positive association (p<0.05) with different cardiovascular outcomes. However, in the majority of such experiences, while the presence of hypercholesterolemia (>5.13, 95% CI 1.0-1.7) during pregnancy were at greater risk of having hypertension 21 years post partum. Women experiencing morning sickness (adjusted OR 1.2, 95% CI 0.8-2.0) and backache (adjusted OR 1.1, 95% CI 0.6-1.7) were not considered to be at risk of developing hypertension. As a whole, our study suggests that most common symptoms of pregnancy are not associated with an increased risk of cardiovascular disease or with hypertension in the long term.

PMR68
INCREASING ACCURACY OF DISTRIBUTION BASED MISSED VALUE IMPUTATION: AN ALTERNATIVE TO MEAN IMPUTATION IN REAL WORLD ENVIRONMENT
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OBJECTIVES: Missing values within variables can impede accurate data analysis on multiple levels including both univariate and multivariate analysis. This research presents distribution-based imputation (DBI), where the distribution of non-missing values is simulated to create a set of values that are then randomly inserted into the missing values, thereby increasing the accuracy of the imputation (MI).

METHODS: DBI was compared to MI in 12 different simulation conditions based on three sample sizes (50, 100, 150 and 200) and three different missing value percentages for each of the sample sizes (10%, 20% and 50%). Each simulation created 1,000 test datasets within each condition for a total of 12,000 simulated datasets. The statistical package, R was used for the simulation. RESULTS: MI was biased by simulating smaller Standard Deviations, and less accurate in mean estimation than DBI in all 12 simulation combinations. DBI was more accurate in matching the number of rejected hypotheses as compared to the gold standard. Comparing the calculated p-values for bias where an unbiased estimator would demonstrate a 5% Type 1 error being greater than the gold standard, was closer to the gold standard with 18.75% split, as compared to the 25.8/74% split of MI. CONCLUSIONS: DBI was found to be more accurate and unbiased as compared to MI. As a result, when results are small and data is large, number of variables, or in situations where more elaborate imputation methods cannot be done, DBI is an accurate and unbiased method.

PMR69
INDIRECT COMPARISON OF THE EFFECTS OF ANTI-TNF BIOLOGICAL AGENTS IN PATIENTS WITH ANKYLOSING SPONDYLITIS BY MEANS OF A MIXED TREATMENT COMPARISON PERFORMED ON EFFICACY DATA FROM PUBLISHED RANDOMISED, CONTROLLED TRIALS
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OBJECTIVES: To compare ASAS (Assessment in Ankylosing Spondylitis Response Criteria) 20 response patterns between anti-TNF biological agents in patients with ankylosing spondylitis by means of a mixed treatment comparison of different randomized, controlled trials (RCTs) on the efficacy of biologic agents. METHODS: A systematic review of literature was performed to identify a number of similarly designed double-blind, randomized, placebo-controlled trials investigating the efficacy of the TNF-alfa inhibitors etanercept, infliximab, golimumab, certolizumab peg and adalimumab in the treatment of ankylosing spondylitis patients, conducted over an 18-year period. The endpoint of interest was ASAS20 response criteria at 12 weeks. Results were analyzed simultaneously using Bayesian mixed treatment comparison model techniques. Results were generated for the probability of being the best treatment was also reported. RESULTS: 6 RCTs were selected for data extraction and further analysis. By means of an anti-TNF agent agent imputed to be the best of the four was induced a ASAS20 response rate of 26.2%. Infliximab shows a 67.6% of probability of being the best treatment of all. Adalimumab, golimumab and etanercept show probabilities of 17.6, 10.6 and 4%, respectively, while infliximab showed a probability of 0.1%. No differences were observed when comparing directly an anti-TNFalpha agent against another. CONCLUSIONS: Even if the mixed treatment comparisons between infliximab, golimumab, certolizumab peg, adalimumab and etanercept did not show a statistically significant difference, this analysis suggests that infliximab, compared to placebo, is expected to provide the highest rate of ASAS20 response in SA patients naive to biologic treatments.

PMR70
A TUTORIAL ON DIMENSIONALITY REDUCTION IN LARGE CLAIMS DATA SETS
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OBJECTIVES: The objective of this presentation will be to introduce the audience to various data dimensional reduction techniques that may be applied in the setting of a large commercial claims data set to facilitate the task of identifying important factors or key features for use in subsequent analysis. METHODS: The author will provide a brief survey of the data dimension reduction literature from areas as diverse as computer science, high-throughput chemistry to demonstrate that despite that many of these techniques have been used in other settings or areas of research, their application to the analytics of health care claims data is relevant and potentially quite useful. RESULTS: One, all-purpose, optional data dimension technique does not exist for application in the analysis of health care claims data. The analyst needs to weigh the features of the large data set under consideration, the objectives of the downstream or subsequent analysis desired, the potential availability of tools for ease of use and interpretation of available results. CONCLUSIONS: The number of data dimension reduction techniques available to claims data researchers is large and diverse; however, keys features of these various approaches will help the analyst make an informed decision that is effective with some simple setting of objectives diagnostic.