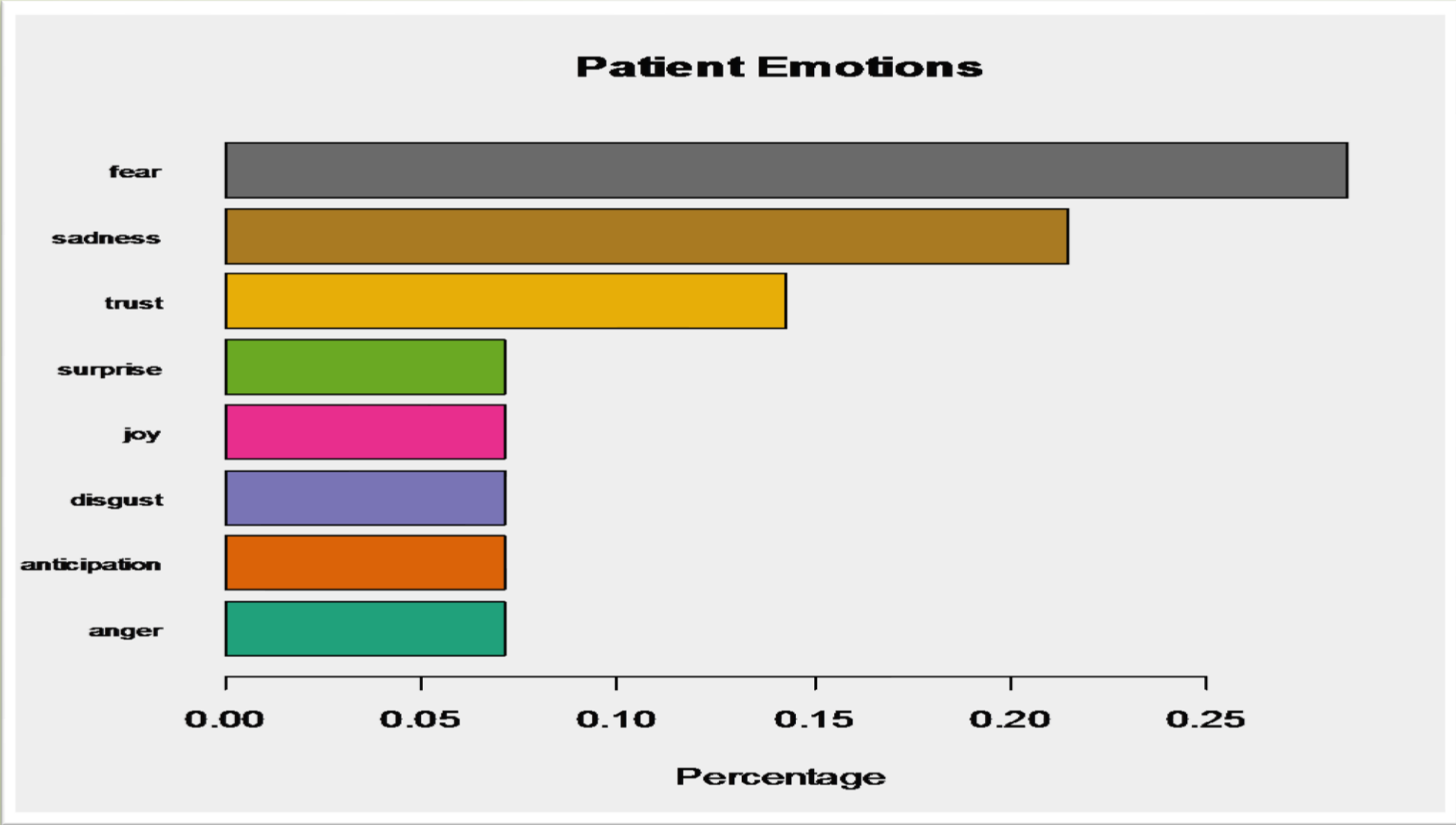# Patient Note Analysis

Sentiment Analysis, Polarity Scoring, Symptom & Medication Identification from Note, Severity Scoring

PATIENT NOTE : The fever has abated but I seem to have pain at all my joints. My fasting glucose level was 110 mg/dl and I am feeling quite weak. I am also itching all over and do not know what is causing this. BP was 125/62. No appetite. Had soup for breakfast. Couple Chicken Sandwiches for lunch. Tea and couple biscuits in the evening and again bread and soup for dinner. Took all my medicines.

