Accident Comparison

**Background**

Through the ages, a leading cause of injury and death can be attributed simply to accidents. Sometimes things go wrong, and people get hurt. Who gets hurt, in what way and where the accident occurs are all different aspects of an incident. By looking at collected statistical data, we can compare the occurrence of different kinds of incidents, and predict the probability of different events happening.

**Data**

The data we will use for this analysis will be the 2001 report from the Home & Leisure Accident Surveillance System; a linked database set up for the purpose of data collection. The data was sourced from the Department of Trade and Industry, a government operated department.

The file is presented with 2 different accident type: Home and Leisure. Each type has about 10 tables that all present data according to different queries (things like age & gender, injury type, incident location, participating activity etc.). This makes up the first 19 pages of the document. The rest of the pages are a long list of different items that are included in an injury, in both Home and Leisure categories. The items of split up into 41 separate subsections.

When comparing and calculating with data, it is important to make sure the calculations are done with the correct data. Using data from 2 different tables could give a mistake, depending on what you’re trying to find out.

Unfortunately, as the data provided does not give a complete total for all accidents, home and/or leisure. And since the recommended statistics to use, as said by HASS&LASS, is the estimates columns on the right/ bottom of each page, adding estimates together makes the calculates less reliable.

**Hypothesises**

No matter what you do, there is a chance, however small, that an accident will occur and injury you or someone else. What is interesting to see if how likely one accident is to occur compared to another, including factors like age and gender.

I would like to make 3 hypothesises:

* There is a higher probability to be involved in an accident if you are a male
* There is a higher frequency of accidents involving people aged <= 14 than >14.
* You are more like to be injured in an accident during Leisure activities, as compared to Home activities.

**Hypothesis 1**

To see if there is a higher probability of being involved in a accident if you are male, we require the totals of accidents where the victim is male and where they are not.

Looking at the data, we are given the statistic that