

OLD:

We're looking into better ways to evaluate and improve patient experience measured by things like pain interference, social participation ability, sleep disturbance, fatigue, depression, anxiety, physical function and pain; so finding better ways to calculate percent change (normalization, deciding when to remove an outlier based on cook's distance, leverage, bonferroni and drop-in deviance tests), including/excluding data points as well as maybe some non-linear models based on a non-constant variance. A lot of factors. So I made some colorful and extensive visualizations of average scores by categorical age and instrument type across time as well as subjective pain relief differentiated by device model or diagnosis.

To summarize, our data comes from patient assessments/questionnaires which are done in the pain clinic before they get a device implanted; the scores from these assessments are used for baseline scores, and ~1 week later the patients take the same assessment and the scores are used to calculate percent change. At the time, they also ask the patient for their subjective pain relief. Our application intends to eventually be functional enough to the point where doctors can do Telehealth visits easily.

Subjective percent pain relief, the standard measure of a device's success, differs from the actual reports given by the patient questionnaires. That's one question to look into.

Our current research goal is to model subjective ppr with greater accuracy than any individual measure.

NEW:

We're looking into better ways to evaluate, organize and improve patient experience which is measured by things like pain interference in everyday life, social participation ability, sleep disturbance, fatigue, depression, anxiety, physical function and pain; so finding better ways to calculate percent change (normalization, deciding when to remove an outlier based on cook's distance, leverage, bonferroni and drop-in deviance tests), including/excluding data points as well as maybe some non-linear models which are justified by a non-constant variance. A lot of factors. So I made some colorful and extensive visualizations of average score by categorical age and instrument type across time as well as subjective pain relief differentiated by device model or diagnosis.

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Shout out to all the people who've helped me get started on this stuff, it's been great. The way in which we break down and create different measures of subjective ppr really needs to be looked into, because there's more which can be done there; after stratifying by demographic groups and doing some chi-squared/permutation tests to verify statistically significant differences between them, I showed that pain relief and factors like age are both negatively/positively correlated depending on the instrument used. You should feel free, just let me know which things I should look at/improve.

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