

This semester I had the privilege to work with Dr. Lovett on a pharmacoeconomic, therapeutic literature review. The work is entitled, Alzheimer's Disease: A Summary of Economic Outcomes. The basis of the research project was to go through the current literature pertaining to FDA approved drugs for Alzheimer's disease and determine the most cost effective drugs. The articles had to be published between 1992 and 2012 with the primary research location being within the United States.

The references and research articles were obtained through the Swilley Library. The most utilized reference databases were Ovid and PubMed. To search within the databases, the keywords "cost benefit of Alzheimer's" were initially used. There was an early struggle due to the amount of articles and the lack of focus. To narrow down the articles, the keywords "Alzheimer's disease medication cost effectiveness" and the specified range of years were used. After searching the articles that were provided through the search engines, their references were also searched in order to obtain additional sources of information. As the parameters for the article search became more specific, the number of articles decreased; however, it was important to maintain the parameters. The research had to be completed within the United States to ensure that the patient demographics and drug stipulations (FDA requirements, research trial guidelines, etc.) were representative of this country. Furthermore, the ten year data range was provided to ensure that the most current research techniques were being utilized.

It was concluded that the costs of FDA drugs are not as efficacious as patients and doctors would prefer. Even though the drug data from other countries was not used in the efficacy calculations, the research did show that there are a greater amount of research being conducted over seas, as well as a broader range of drug therapy. There are only five FDA approved drugs which are donepezil, galantamine, memantine, rivastigmine, and tacrine. Being that Alzheimer's disease is progressive, the drugs have a limited time that they are effective. The changing morphology of the brain due to the amyloid plaques causes a myriad of disturbances in memory, thought, and behaviors. The next steps of the project would be to study the drugs used to treat these comorbid symptoms such as anti-inflammatory agents which are used to treat the inflammatory mediators in the brain.

Conducting this research project was an instrumental learning experience for future literature reviews. I have learned that it takes patience to gather an adequate amount of resources. A plethora of articles had to be sifted through, to ensure that they contained the parameters that were aligned to my research goals. It is imperative to understand the study design, patient selection, methodology, results, and conclusions of each article in order to report on their findings. By completing this preliminary summary of economic articles, I have a better grasp of how to start the next phase of the research project.