



INPATIENT MEAL SURVEY

WHAT IS THE AGENDA?

- Introduction
- Project Overview
- Data
- Methodology
- Analysis
- Conclusion

MEET THE TEAM



#DataAnalyst

Methodology



#DataAnalyst

Technical



WHAT IS OUR MOTIVATION?



Quality of food provided to patients has a direct impact on their health.



There has been a constant drop in the nutritional content of the food provided by hospitals nowadays.

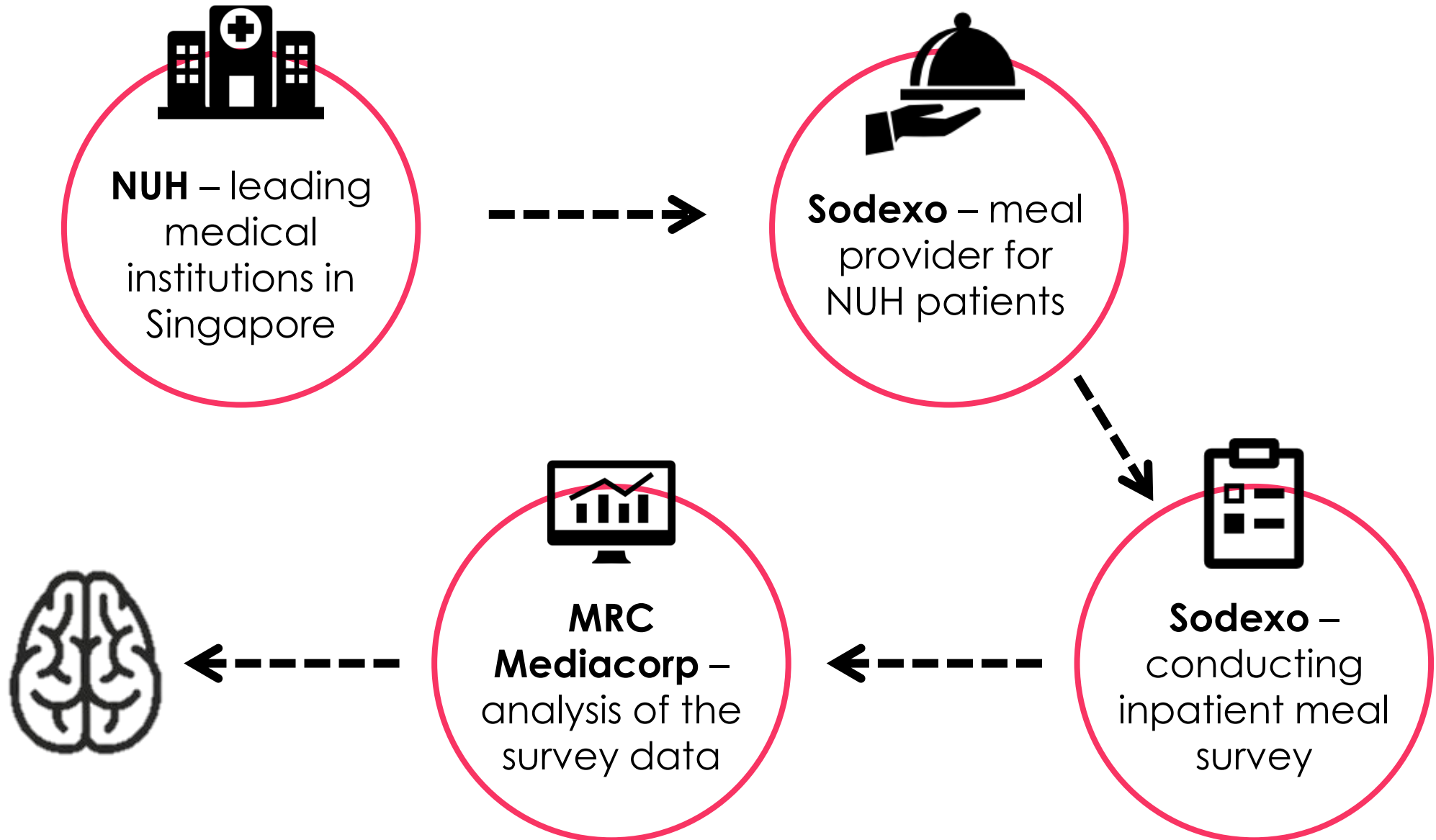


29% of previously well-nourished patients faced a decline in their nutritional content after being admitted to hospitals.



Food services should be given higher priority in hospitals.

WHERE DID WE FIND THE PROJECT?



WHAT IS THE SURVEY?

FACTORS

Temperature of Food
Timeliness of Meals Served
Accuracy of Meals Served
Courtesy of the Food Service Staff
Portion Size of the Meals Served
Variety of the Food Provided in menu
Presentation of the Meals Served

IMPORTANCE

- Not Important At All
- Not Important
- Somewhat Important
- Important
- Very Important

SATISFACTION

- Very Poor
- Poor
- Satisfactory
- Good
- Excellent

5 Point Likert Scale

WHAT IS OUR PROJECT GOAL?



