

# Evaluating Employee Performance and Timekeeping in a Medical Company: An Examination of Compliance and Completeness

## PROJECT ASSIGNMENT 2

# PROBLEM

Attendance non-compliance, chronic tardiness, leaving early, and not consistently logging work hours, can have a negative impact on a company's productivity and operations. In healthcare, where employees are required to be on schedule, non-compliance can also lead to increased stress and pressure on other employees. It is crucial for companies to monitor and ensure that employees are adhering to their schedules and regulations to maintain a smooth and efficient work environment.

With the provided data, the HR department asked the team to analyze the attendance records and answer questions formulated by the CEO with regards to the discipline of the employees, patterns or trend on the number of late, absences, and leaves, and the behavior of each department.

# OBJECTIVES

- Create a report/dashboard that will answer the following:
  - disciplined, undisciplined employees and divisions
  - analysis on what month and day of the week were most employees were late/absent, vacation or sick leaves
  - which department tend to forgive or has lack of discipline to their employees, and;
  - find out if there are favoritism, casualties among employees
- Provide insights and and recommendations.

# METHODOLOGY

- Identification of the problem.
- Utilizing the company-provided data.
- Perform data cleaning using Excel/PostgreSQL, loading the cleaned data, data modeling, and create visualizations in PowerBI.

# ASSUMPTIONS

- Outlier (time-in and time-out for more than 2 hours) were excluded from the attendance table
- No time-in and time-out with valid schedules are treated as absences.
- Schedules filtered from October 20, 2021 to October 19, 2022 based on below table.

Table	Column	Earliest Date	Latest Date
users	created at	10/20/2021 11:15	10/16/2022 9:57
leave_requests	created at	11/15/2021 13:45	10/17/2022 4:17
	dates	11/16/2021	10/23/2022
attendance	date	10/20/2021	10/19/2022
payroll	date_start	12/1/2021	9/1/2022
	date_end	12/31/2021	9/30/2022
	created at	12/28/2021 4:08	10/7/2022 5:01

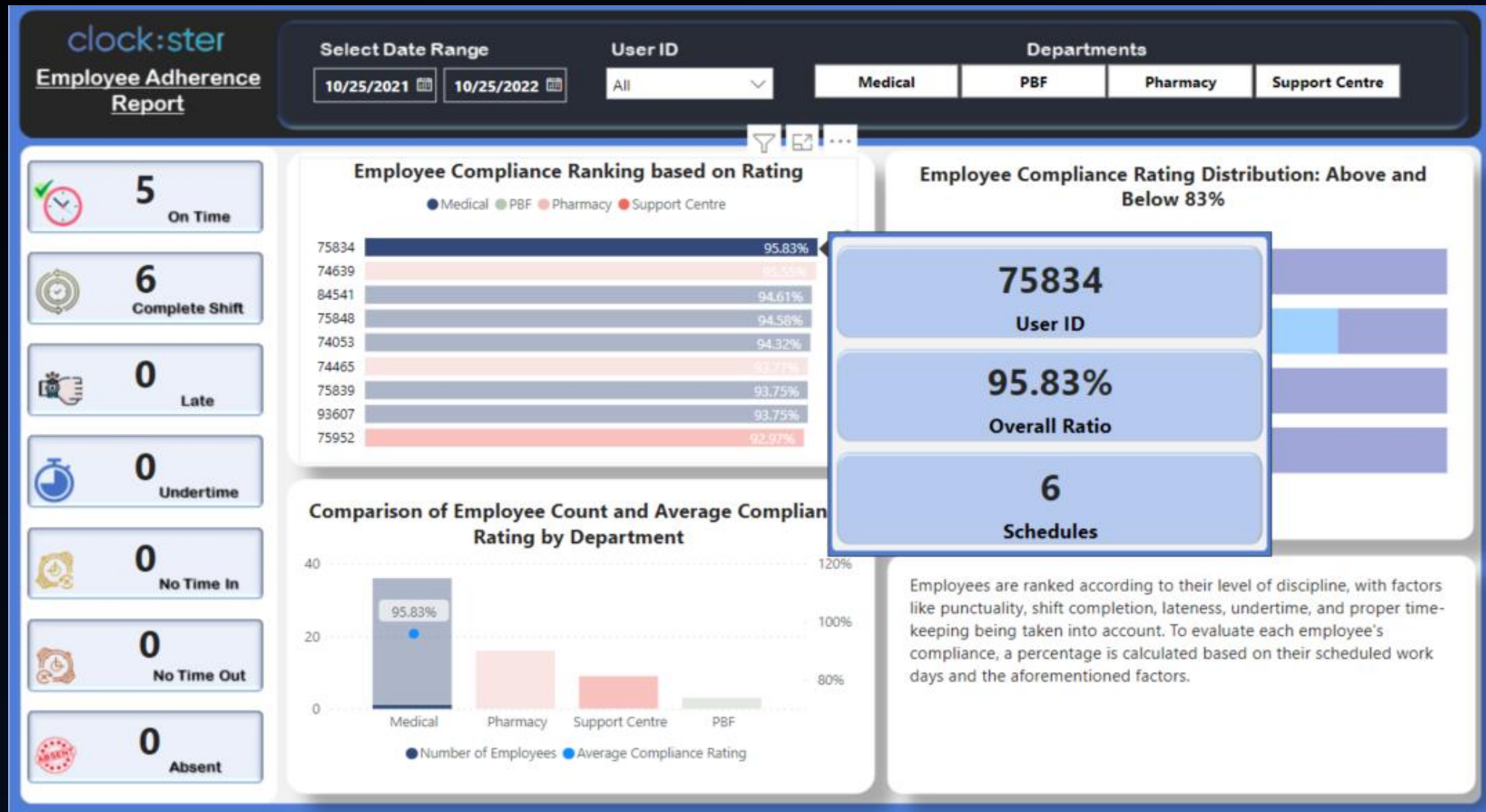
# FINDINGS

Q1. Identify the most disciplined and undisciplined employees and divisions.

