### **Top 1% Facilities in RN Contract and Employee Use**

## **1. Overview of Findings**

The analysis focused on identifying the **top 1% of facilities** in two categories:

* **Extreme RN Contract Use** (Facilities relying heavily on contracted RNs)
* **Extreme RN Employee Use** (Facilities relying primarily on employed RNs)

From the plots and logs, we gathered key insights into the characteristics of these facilities, their geographic distribution, reliance on temporary RN staffing, and potential quality implications.

## **2. Geographic Distribution of Top 1% Facilities**

### **Key Observations from the Bar Charts**

* **New York dominates both categories** (contract and employee use). The sheer number of facilities in NY using both contracted and employed RNs suggests a **high overall demand for RNs** in the state.
* **For Contract RN Use**, other significant states include:
  + **Illinois, Pennsylvania, Maryland, Maine, Massachusetts, Virginia, and Florida**
  + This suggests that some states **heavily depend on temporary nursing staff**, possibly due to shortages or regulatory environments.
* **For Employee RN Use**, the distribution shifts slightly:
  + **Florida, California, Minnesota, Maryland, Washington, and Illinois** also have significant employee-based RN facilities.
  + **Fewer states show reliance on permanent RN staff compared to contract staff**, which might indicate different staffing policies or state regulations.

### **Conclusions:**

* **States like NY, IL, and PA consistently appear at the top**, regardless of staffing type, indicating **high RN demand**.
* **Contract-heavy states may indicate RN shortages, high turnover, or difficulty retaining staff**, requiring reliance on external contractors.
* **Employee-heavy states suggest more stable staffing models but still high nursing needs**.

## **3. RN Temp Ratio Distributions**

The histograms show **the proportion of RN hours filled by contracted staff vs. employees**.

### **Contract RN Use (Temp Ratio Distribution)**

* The **contract RN temp ratio is spread across a wide range**, with many facilities having **ratios above 50%**.
* Some facilities **completely rely on contract RNs (100%)**, which could indicate:
  + **Severe nursing shortages**
  + **A business model that prefers outsourced RNs over hiring employees**
  + **Higher costs and lower stability in staffing**
* The **bimodal nature of the distribution** suggests that facilities either:
  + Rely moderately on contracts (**ratios around 40-60%**)
  + Or **fully depend on contracts (90-100%)**.

### **Employee RN Use (Temp Ratio Distribution)**

* The **majority of facilities have very low temporary RN ratios (close to 0%)**.
* The **long tail of the distribution** shows that **some employee-heavy facilities still use contractors, but minimally**.
* This suggests that in employee-heavy facilities, **contract nurses are used as a supplement rather than a primary staffing source**.

### **Conclusions:**

* **Contract-dependent facilities may face workforce instability**, with higher costs and turnover.
* **Employee-heavy facilities have more stability but still require some contract RN support**.
* **A facility's staffing strategy strongly influences its reliance on temp nurses**.

## **4. RN Temp Ratio vs. Total RN Hours (Scatter Plots)**

These plots examine whether facilities with **more total RN hours** tend to **rely more or less on contract nurses**.

### **Key Observations**

* **For contract-heavy facilities**, there is a **strong negative correlation**:
  + The **higher the total RN hours, the lower the temp ratio**.
  + This suggests **large facilities with high RN needs may eventually reduce reliance on temp nurses** as they scale.
* **For employee-heavy facilities**, there is **no strong correlation**, but:
  + Most points **cluster near low temp ratios**, confirming **low reliance on contract RNs** even when total RN hours increase.

### **Conclusions:**

* **Large facilities may transition from contract-heavy to employee-based RN models over time**.
* **Contract-heavy facilities with very high total RN hours may need a better long-term staffing strategy**.
* **Employee-heavy facilities maintain stability in staffing regardless of RN hours**.

## **5. RN Temp Ratio vs. Four-Quarter Average Quality Score (Scatter Plots)**

These plots examine whether **higher reliance on contract nurses impacts quality scores**.

### **Key Observations**

* **For contract-heavy facilities:**
  + No strong correlation, but **many low-scoring facilities have high temp RN ratios**.
  + **Several facilities with temp RN ratios >80% have very low quality scores (<20).**
  + A cluster of **high temp RN ratio** facilities with **poor quality scores suggests a potential issue**.
* **For employee-heavy facilities:**
  + Quality scores are **more evenly distributed** across temp ratios.
  + **Most facilities have low temp RN ratios and decent quality scores**.

### **Conclusions:**

* **High reliance on temp nurses could negatively impact quality in some cases**, but it's not a universal rule.
* **Employee-heavy facilities maintain steadier quality levels**.
* **Facilities using high temp RNs might need to explore quality improvement initiatives**.

## **6. Key Takeaways & Recommendations**

### **Key Findings**

* **NY, IL, PA, and MD dominate both categories, suggesting high nursing demand.**
* **Contract-heavy facilities** show **wide variability in RN temp ratios**, with some **fully dependent on contract nurses**.
* **Larger facilities with high RN hours tend to reduce temp nurse reliance over time**.
* **Some facilities with high temp RN use also show poor quality scores**, indicating **possible staffing-related quality risks**.

### **Recommendations**

#### **For Sales Teams:**

* **Target contract-heavy states (NY, IL, PA, MD) for solutions related to reducing temp RN reliance.**
* **Offer retention and training programs to contract-heavy facilities aiming to transition to employee-based models.**
* **Promote efficiency solutions to large facilities with high total RN hours but unstable staffing strategies.**
* **Market quality improvement strategies to contract-heavy facilities with low quality scores.**

#### **For Further Analysis:**

* **Investigate why some contract-heavy facilities perform poorly in quality scores**.
* **Assess cost efficiency of contract vs. employee models for high-RN-hour facilities**.
* **Explore regional policy or economic factors influencing contract RN use.**

## **Final Thoughts**

These findings provide a **comprehensive view of RN staffing strategies across the industry**. While some **facilities operate efficiently with contract RNs, others may be struggling with workforce stability and quality concerns**. The insights can help **sales teams tailor solutions to different facility needs, while further analysis can refine strategic approaches.**

Would you like to delve deeper into **specific states, quality metrics, or workforce trends?** 🚀