Online Dashboard

Automated Dashboard to show appropriate visualization for the analysis of the meal surveys

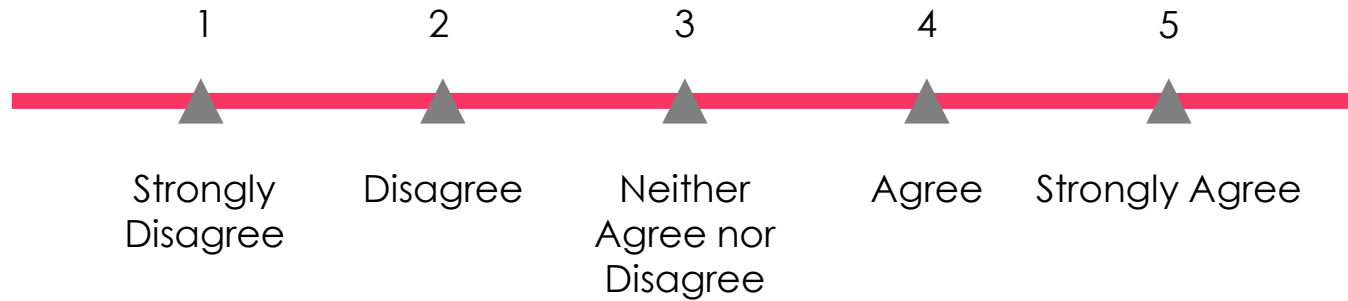
Service Gap Analysis

Which factors are most important but patients are dissatisfied with?

Factor Analysis of different dimensions

Which wards, or patient types have the largest service gap among the factors?

HOW IS LIKERT DATA DIFFERENT?



Common Mistake

Treat Likert as continuous or discrete data.
Use mean as the measure for analysis.



Why is it a Mistake?

Measure for feelings, attitudes and personality traits.
No measurable between the values.

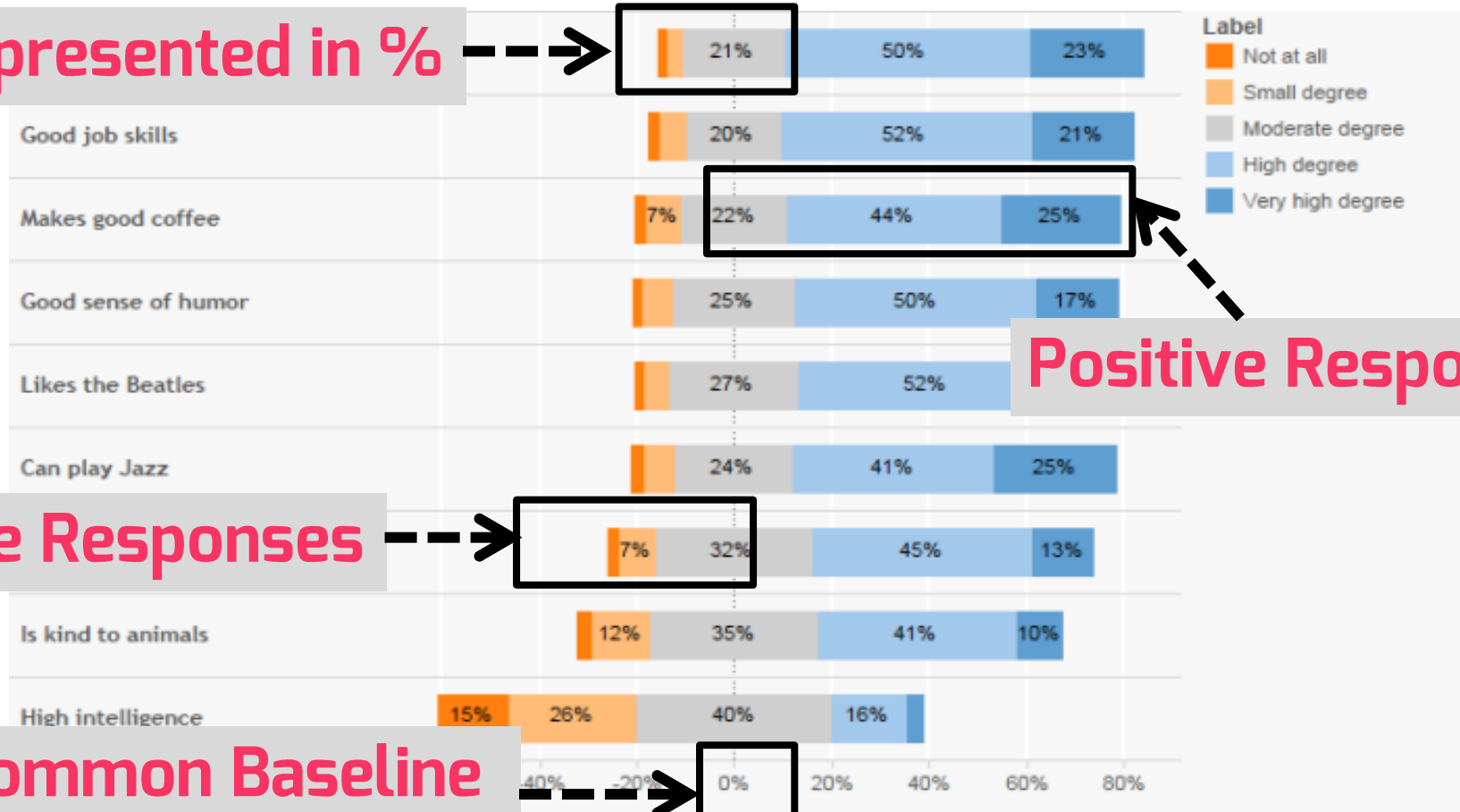


Appropriate Way

Frequency Table.
Visualize the distribution.