Employee user\_id 75834 is the most disciplined employee with an outstanding compliance rate of 95.83% :

- 6 scheduled work days, likely indicating they are new to the company
- Been on time for 5 days, completed all 6 shifts
- Accurate records with their time-ins and time-outs
- Zero lates and absences.

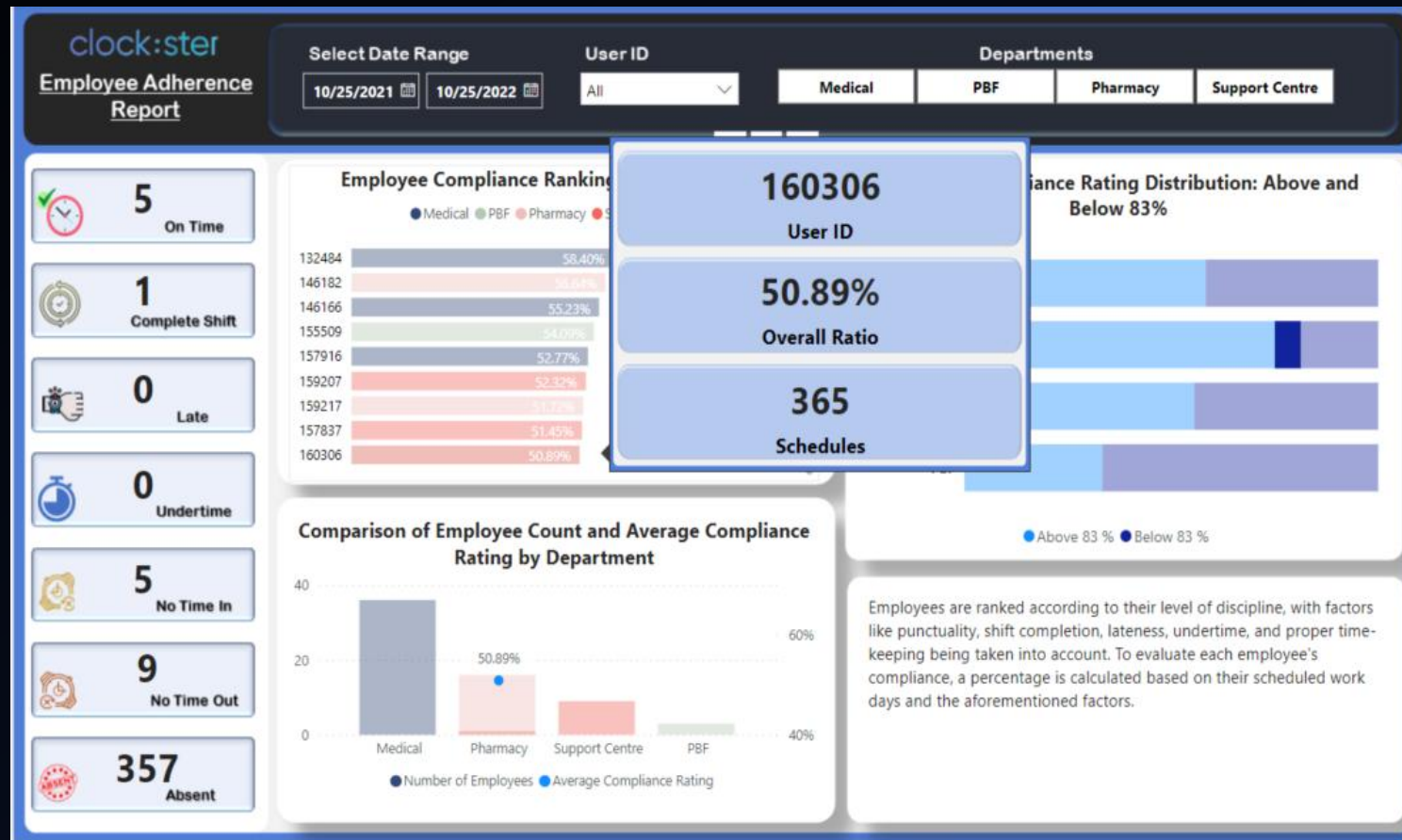
# FINDINGS





# FINDINGS

Employee user\_id 160306 is the most undisciplined employee with an lowest compliance rate of 50.89% :

