Introduction:

The Healthcare Data Analysis Dashboard on Power BI offers an in-depth examination of patient health data spanning from 2018 to 2021. Divided into two main sections — "Summary" and "Detailed view" — this report utilizes visualizations and DAX calculations to unveil critical trends and key performance indicators (KPIs), enabling healthcare providers to make informed decisions and optimize patient care strategies. The dataset that is taken here is from an imaginary hospital that includes waiting period for a patient to meet a doctor corresponding to the speciality department.

Data Collection:

The dataset comprises various attributes including patient demographics, medical conditions, admission details, and more. It's a synthetic dataset designed for educational and non-commercial use, ensuring privacy and compliance. The data cleaning is done using Microsoft Excel, removing incomplete records and irrelevant columns to enhance analysis accuracy.
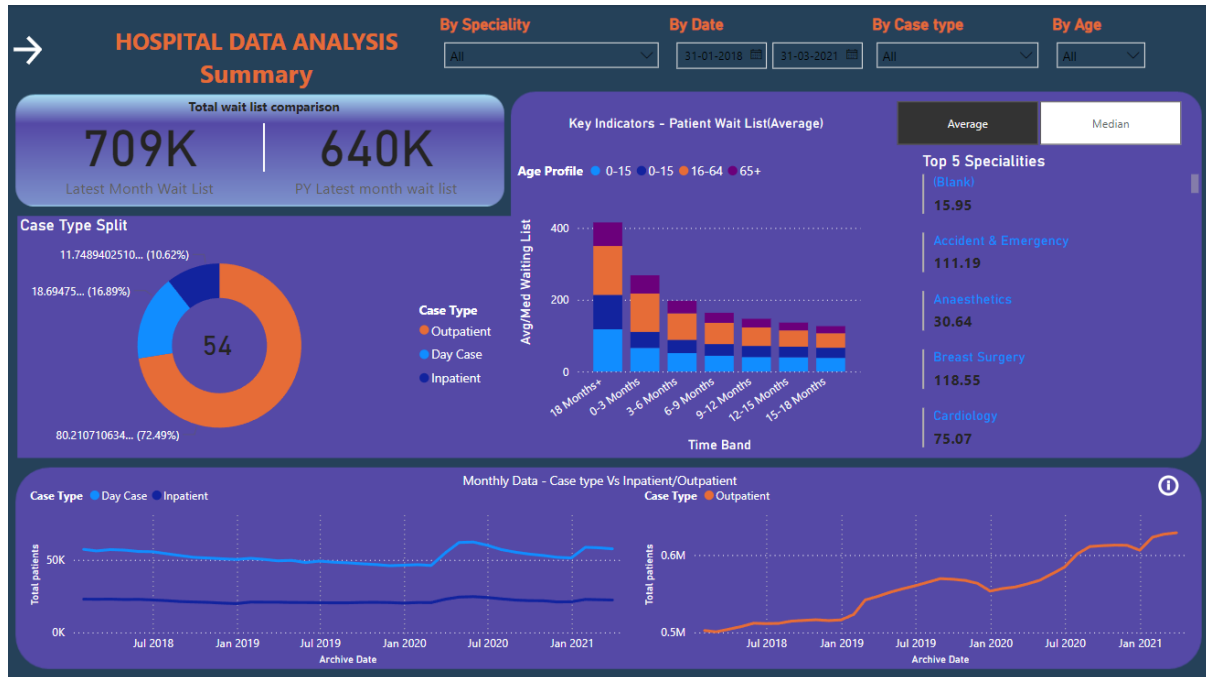
Data Preparation for Analysis using Power BI:

- Creating Separate Tables: A Date table is created by clubbing the synthetic data to facilitate temporal analysis, linked with the main dataset. Additionally, "Mapping speciality" table is prepared for visualisations.

- Creating measures: New calculations are measured to calculate Average waiting time,Median waiting time that facilitates calculation to be made easily. . Various KPIs are calculated using DAX expressions such as Count, Distinct Count to name a few.

- Drilldown: Drilldown is used to create a tooltip when the end user navigates through the charts.

Analysis and Visualizations for the Report:

The report is structured into two sections for clarity:

1. Summary page:

2. Detailed page:

DAX functions used in the report:

- **Average**

   Average Waiting List = AVERAGE(All_Data[Total]) – This DAX function was used to get average of waiting waiting list Total of all patients.

- **Median**

   Median Waiting List = MEDIAN(All_Data[Total]) – This DAX function was to get the median of the total waiting list of all patients.

- **CALCULATE**

   1. Latest Month Wait List = CALCULATE(SUM(All_Data[Total]),All_Data[Archive_Date]=MAX(All_Data[Archive_Date]))+0 – This DAX function is used to calculate the Latest month waiting list.

   2. PY Latest month wait list = CALCULATE(SUM(All_Data[Total]),All_Data[Archive_Date]= EDATE(MAX(All_Data[Archive_Date]),-12))+0 -This DAX function is used to calculate the previous month waiting list from current month at any given time.

- **SWITCH**

   Dynamic Title = SWITCH(VALUES('Table'[Calc Method]),"Average","Key Indicators - Patient Wait List(Average)","Median","Key Indicators - Patient Wait List(Median)") – This DAX function is used to create a switch between Average and Median data.