HOW DO WE VISALIZE THE DISTRIBUTION?

Data represented in %



Positive Responses

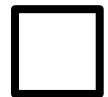
Negative Responses

Common Baseline

0%

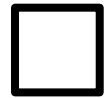
WHAT DATA ARE WE USING?

Monthly Survey Data collected by 3 interviewers from 50 patients each.



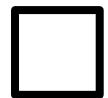
8 factors

There are 8 factors which rated by the patients.



Rating scale

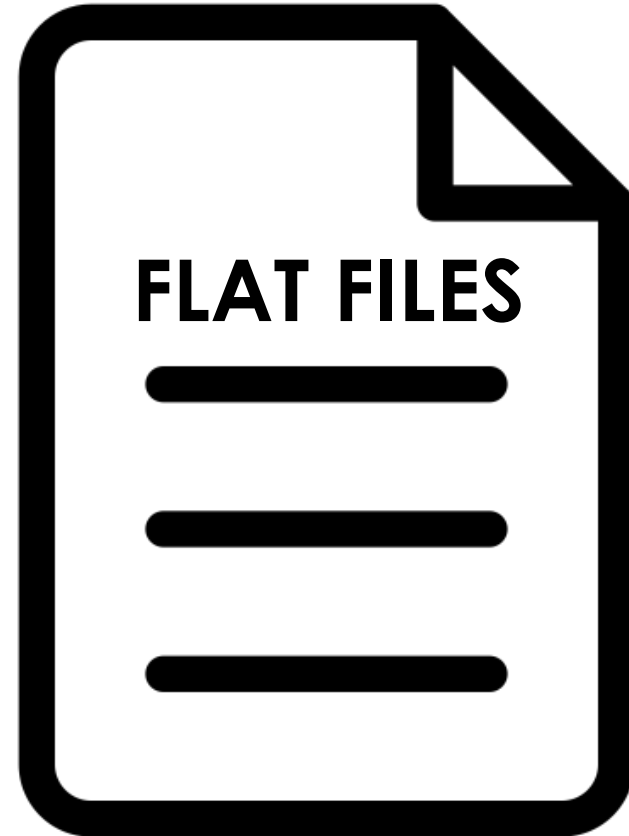
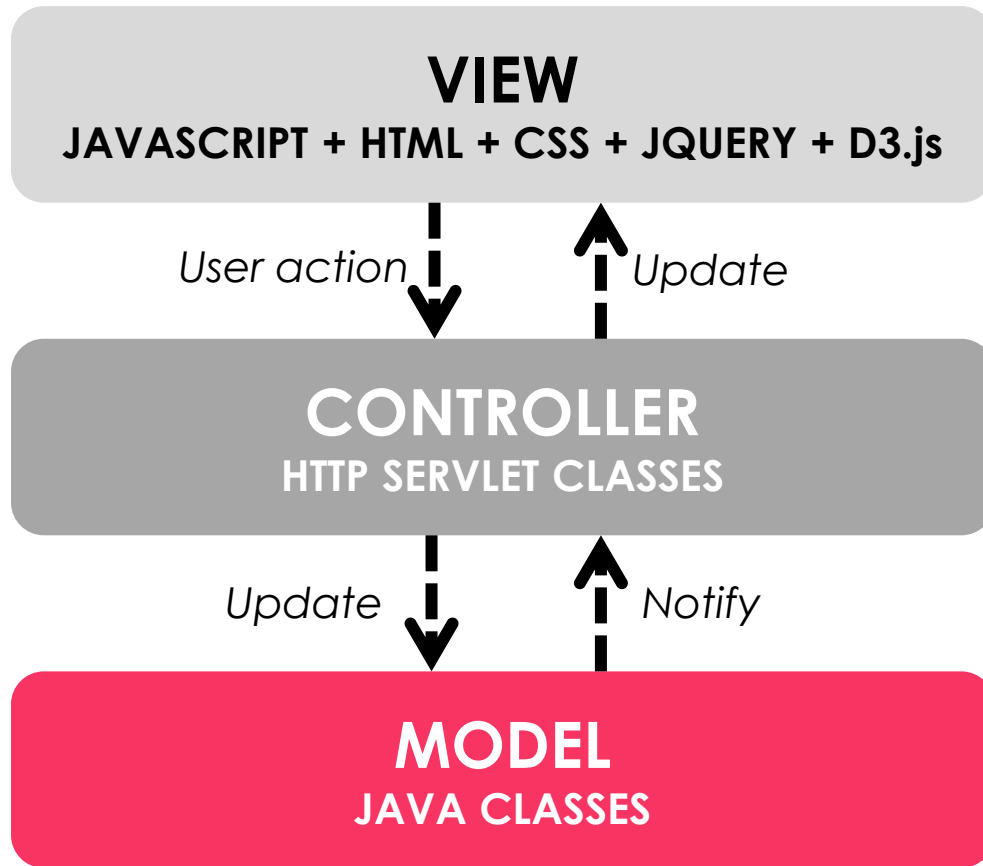
Importance & Satisfaction rating for each factor.



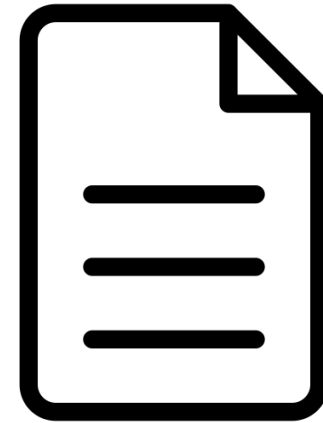
Patient Description

Information about the patient like ward, payment type, diet type etc.

