INTRODUCTION

• Health economics as a sub-specialty of economics has gained significant momentum over the last decade.
• According to the Organization for Economic Cooperation and Development (OECD), 2.5 exabytes of data is created every day globally. Of what is stored, 30% is health related.
• Analytical skills are needed even more as we face a rapid influx of information and health data.
• The aim of the study is for students in the Bachelors of Health Administration to acquire expertise and skills in the area of Big Data analysis, with a particular focus on the use of predictive modelling.

BIG DATA ANALYSIS INSTRUCTION

• GOAL: For students to apply their understanding of big data analytics using organization specific data and interpret the results and its link with the current health care environment.
• Individually, students are required to use the given problem set of deidentified patient level administrative claims data and complete a series of analytics related tasks to answer a hypothesis you have developed regarding a given outcome that will have a significant economical impact on healthcare.
• Scenario: Use Grossman’s model of the production of health to develop a plausible hypothesis how Florida’s Prescription Drug Pricing Transparency House Bill 351 likely to affect prescription drug use. Use the articles and data within the reading to provide evidence in support of your hypothesis.
• Use and analyze data from multiple sources the provided data to make organizational recommendations. (See Figure B)

FRAMEWORK FOR IMPLEMENTING DATA ANALYTICS

Macro-level: Many training programs in a university
Meso-level: Many courses in an academic year
Micro-level: One course in a training program
Nano-level: One activity in a course

Academic Analytics

UNDERGRADUATE STUDENT EXAMPLES

Example 1

Student comment: “The graph I created reflects my hypothesis. You can see that the average spent monthly on prescription drugs after the bill is passed will be reduced. While the amount spent on generic versions of drugs will rise averaged for all counties in Florida.”

Example 2

Student comment: “The graph I created reflects my hypothesis. Policies focused on improving smoke free policy will increase to improve the health of the counties across the U.S.”

IMPACT AND CONCLUSIONS

• Students evaluated the experiential learning exercise in multiple ways including course evaluation, formal written evaluations of the analytical project, and reaction papers.
• Although an overwhelming majority of the students’ comments and evaluations were extremely positive, opportunities exist to further improve the simulation.
• As healthcare organizations and professionals continue to adjust to the big data environment facing healthcare today, students who participated in this assignment will better prepare their employees, their organization, and fellow administrators for the financial, emotional, and time investment that a lawsuit mandates.