p ON s.product_id = p.product_id
WHERE s.total_amount <> (s.quantity * p.price);
```