ARCHITECTURE DIAGRAM



TECHNOLOGIES USED



FLAT FILES



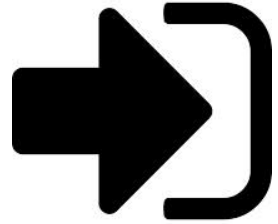
**commons
fileUpload**

LIBRARIES

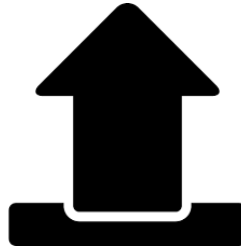


LANGUAGES

METHODOLOGY



Admin Login

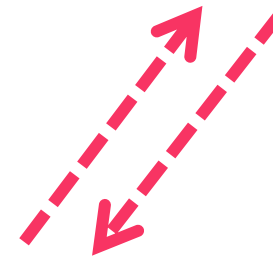


File Upload

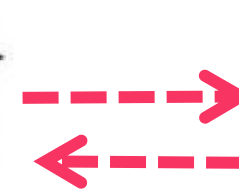
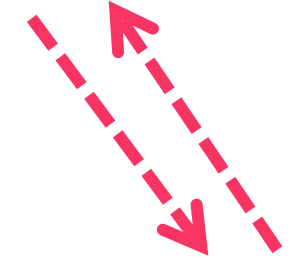


Overall Visualization

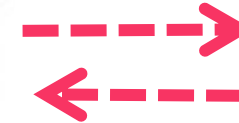
- **Service Gap Analysis of Overall Visualization** to figure out the most important factors for patients & their performance
- **Drill down to important factors** to see which ward, diet or patient type is most dissatisfied
- **Filters** for ward, patient and diet type to analyze the factors