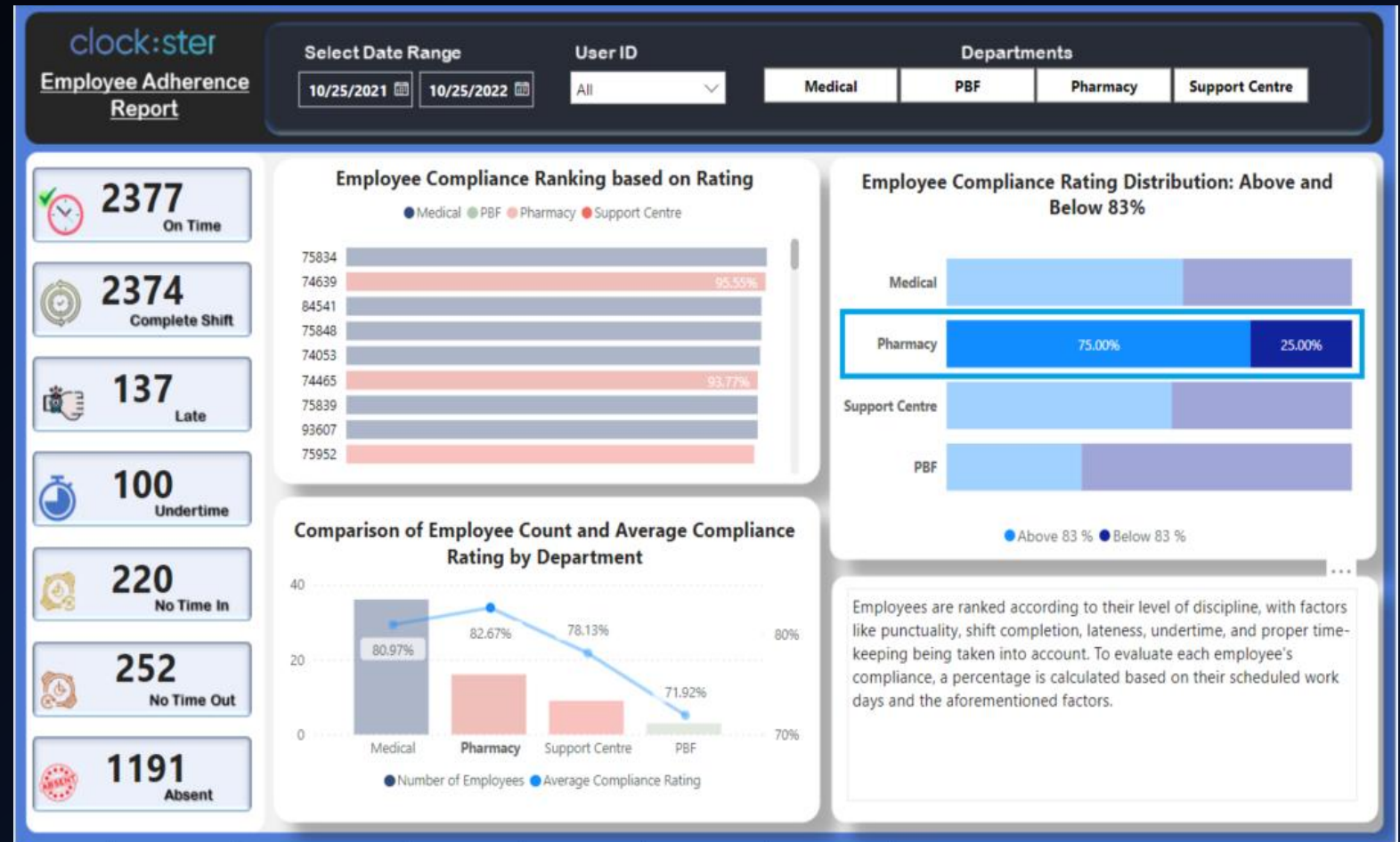


- Have 365 days recorded schedules but 357 of which were absent
- Only 5-recorded on-time attendance
- Only 1 completed shift
- Inconsistent with time-ins and time-outs (5 missed time-ins and 9 missed time-outs).

