

Improving health indicators for the public: Analysis of CDI data for Group: Nutrition, Physical Activity, and Weight Status (NPAW)

Executive Summary

This project is intended to inform health professionals and the general public about factors that may influence obesity at a population level. Tableau is used for the graphical presentation of the data. Health data related to obesity is important because of the large percentage of the population that are now affected by it.

Why

The business case is to show how some dietary and lifestyle factors affect the proportion of people with obesity, analysed by state and demographic factors.

The intended outcomes are 2 documents – a peer reviewed journal paper for medical and nutritional professionals, and an educational brochure intended for a lay audience. These will be supported by the Tableau visualisation of the data.


This analysis will inform public health policy for reducing the prevalence of obesity.

Who

Stake holders are medical and nutritional health professionals. These people will generally be university educated with knowledge of scientific methods. They will be looking for an evidence base in order to accept any new knowledge.

The final target audience will be the general public, to educate them about lifestyle modification to reduce the prevalence of obesity. Their levels of education will vary widely, so a simple message of lifestyle changes is needed here.

Persona no. 1 – member of public who is overweight: Joe

	<p>Role: High school student and hard core computer gamer.</p> <p>Age: 17</p> <p>Gender: Male</p> <p>Education: Year 11 at Springside</p> <p>Goals: Joe realises he is overweight and wants to improve this so he can participate in activities with his friends. He needs to know what changes he can make to his lifestyle.</p>
<p>Challenges and needs: Joe needs to be aware of factors that might be increasing his risk of obesity and strategies that he can adopt to mitigate them.</p>	

Persona no. 2 – public health decision-maker with the Federal Government: Sharon



What

Data sources: Data have been downloaded from the HealthData.gov website <https://www.healthdata.gov/dataset/us-chronic-disease-indicators-cdi> which are one of the Centers for Disease Control and Prevention datasets. The indicators chosen for this project are the Nutrition, Physical Activity, and Weight Status group, so that a detailed analysis can be conducted on these data. The .csv file has been downloaded from the website and reshaped with R code to make it suitable for Tableau analysis. Rows with missing values for variables of interest are excluded. A copy of the R code can be found [here](#).

These data include the years 2010 to 2016 and so are reasonably current.

How

I plan to present these data in two formats – one as a simple brochure (single page) for a general public audience and the other as a multi-sheet story with interactivity for health professionals.

Challenges

The first challenge for this data was to get it into a Tableau Friendly format to enable analysis of an outcome (% population with obesity) with predictor variables (responses to the questions in the group) in order to evaluate risk factors that could be suitable for a health program intervention.

The other big challenge will be to present the data in a format that can be understood by the general public.