Drill Down to Factors



Filter by Ward, Diet etc

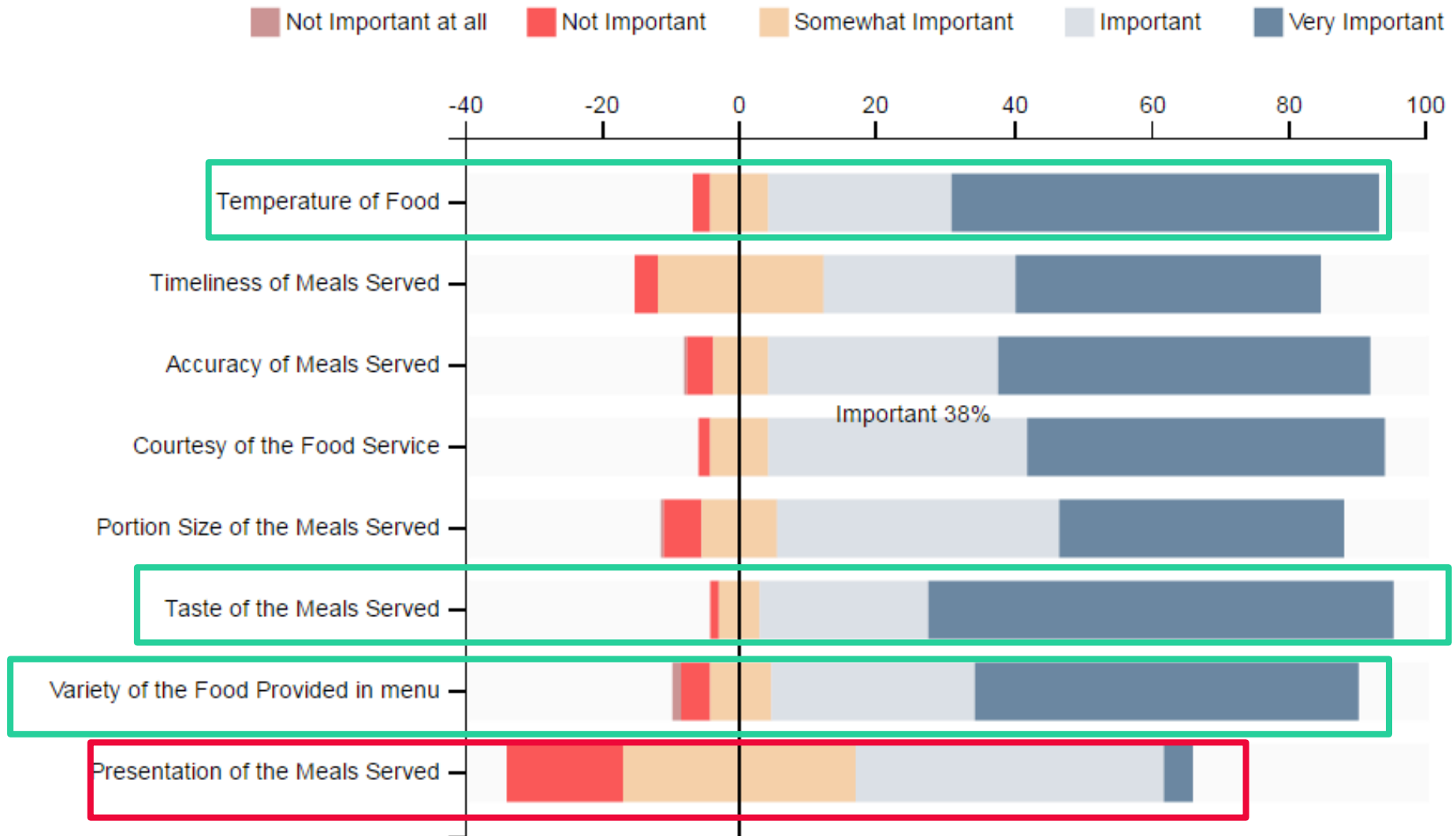




DEMONSTRATION

ANALYSIS

Overall Importance of Factors



ANALYSIS

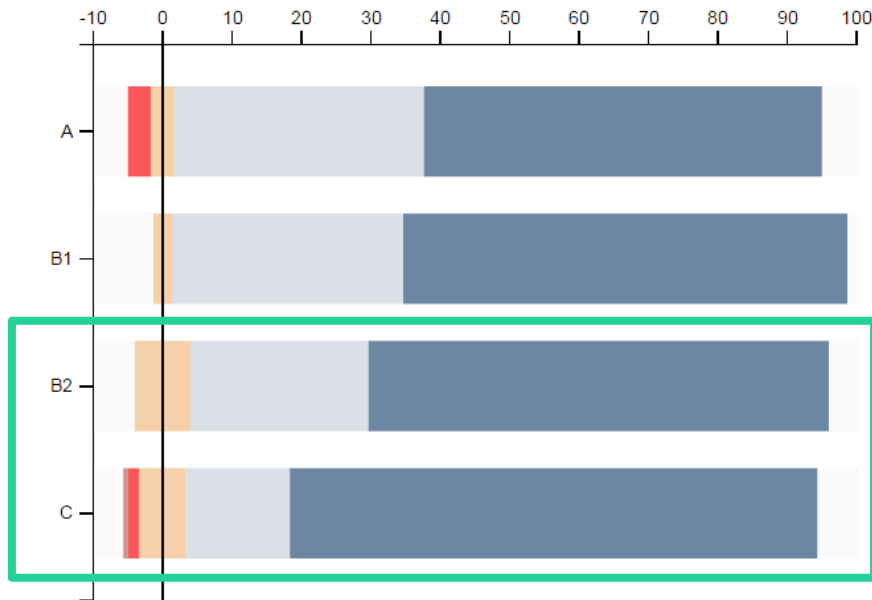
Overall Satisfaction of Factors



ANALYSIS