# FINDINGS

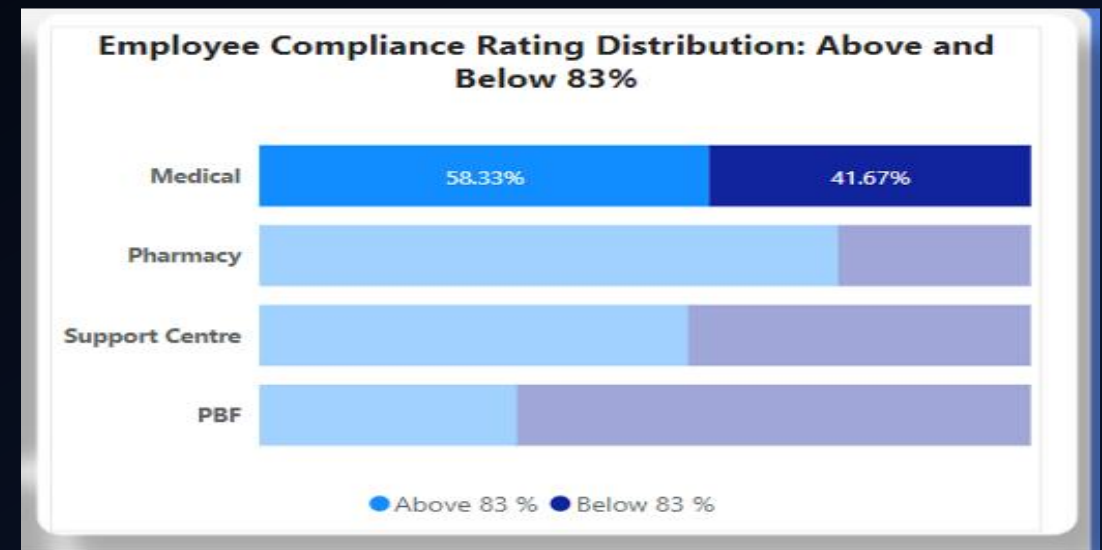
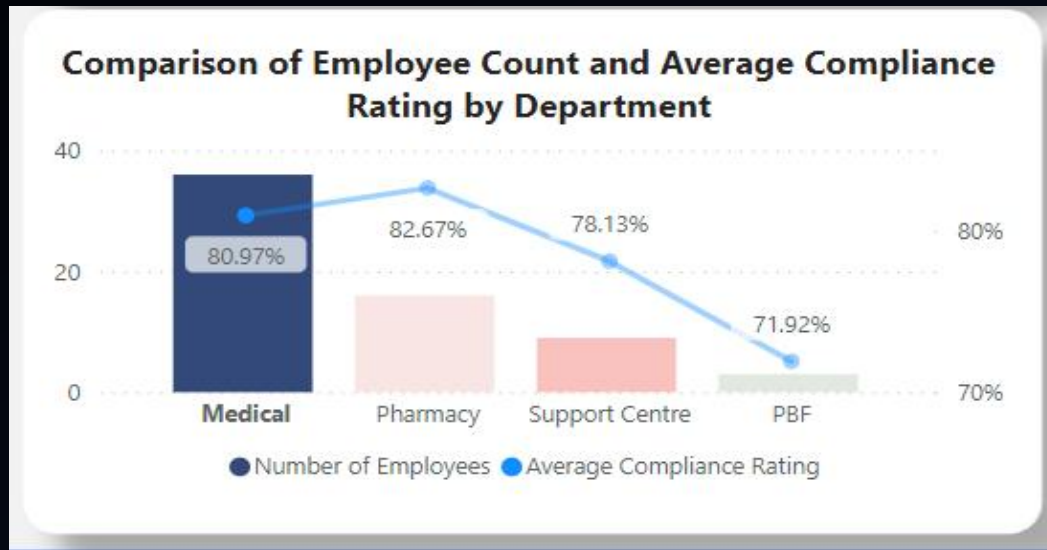
Pharmacy department has the highest level of disciplined employees.

- 75% of its total employees have high compliance rating of above 83% which might suggest that the department head is effectively monitoring attendance compliance to its employees.



# FINDINGS

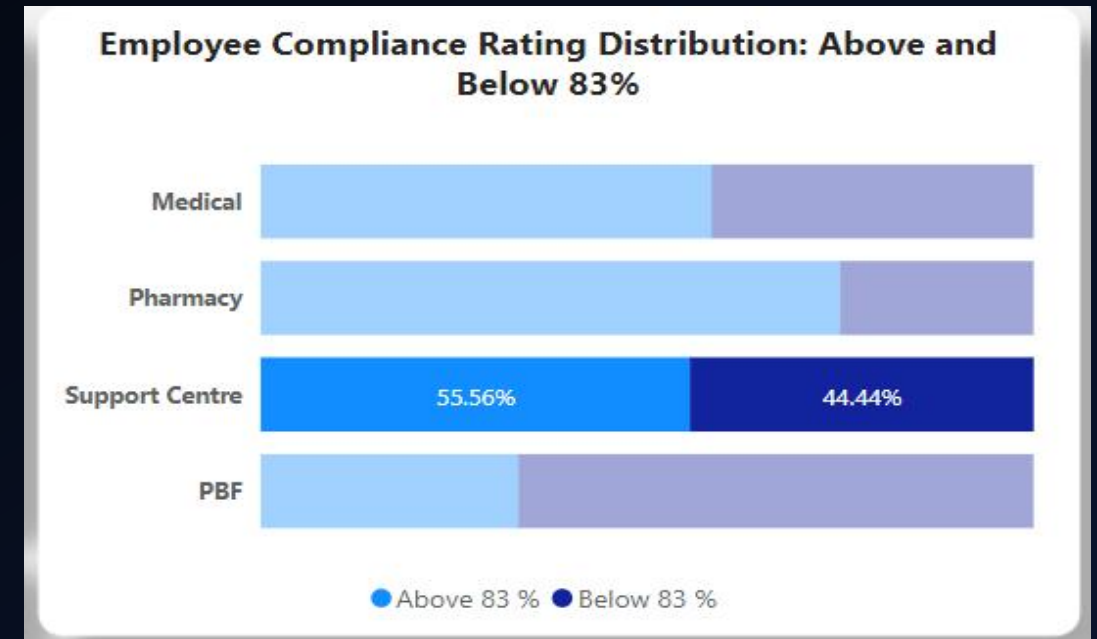
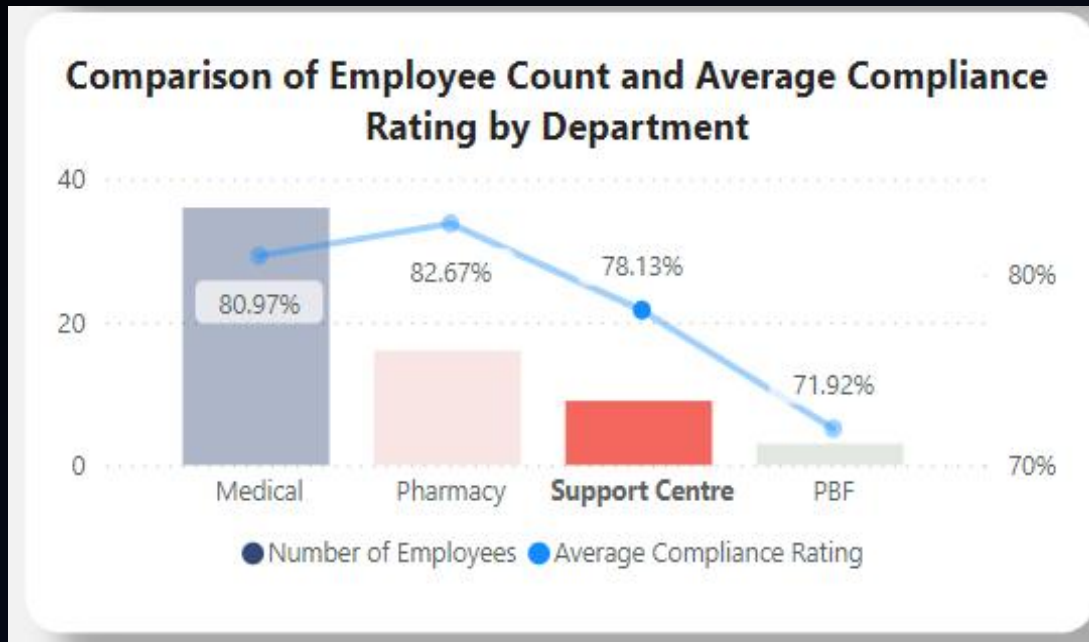
Medical department has larger number of employees than the pharmacy department.



