

Making Health Economics Shiny: A tutorial

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Introduction

R Markdown documents can be used to write reports. In this example I am rendering this report to PDF, but it could be output in Word or as an online document (like the course material).

The Sick Sicker Model Results

We can run the entire model from within Rmarkdown, and produce outputs:

```
df_results <- f_wrapper(n_age_init = params$drug_price,
                        n_age_max  = params$n_iterations,
                        d_r        = params$discount_rate,
                        n_sim      = params$n_iterations,
                        c_Trtr     = params$drug_price)

head(df_results)
```

##	Cost_NoTrt	Cost_Trtr	QALY_NoTrt	QALY_Trtr	ICER
## 1	124037.23	125833.30	17.90072	18.55311	2753.041
## 2	99716.86	101104.46	18.59317	19.26570	2063.243
## 3	138397.36	140126.89	18.49035	19.18378	2494.160
## 4	99356.12	100698.16	18.89446	19.45113	2410.853
## 5	110270.53	111806.08	19.08431	19.61313	2903.722
## 6	89786.78	91002.94	17.65315	18.18161	2301.335

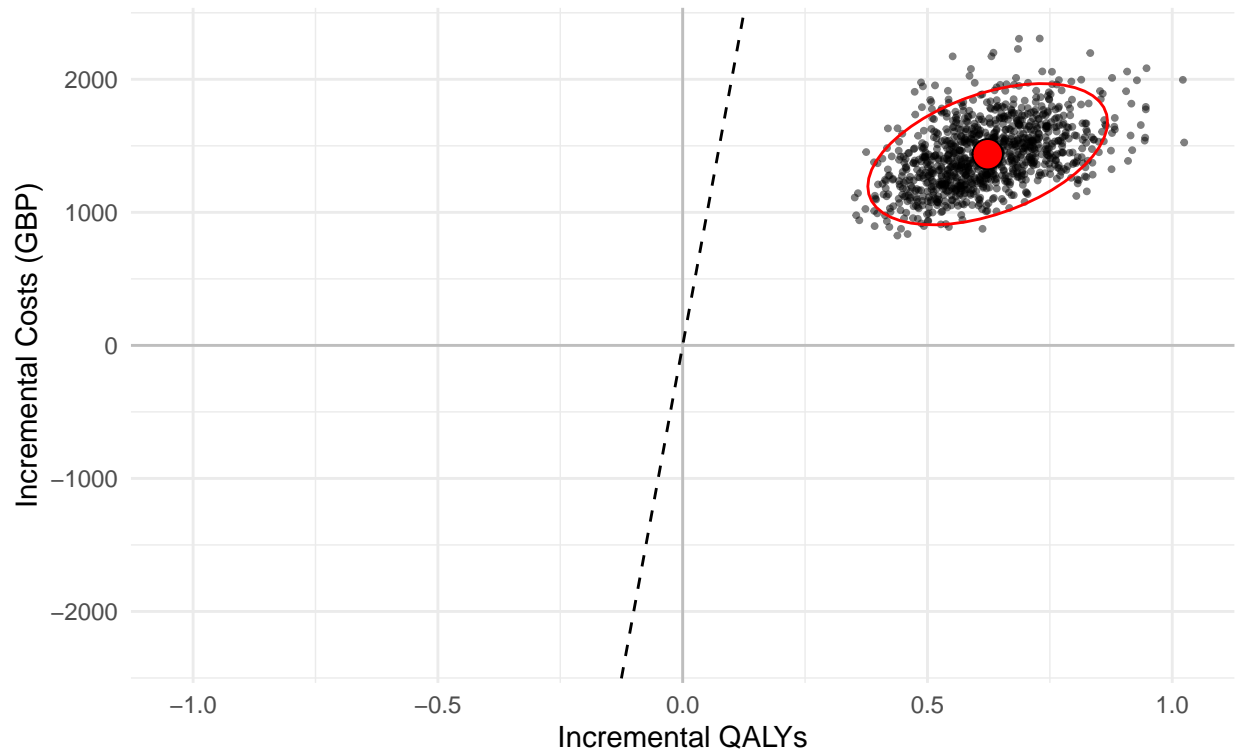
Including Plots

You can also embed plots, for example here is a the Cost Effectiveness Plane.

```
plotCEP(df_results)
```

Cost-effectiveness Plane

Results of Probabilistic Sensitivity Analysis



Note that the text can include model results. For example I could say that the ICER is £2306.73

Exercise

1. Your client has mentioned that their treatment cost is now £375, rather than the £200 stated in the previous report. They would like to see an identical report to that shown above, but with an updated cost-effectiveness plane and ICER.
2. Your client would like to see the CEAC curve and for the insertion of a paragraph at the beginning with the inputs to the Sick-Sicker function defined. (Ensure you do this so that the entire document can be updated by one change).
3. The decision body has changed its discount rate from 3.5% to 1.5%. Please update the entire report.