Analysis of 'Taste' factor by Ward

Not Important at all Not Important Somewhat Important Important Very Important



Importance

Very Poor Poor Satisfactory Good Excellent



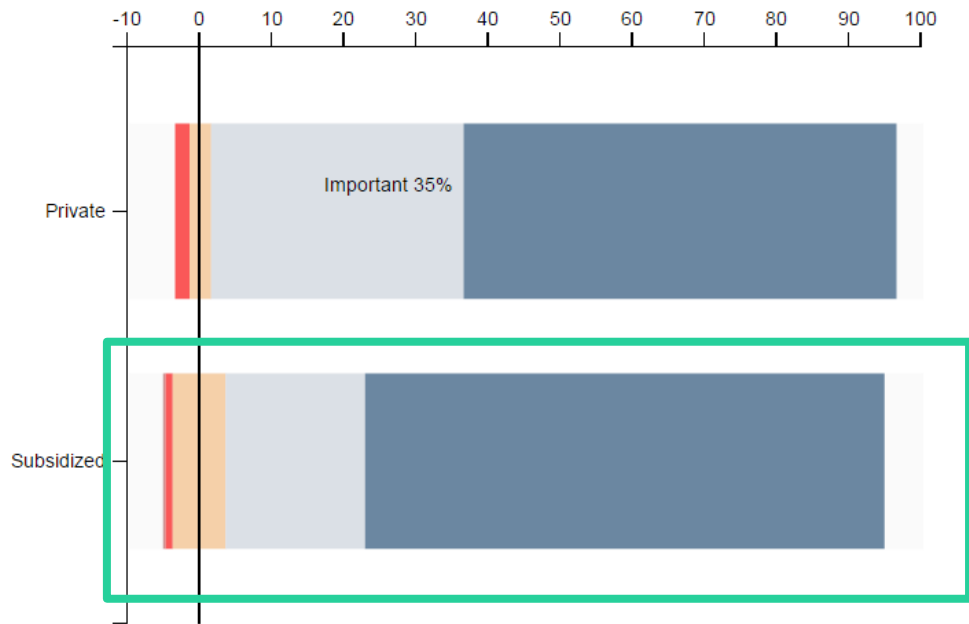
Satisfaction

ANALYSIS

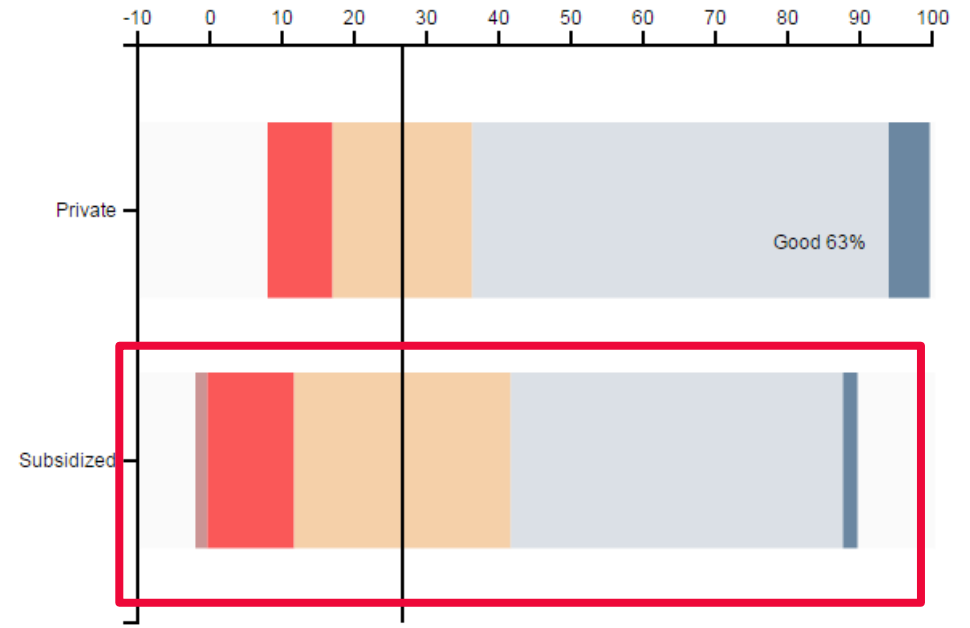