- The size of the medical department may contribute to the low compliance rate.
- However, it can't be ignored that almost half of the staff in medical department has a low compliance rating which may indicate that department heads has a lack of effective monitoring to attendance compliance.

# FINDINGS

Support center department has fewer employees than medical and pharmacy departments, but it still faces challenges in monitoring employee compliance.

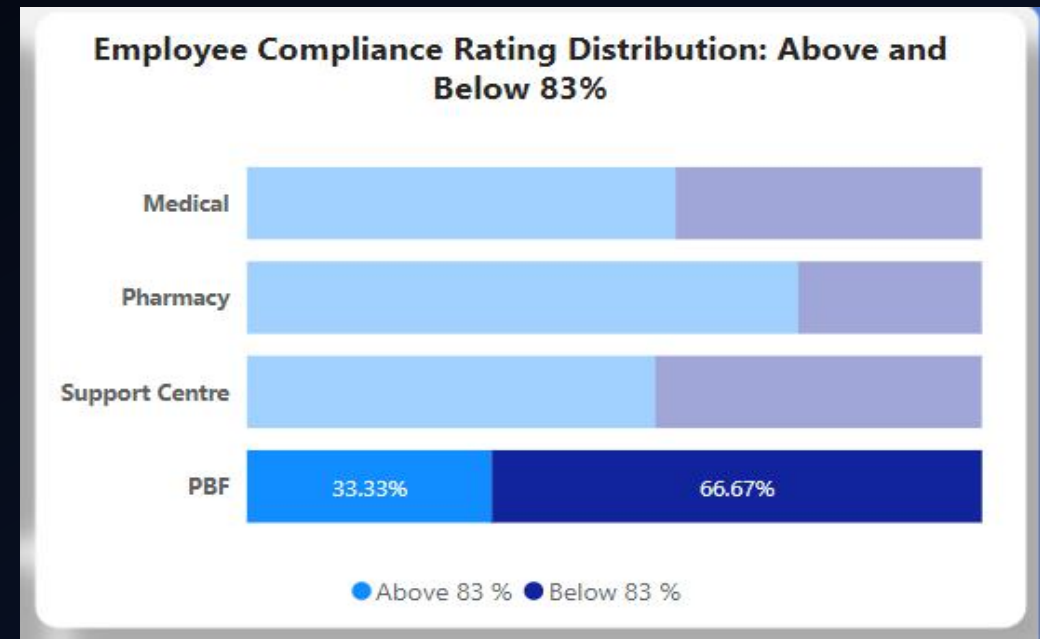
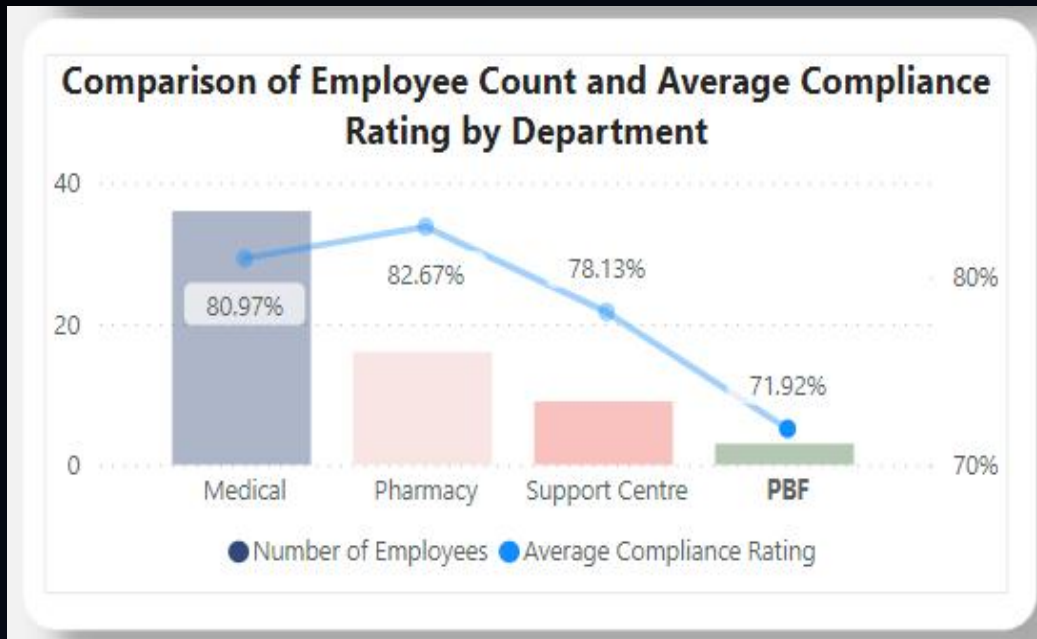


