# Disparities in Health Literacy Examined Through Diabetes Mellitus Resources

## Tessa Farthing, Noha Jan, Taylor Vernot

### Advisor: Dr. Ann Biswas

## Abstract

When an individual has a low health literacy level, their ability to successfully access and comprehend healthcare procedures and treatments is impaired. This resulting healthcare disparity is especially prevalent among individuals who speak English as a second language. The goal for our team's project was to revise a website's medical content in order to accommodate the English health literacy levels of individuals enrolled in the University of Dayton's Intensive English Program (IEP).

## Problem

Individuals with a low health literacy level may not be able to recognize pertinent symptoms or comprehend treatment regimes and procedures. The reading level of the IEP students is at a 3rd-4th grade level, and the students wanted to learn more about the distinguishing factors among type 1 and type 2 diabetes as well as gestational diabetes. The overwhelming, text-dense, high literacy level of the available resource would have made comprehension difficult for these students.

## Method

Our team conducted a Health Literacy Load Test using the multidimensional model and a SMOG test in order to analyze the literacy of an existing Diabetes Mellitus resource published on MedicineNet.com. The original documents were found to be written at approximately a 12.4 grade level. We met with the IEP students to obtain feedback and assess comprehension in order to determine how to improve the existing resource. Our team condensed the wide breadth of information available on the website and narrowed down the information to subheadings that were of particular interest to the students. To reduce the literacy level of the documents, we removed confusing sentence structure as well as complex medical and scientific jargon. We also added visual aids like diagrams and charts in order to further comprehension of more advanced concepts.

## Result

After revising the existing information, the brochure that our team created was retested with the SMOG test and concluded to be around a 5th grade literacy level. When we worked with the IEP students and gave them the revised brochure, they were able to understand the information concerning Diabetes Mellitus that they were originally inquiring about.
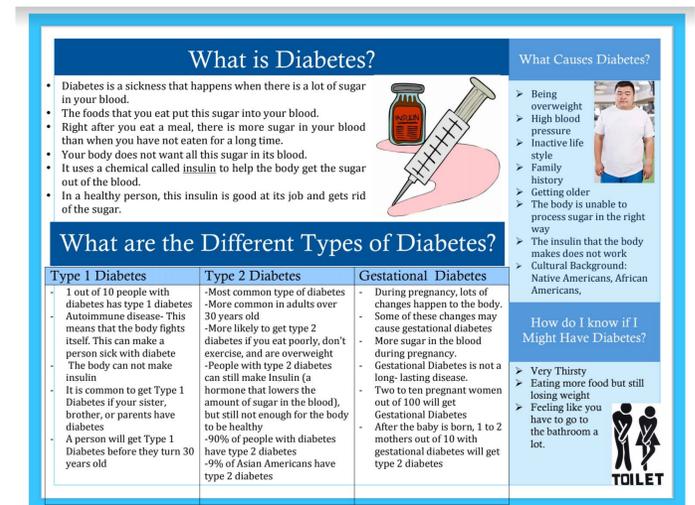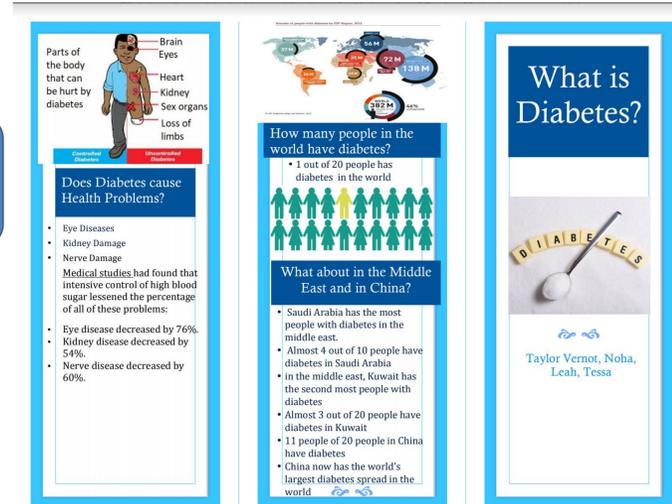
## Conclusion

It is crucial for health care professionals to comprehend the effect that low health literacy can have on proper patient care. Many people can struggle with low health literacy. A patient could have a weak academic background, he or she may be highly intelligent, but has limited scientific or medical knowledge, or a person may speak English as a second language. Regardless of the civic, cultural, functional, or scientific barriers that a person may face, it is important that they do not fall subject to medical care disadvantages because of their health literacy disparities. Our team was able to see, first-hand, successful comprehension of pertinent health care information among IEP students when the information was presented at an appropriate health literacy level.

Revised Document

Original Document