

Due to the data pyramid, this design is viewed. These three stages of aggregation among information patient healthcare data performance goals combine to meet a wide range of needs, such as patient satisfaction.

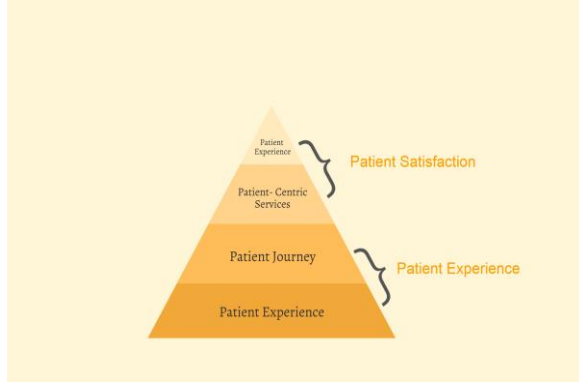


Fig 3: Patient Experience for Satisfaction

1. Well Oriented Data Structure
  - a. Vital Statistics
  - b. Patient's data
  - c. Hospital Data
2. Aggregate Structure
  - a. Aggregates
  - b. State indicators
  - c. Demographics
3. Organized Reports and Delivery indicators
  - a. Granted Reports
  - b. Comparisons of Model
  - c. Indicators [5]

#### IV. DATA ANALYTICS

Data analytics is the science of process with analyzing raw data to make decisions into mechanical processes and algorithms. It provides analysis data to operations. Data analytics help a marketing optimize its goals.

##### A. Advantages Of Data Analytics.

Make more informed and timely business decisions based on facts. Determine which performance issues require attention. Improve your business relationships by learning more about your customers' needs. Increase risk awareness in order to put preventive measures in place. Visualize the data in various dimensions. Increase your competitive advantage. Improve your understanding of the company's financial performance. Find ways to cut costs and thus increase profits. [6]

##### B. Techniques for Data Analysis

ICT is critical to analyze raw data in order to comprehend it. We must use a variety of techniques depending on the type of information gathered, so it is critical to define the method before implementing it.

TABLE 6: Qualitative and Quantitative Data Analytics

Rf	Qualitative Data Analytics	Quantitative Data Analytics
[7]	Researchers collect underlying emotions, body language, and expressions from qualitative data.	Quantitative data is presented numerically.
[8]	Open-ended interviews, focus groups, and observation groups are the most common methods for gathering this information.	It focuses on measurable outcomes.
[13]	During the data collection phase, researchers typically analyze patterns in observations.	It is a measurable research analytics approach.

##### C. Data Analytics Way

There are more data analytics way to analytic data properly. In the modern age, some analytics ways are used all the world. These are- Data Mining and Machine learning, Report: JSON, CSV, and Excel, Statistics: Chart, Visualization, Query: SQL, Database Management, Using Data Analytical Tools and Using Data Analytical Formulas.

##### D. Patient Satisfaction in Clinical Healthcare Data Analytics: Hypothesis

In a hypothetical case study, there are two hypotheses with gender perspective (Male and Female) in our clinical dataset. Our clinical dataset has 200 patients, satisfied by two hypotheses (Excellent and Negative) or patient satisfaction from Surgery.

##### Chi-Square Test:

TABLE 7: The results are below:

Gender	Patient Satisfaction from Surgery		Total
	Excellent	Negative	
Male	90	17	107
Female	30	63	93
Total	120	80	200