**Optional extra web-based version of Exercise 13**

The equity-efficiency trade-off analysis in Exercise 13 can also be done using our web-based DCEA tool.

Open the DCEA tool at this website: [**https://shiny.york.ac.uk/dcea/**](https://shiny.york.ac.uk/dcea/)

Click on “Evaluate using social welfare functions”.

Click on “Atkinson EDE plot”. Look at the graph entitled “Equity weighted NHB compared with No NRT”. This compares social welfare under the three policies using the Atkinson social welfare function with different levels of concern for reducing health inequality (“inequality aversion”). Social welfare is measured in units of “Equitably Distributed Equivalent Health” (EDEH) that are comparable with population total HALYs.

1. At what level of inequality aversion do the two lines cross, such that Proportional Universal NRT has higher EDEH than Universal NRT? What does this mean?
2. Try changing the baseline decision to “Universal NRT”. (Select this in the left hand panel). How and why do the lines change?

Now click on “Equity impact plane”.

1. Try setting the inequality aversion parameter to 0, by moving the slider. What do the results mean? (*Hint: This corresponds to a standard CEA, which focuses only on efficiency in improving total health without concern for reducing health inequality).*
2. Now try gradually increasing the parameter by moving the slider. What happens to the points? Why?
3. Try changing the baseline decision to “Universal NRT”. At what level of inequity aversion does the “Proportional Universal” become clearly better than “Universal NRT”?