Analysis of 'Taste' factor by Patient Type

Not Important at all Not Important Somewhat Important Important Very Important

Very Poor Poor Satisfactory Good Excellent



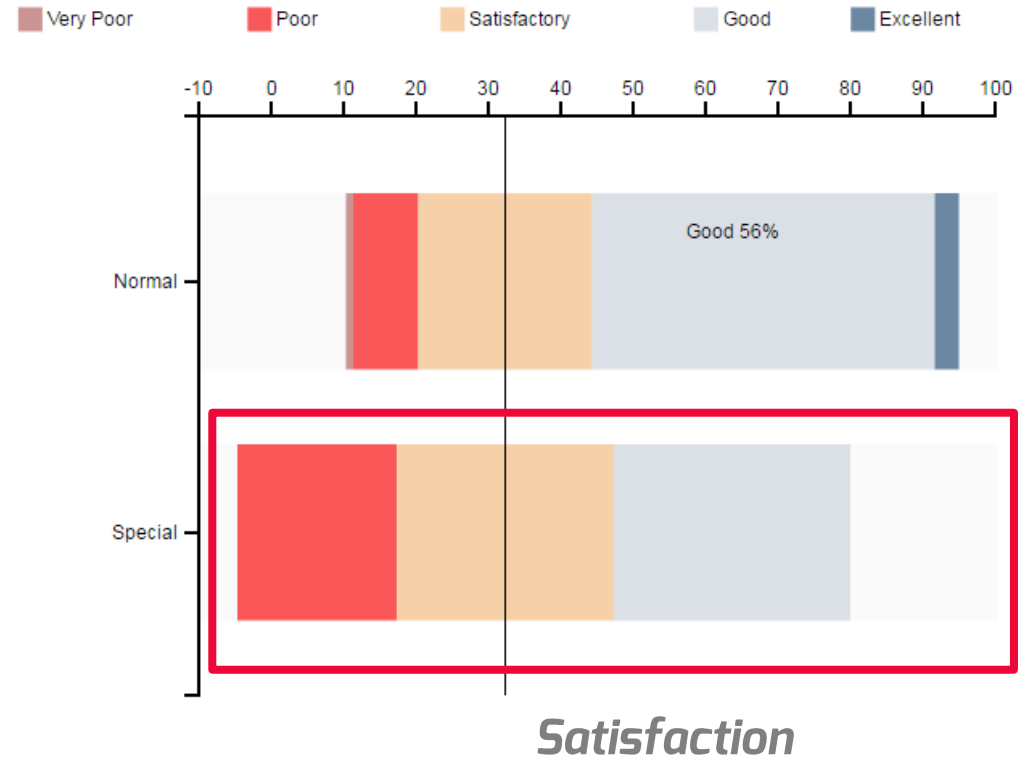
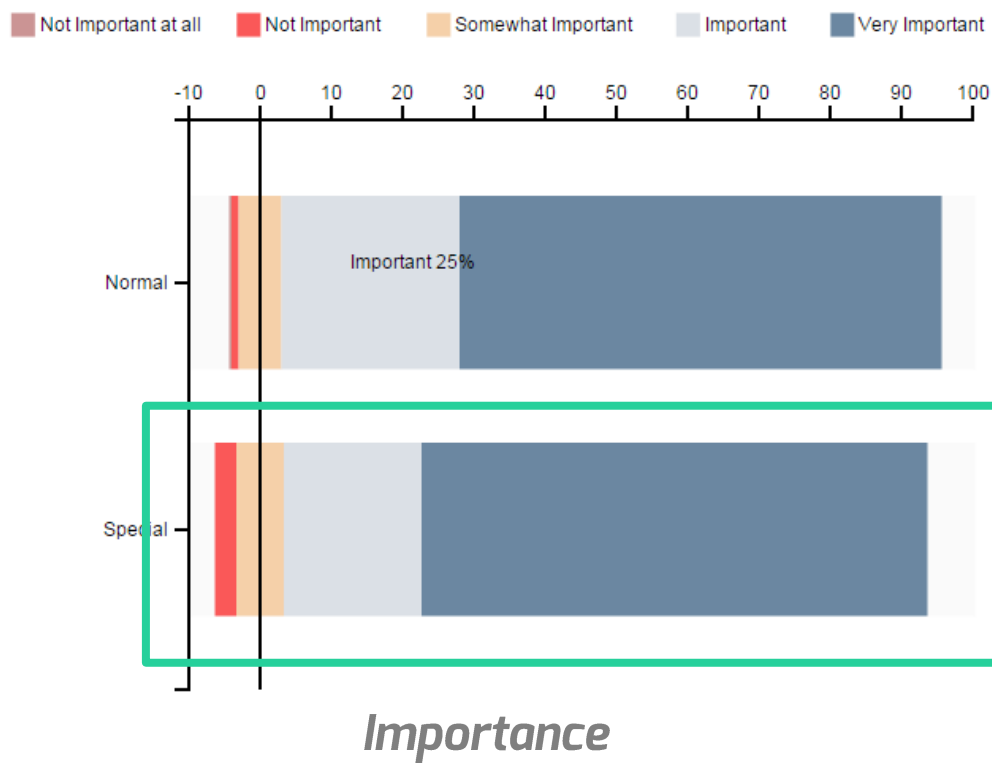
Importance