Support center department has a higher number of employees with low compliance ratings than the medical department which might suggest that they are the most undisciplined department.



# FINDINGS

PBF department has the lowest number of employees and also the largest amount of non-compliant employees



Though PBF department only have a small team of 3 employees, it might not affect the performance of the company overall. But it's still be a concern for the department to make sure they manage their employee compliance

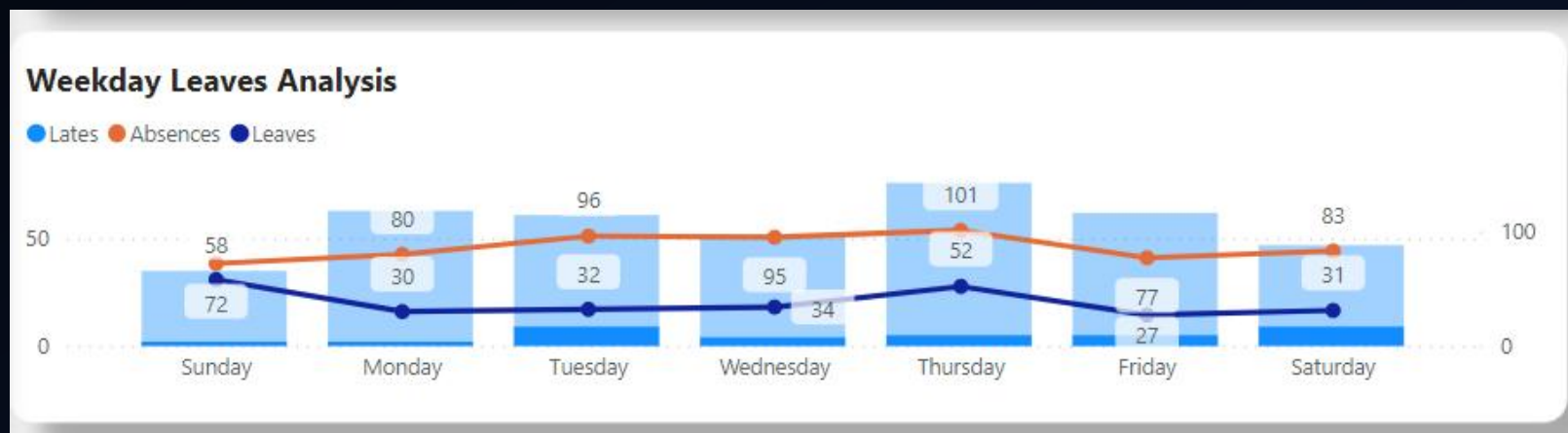
# FINDINGS

Identify the existing tendencies of employees being late (based on department, position, number of vacation days etc.)

- The observation made by the group suggests that the employees who commit misconduct are being forgiven or not strictly monitored by their department heads which contributes to their lack of discipline. This is a concerning issue as it implies that the tendency of employees to be undisciplined is only linked to the department they are in, rather than factors such as number of days off or salary. This suggests that the management within certain departments may not be effectively addressing issues of employee misconduct and compliance, leading to a lack of discipline among the employees within those departments.

# FINDINGS

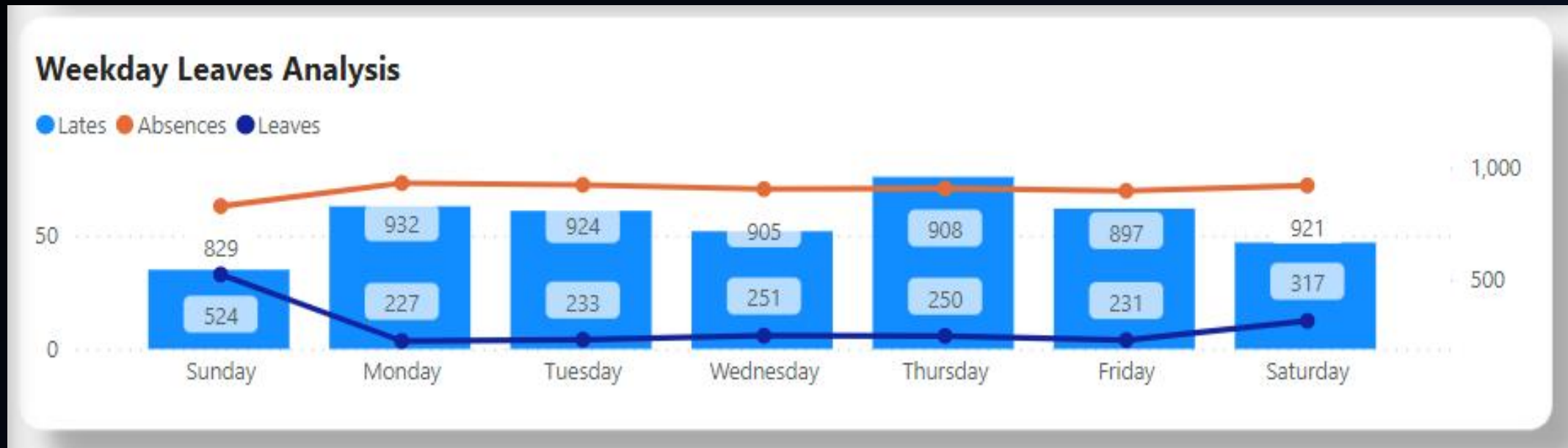
**Q2.** Create a visualization with the analysis of weekdays and months when the most employees were late/absent (either for vacation or sick leave)



