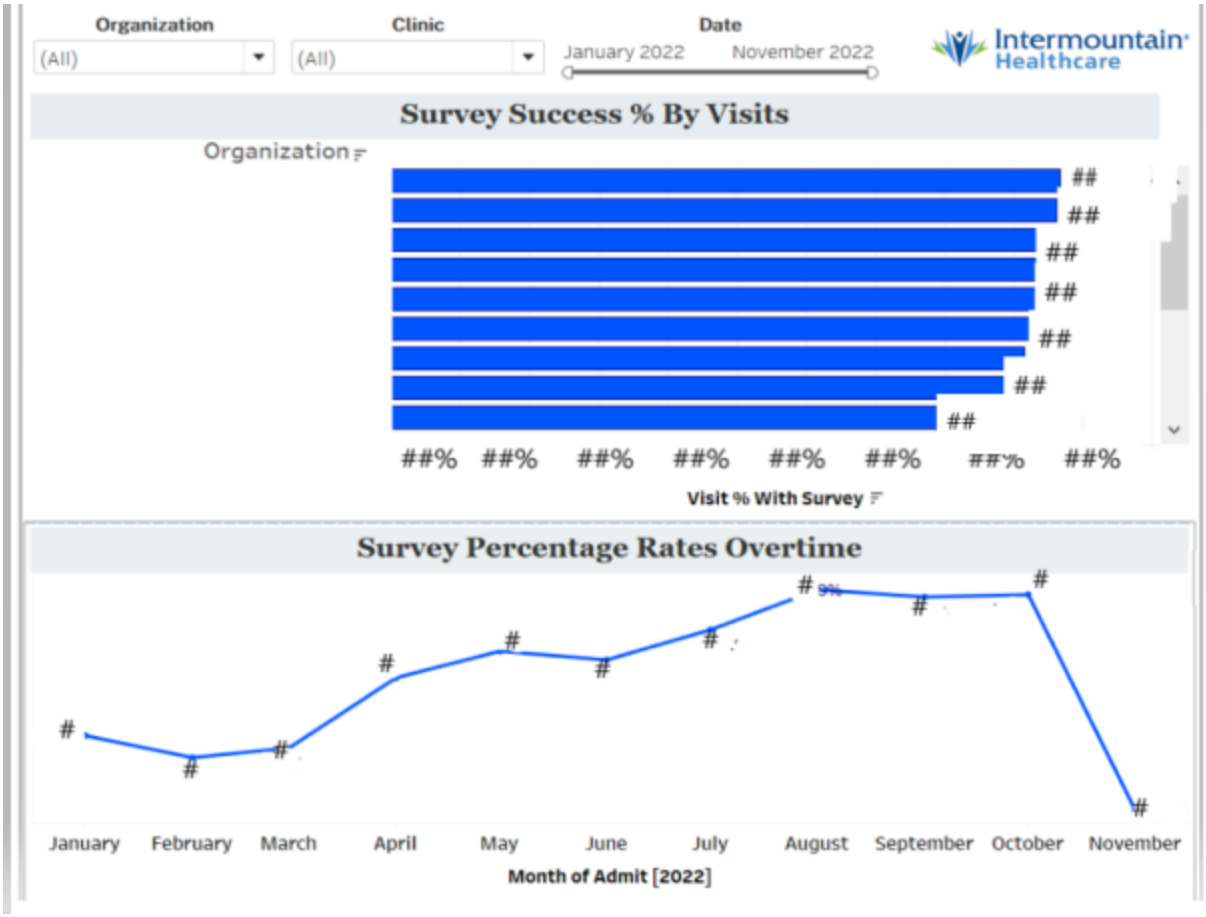
Survey Success Rates Dashboard – Intermountain Health



Situation:

As a member of the team, my role was to utilize SQL and Tableau to address a specific problem related to survey success rates. The problem was that the survey success rates did not meet the desired targets, which impacted both the company's customers and stakeholders/shareholders. The low success rates meant that valuable feedback from patients was not being captured effectively. The stakeholders, including physicians and operations staff, were unable to make informed decisions based on the incomplete data, leading to potential missed opportunities for improving services and patient satisfaction. Solving this business problem was important to enhance the overall performance of the company and ensure better decision-making.

Task:

- Cleaning the data in SQL by removing duplicates, handling missing values, and ensuring data integrity.
- Performing data analysis using SQL's aggregations, filtering functions, and JOINs to answer client questions.
- Visualizing the findings using Tableau to create interactive visualizations and a dashboard.
- Incorporating calculated fields in Tableau to perform final calculations.

Actions:

In SQL, I cleaned the data by eliminating duplicates, addressing missing values, and ensuring data integrity. To perform comprehensive data analysis, I leveraged SQL's filtering functions, such as the WHERE clause followed by multiple AND statements, allowing me to efficiently filter the data based on specific criteria. Additionally, I utilized JOINs to combine related tables and subqueries to answer complex questions and further filter the data as needed.

```
WITH visits AS
(
SELECT
  pat.empi
  , e.fin_nbr
  , e.admit_dts
  , e.encntr_id
  , lpc.organization_nm
  , lpc.nurse_unit_dsp
  , TRUNC(saf.sched_pt_begin_dts) AS visit_dt
FROM
  cerner_dm.encounter e
  JOIN mstr_location.location_patient_care lpc ON lpc.location_mk = e.location_mk
  JOIN mstr_person.patient_full pat ON pat.person_mk = e.person_mk
  JOIN cerner_dm.schedule_appt_flat saf ON saf.encntr_id = e.encntr_id
    AND saf.sch_state_ref IN (4536 /*Checked In*/, 4537 /*Checked Out*/)
WHERE 1 = 1
  AND e.admit_dts >= DATE '2022-01-01'
  AND e.admit_dts <  SYSDATE
```

I Incorporated calculated fields in Tableau to perform final calculations. I used LOD calculations for the survey count and the visits count as a first step.

LOD Survey Count

```
{ FIXED [FIN_NBR] : [Survey Count] }
```

LOD Visit Count

```
{FIXED[FIN_NBR] : [Visit Count ]}
```

The next step was to use the LOD calculations to get the survey success rates.

Survey Success

```
IF [LOD Survey Count] = [LOD Visit Count] THEN 1 ELSE 0 END
```

Lastly, the survey success was used for an additional calculated field to determine the survey success percentages.

I utilized Tableau to visualize the findings, creating interactive visualizations and a dashboard. To represent the survey success rates for each location, I employed a simple bar chart. Additionally, I incorporated a line graph to display relevant trends. The visualizations were done with calculated fields and location names derived from the survey data. I also included necessary filters to facilitate easy data exploration and filtering by users.

Result:

The analysis revealed several insights regarding survey success rates. We identified specific patient demographics that were more likely to provide successful survey responses. Additionally, we discovered operational factors, such as appointment wait times, that had a significant impact on survey outcomes. These findings were applied to guide decision-making for physicians and operations staff. By addressing the identified factors, the company was able to increase survey success rates, leading to a more comprehensive and representative data set for analysis.

The approach taken successfully solved the problem by enabling informed decision-making based on accurate data. The Tableau dashboard provided an intuitive platform for stakeholders to monitor and evaluate survey success rates. The increased success rates allowed for a more reliable assessment of patients.