Satisfaction

ANALYSIS

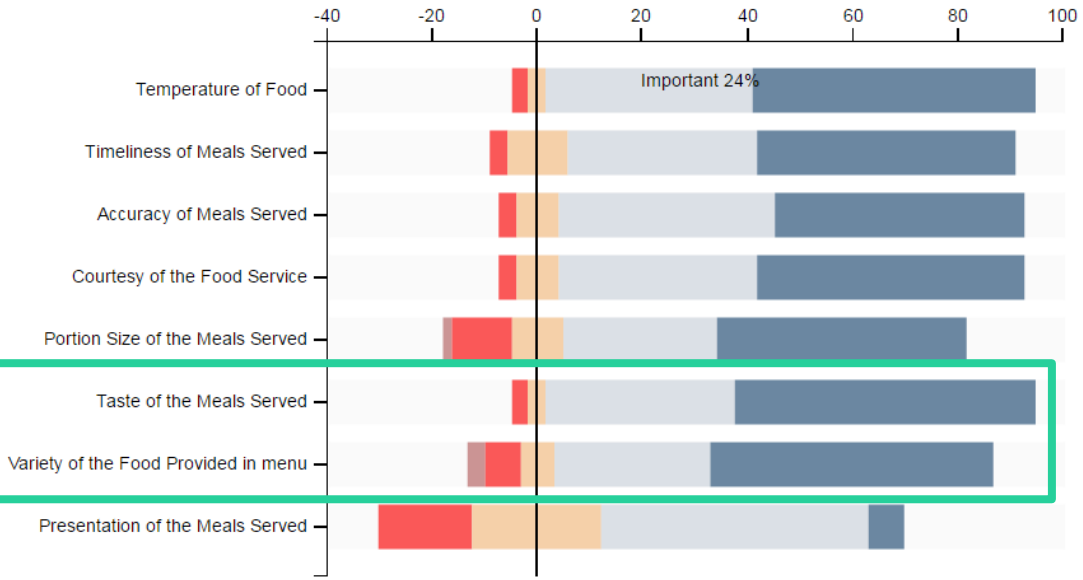
Analysis of 'Taste' factor by Diet Type



ANALYSIS

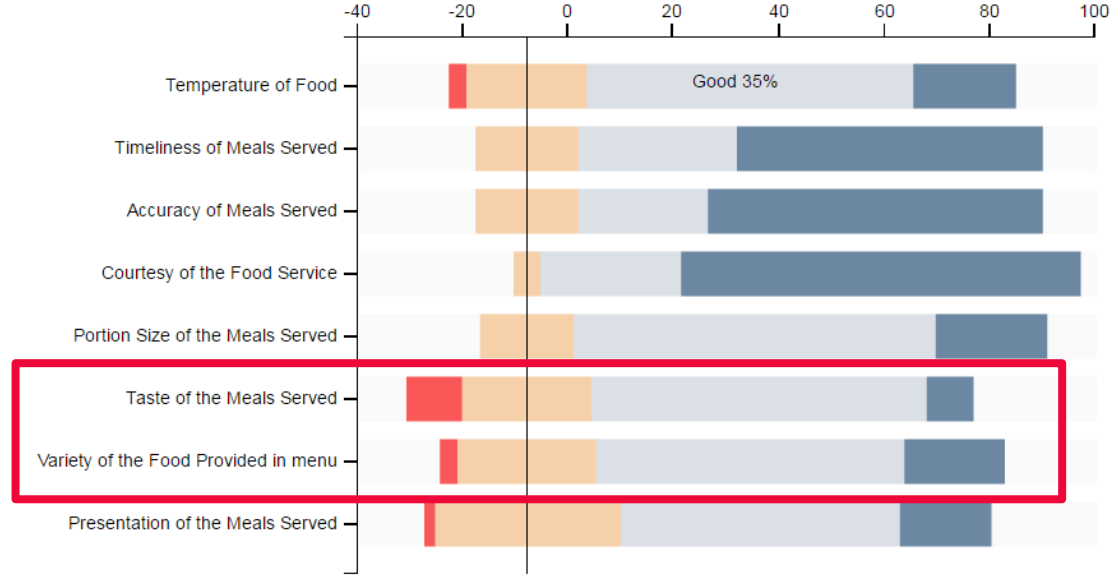
Analysis of Ward A

Not Important at all Not Important Somewhat Important Important Very Important



Importance

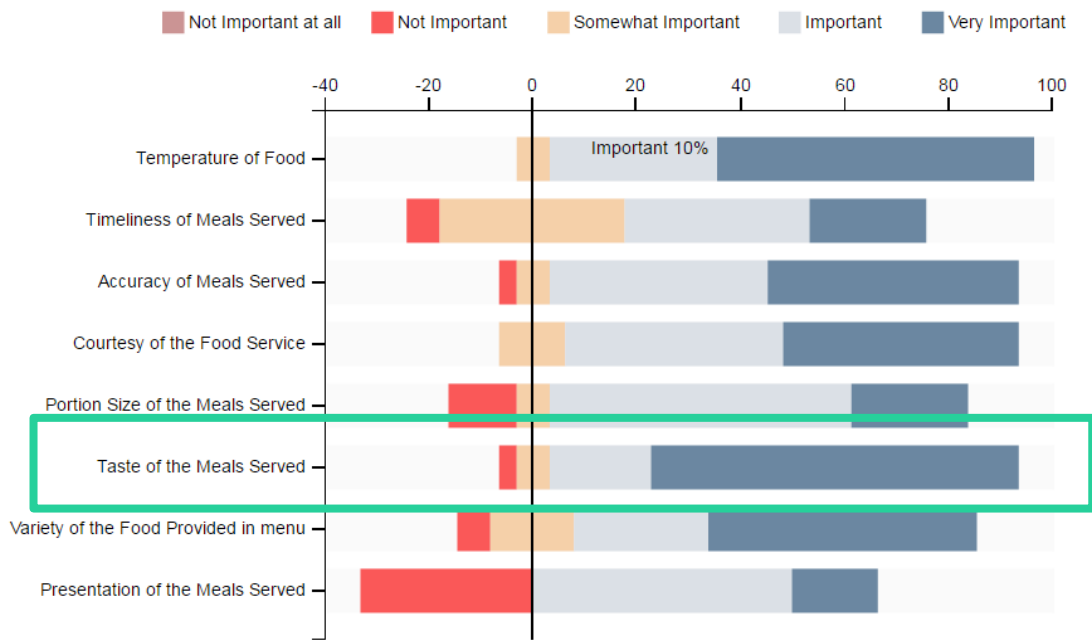
Very Poor Poor Satisfactory Good Excellent



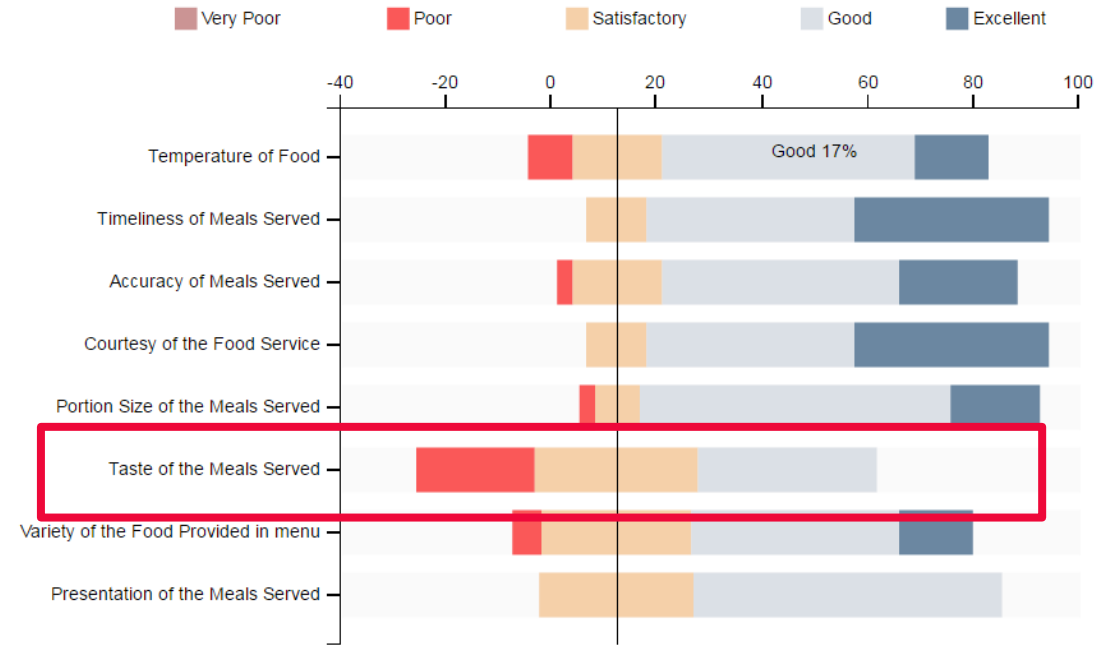
Satisfaction

ANALYSIS

Analysis of Special Diet Type



Importance



Satisfaction

INSIGHTS

- Taste, temperature and variety of meals are the most important factors for patients
- Save up resources from presentation of meal
- Ward B2 and C are most dissatisfied with the taste of the meals
- Patients with special diets are also dissatisfied – dietary constraints and so Sodexo should look into more innovative ways of make meals tasty with those limitations

Using the dashboard, Sodexo can direct their attention towards these particular spheres and take the necessary steps to keep the patients satisfied at NUH.

LOOKING FORWARD

The dashboard can have extra functionalities that might be useful in the analysis:

- Analysis for correlation among factors and how it affects the data
- Time series Analysis of the data to see if the service has become better over a period of time or not



THANK YOU