➡ **Concepts Extracted from the Patient Note**

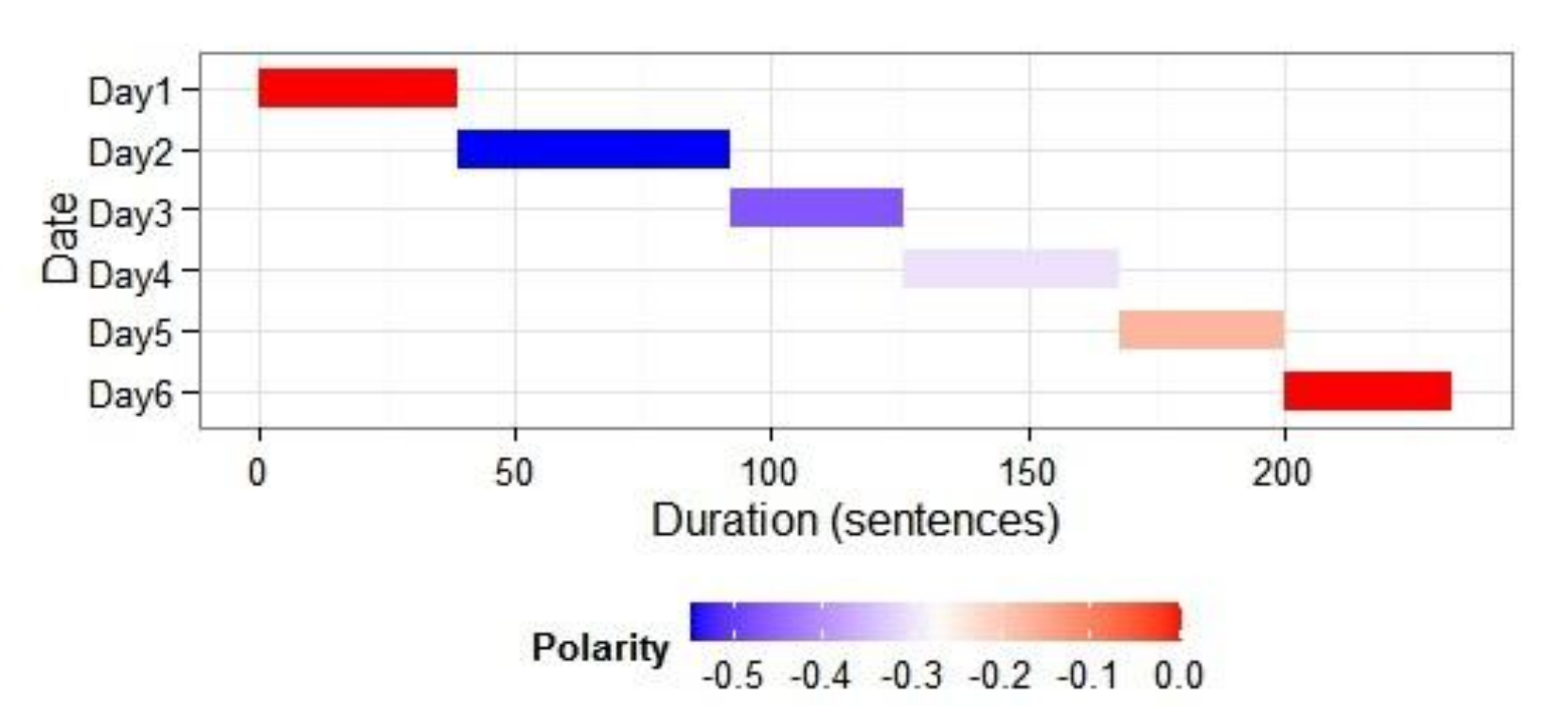| Concept	Concept Type	Phrase
Fever	Finding	The fever
Pain	Sign or Symptom	pain at all
Joint	Body Space or Junction	my joints.
Fasting	Finding	My fasting glucose level
110 mg/dl	Laboratory Procedure	glucose level was 110 mg/dl
Emotions	Mental Process	Feeling
Asthenia	Sign or Symptom	quite weak.
Generalized pruritus	Sign or Symptom	itching all over
Soup	Food	soup for breakfast.
Chicken - meat	Food	Couple Chicken Sandwiches for lunch.
Tea	Food	Tea
Cookie and/or cracker	Food	couple biscuits in the evening
Bread	Food	again bread
Soup	Food	soup for dinner.
Take	Health Care Activity	Took
Drug	Pharmacologic Substance	all my medicines.

PATIENT NOTE : The fever has abated but I seem to have pain at all my joints. My fasting glucose level was 110 mg/dl and I am feeling quite weak. I am also itching all over and do not know what is causing this. BP was 125/62. No appetite. Had soup for breakfast. Couple Chicken Sandwiches for lunch. Tea and couple biscuits in the evening and again bread and soup for dinner. Took all my medicines.

Patient Emotions

fear
sadness
trust
surprise
joy
disgust
anticipation
anger

0.00   0.05   0.10   0.15   0.20   0.25

Percentage

- The objective is to compute the emotional valence of each sentence, problem known as sentiment analysis.

- The process uses simple lexicons: a list of words with a precomputed positive or negative "score" for each word, and computes the valence of a sentence using scores of every word in it.

AnalyticsPlus
Science behind Profits

- Patient's feeling over a period of seven days from his Notes to Doctor
- Original Patient Notes Link : Longitudinal Data of a Patient.xlsx

Date	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Ave. Polarity	0	-0.549	-0.473	-0.305	-0.174	0

- Polarity assignment, a form of sentiment analysis, is using an algorithm to determine the **polarity of a sentence/statement**. The algorithm is to assign value to polarity of each sentence and to **tag polarized words**. A context cluster of words is pulled from around this polarized word. The words in this **cluster are tagged as neutral, negator, amplifier or de-amplifier**.

- Red means his polarity score is neutral, and turns blue when it is negative as indicated in the scale.