# Behavioural Insights into H1N1 and Seasonal Flu Vaccine Refusal

What specific behavioural factors can be identified as predictors of H1N1 and seasonal flu vaccine refusal among different demographic groups, and how can this information be used to develop targeted interventions to increase vaccine uptake?

## A predictive question such as such as if X can predict Y

What are the underlying psychological and social mechanisms that drive vaccine uptake behaviour among individuals who choose to receive H1N1 and seasonal flu vaccines, and how can this information be used to design more effective communication strategies to increase vaccine acceptance even further?

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## Introduction

* Talk about what the topic is about!
* What other papers have done (referencing)
* Propose the problem and what solutions are available (multi-classification task)
* Why is the paper being written and its importance? (Research question)

## Methods used(Removal of outliers, Irrelevancy removal (corr matrix), type conversions, standardization, clipping and z-score, one-hot encoding,

* Information about the dataset
* How was it collected?
* Statistical description (Summary of the characteristics of the data such as distribution/mean of the data)
* Summarise the pre-processing (methods used)/how is the data prepared for the problem.
  + Cleaning - Removal of outliers
  + Cleaning -Irrelevancy removal (corr matrix)
  + Cleaning - Type conversions
  + Transformation – Standardization
  + Transformation – Clipping
  + Transformation – Z-Score
  + Imputation – Mode Substitution
  + Imputation – Mean Substitution
  + Imputation – One-hot Encoding
  + Reduction – Attribute Subset Selection (to do)
  + Reduction – Dimensionality Reduction (to do)
* Table with statistics of data (count, mean, min, max, etc)
* Patterns in the data that can generate hypotheses

## Next Steps

* What methods are we considering?
* Metrics to be used.
* Testing

Diagram

Description automatically generated

## References

* <https://www.cdc.gov/h1n1flu/vaccination/public/vaccination_qa_pub.htm>
* <https://www.researchgate.net/publication/349186528_Machine_Learning_Based_Prediction_of_H1N1_and_Seasonal_Flu_Vaccination>
* <https://www.researchgate.net/publication/360729997_Fast_COVID-19_versus_H1N1_screening_using_Optimized_Parallel_Inception>
* <https://towardsdatascience.com/converting-data-to-a-numeric-type-in-pandas-db9415caab0b>