## LEAVES and ABSENCES

- March 2022 has the most recorded count (264 & 604 respectively). In this month, Sundays have the most number of leaves filed (58). While Thursdays have the most number of absences (101).

# FINDINGS



## LEAVES and ABSENCES

- For the span of 12 months, Sundays still have the most leaves filed by employees (524) followed by Saturdays (weekends). This is understandable since this is also considered as family day. There's not much change on the number of absences except for Sundays being the lowest (829).

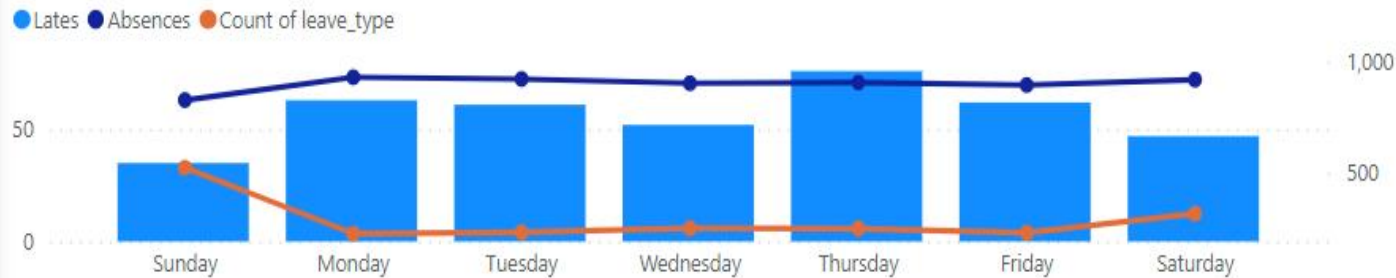


# FINDINGS

## Monthly Leaves Analysis



## Weekday Leaves Analysis

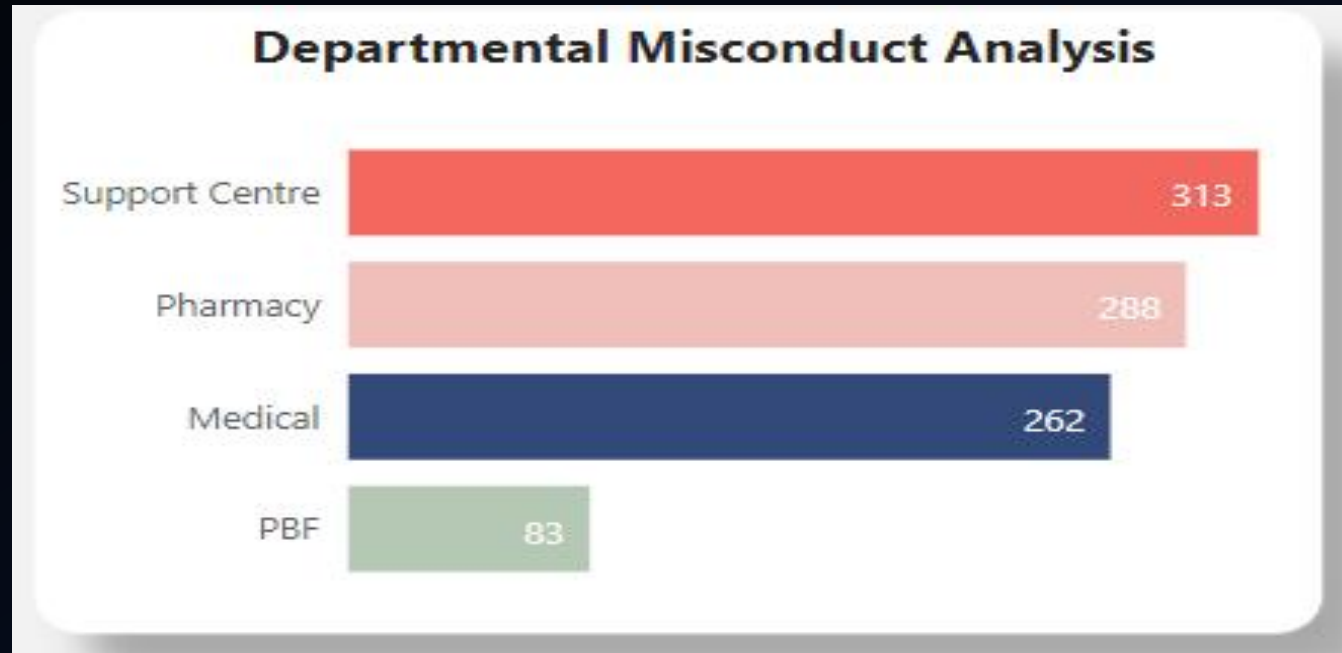


## LATES

- Records don't fluctuate much per month, except with the lowest recorded, August 2022 (9).
- For the span of 12 months, Thursdays have the most records. This may be due to traffic increase when approaching the weekend. Wednesdays have the least next to Sundays, this may be because traffic is not as heavy as the other days.

