Models In Epidemiology And Biostatistics
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An Introduction To Open Office

You can download Open Office at https://www.openoffice.org/download/

There are many YouTube videos on Open Office.

Google : 'open office writer youtube basic', for example.

User guides can be found at :
https://wiki.openoffice.org/wiki/Documentation/OOo3_User_Guides/Chapters

Open Office Writer is like MS Word. Writer's default file format is .odt You can save your work in many other formats notably .pdf You can export directly to .pdf from the standard toolbar.

See the save options using 'Save As'

You can create the mathematics expressions, formulae and equations very nicely in OpenOffice.

A typical logistic regression equation might look like :

$$\log\left(\frac{p}{1-p}\right)=\beta_0+\beta_1 E+\beta_2 A+\beta_3 EA$$

In Open Office, type in the text section as usual, then, from the Menu Bar, go to 'Insert' then 'Object' then 'Formula'. A window will open below the text. In this window, type in :

```
log ( p over {1-p})= %beta_0 + %beta_1 E + %beta_2 A + %beta_3 EA
```

You will then see the math below the text. Clicking in the window, places this math in the file.

To get an expression for the fit, you might like something like :

$$\log\left(\frac{\hat{p}}{1-\hat{p}}\right)=b_0+b_1 E+b_2 A+b_3 EA$$

with

```
log ( hat "p" over {1-hat "p"})= b_0 + b_1 E + b_2 A + b_3 EA
```

or

$$\log\left(\frac{\hat{p}}{1-\hat{p}}\right)=\hat{\beta}_0+\hat{\beta}_1 E+\hat{\beta}_2 A+\hat{\beta}_3 EA$$

with

```
log ( hat "p" over {1-hat "p"})= {hat %beta}_0 + {hat %beta}_1 E +{hat
%beta}_2 A +{hat %beta}_3 EA
```

The double quotes " and curly brackets {} are valuable to make the expressions 'nice'.

To get an expression for an odds ratio or an estimate of an odds ratio:

The population OR is estimated by $\widehat{\mathrm{OR}} = \frac{ad}{bc}$

with

```
 "The population " "OR" " is estimated by "  {size 24 hat size 12 "OR"} =
ad over bc
```

Here are some more examples:

$$\bar{\mathrm{x}} = \frac{\sum_{i=1}^{n} x_i}{n} = \frac{\sum_{i=1}^{n} x_i}{n}$$

```
bar "x" = sum from {i=1}to n x_i over n =sum_{i=1}^n x_i over n
```

$$\hat{\beta}_1 = b_1 = \frac{\sum_{i=1}^{n} (x_i - \bar{x}) y_i}{\sum_{i=1}^{n} (x_i - \bar{x})^2}$$

```
{hat %beta}_1 = b_1 ={sum from {i=1} to n (x_i - bar x)y_i} over {sum from
{i=1} to n (x_i - bar x)^2}
```

To add a graphic from Stata to an OpenOffice file, save the graphic as .png. Then, from the menu bar, go to Insert, then Picture, then 'From File'. Find your saved .png file and insert it into the file. You can position and size the graphic using the edges of the image.