# FINDINGS

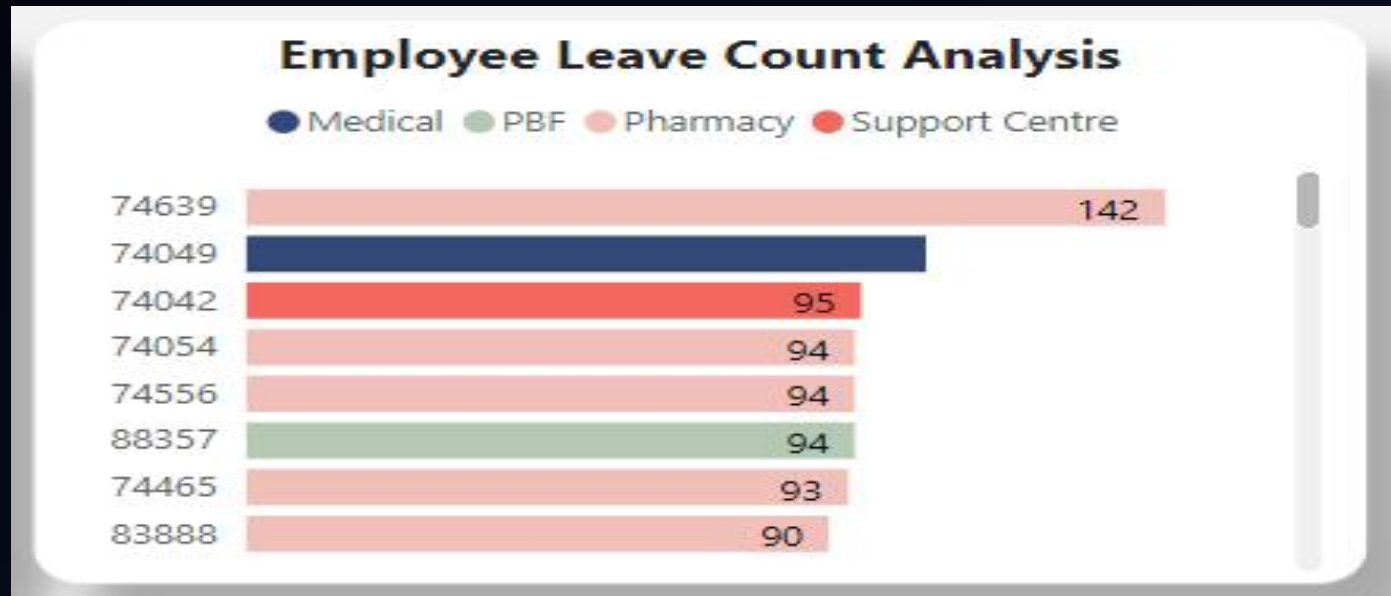
Q3.a. Which head of departments tend to forgive employees for lack of discipline?



Support Center has the most number of recorded misconducts among the departments.

# FINDINGS

Q3.b. Which head of departments tend to forgive employees for lack of discipline?



Employees from Pharmacy (Most number of leaves) and they account for the majority of top spots. Though there is no evidence of different treatment as there is no penalty, deduction or termination.

# FINDINGS

In addition to the inquiries raised by the CEO, based on our analysis, the team found that there is no evidence of favoritism in the company. We found that:

- The data source lacks information that would indicate any special treatment for certain employees.
- It is evident that there is no special treatment given to a few employees, as everyone is forgiven for being tardy.
- No deductions on salary for tardiness.
  - Example: **Position: Perawat (Nurse)**  
Four nurses earn a monthly salary of 1.80M IDR despite varying levels of tardiness, while six earn 1.30M IDR and their salary also remains unchanged despite tardiness.
- Furthermore, out of 91 leave applications, only 6 were rejected, with 32 compensatory leaves, 26 sick leaves (20 of which were accepted and 6 were rejected), 13-day offs, 9 annual leaves, 8 unpaid leaves, and 3 special leaves, all accepted.

# RECOMMENDATIONS

- Implement an employee attendance policy that contains all the attendance related information like schedules, leaves, absenteeism, negligence on time-in/time-out logs, disciplinary actions , etc. and ensure that every employee is aware of this policy and what they need to avoid and the consequences.
- Department heads should conduct a regular monthly attendance performance.
- Give penalties/deductions to every lates, missed time-ins/time-outs, unapproved leaves incurred by the employee.
- Reward employees with excellent attendance performance.
- Allow a flexible working schedule on weekends to improve absenteeism, tardiness, leaves, etc. that fall on these days.

# DATA ANALYTICS TEAM – GRP 12

## Project Lead:

Reynard Kevin Francisco

## Members:

Gideonjunn Gacus

Venice Campos

May Ramos

Mavel Espenilla

Rhemo Bacerra



THANK YOU!

For any questions or clarifications, feel free to reach us out at  
[dataanalyticsdept@clockster.com](mailto:dataanalyticsdept@clockster.com)