Normal GPD Quantile treatment effect
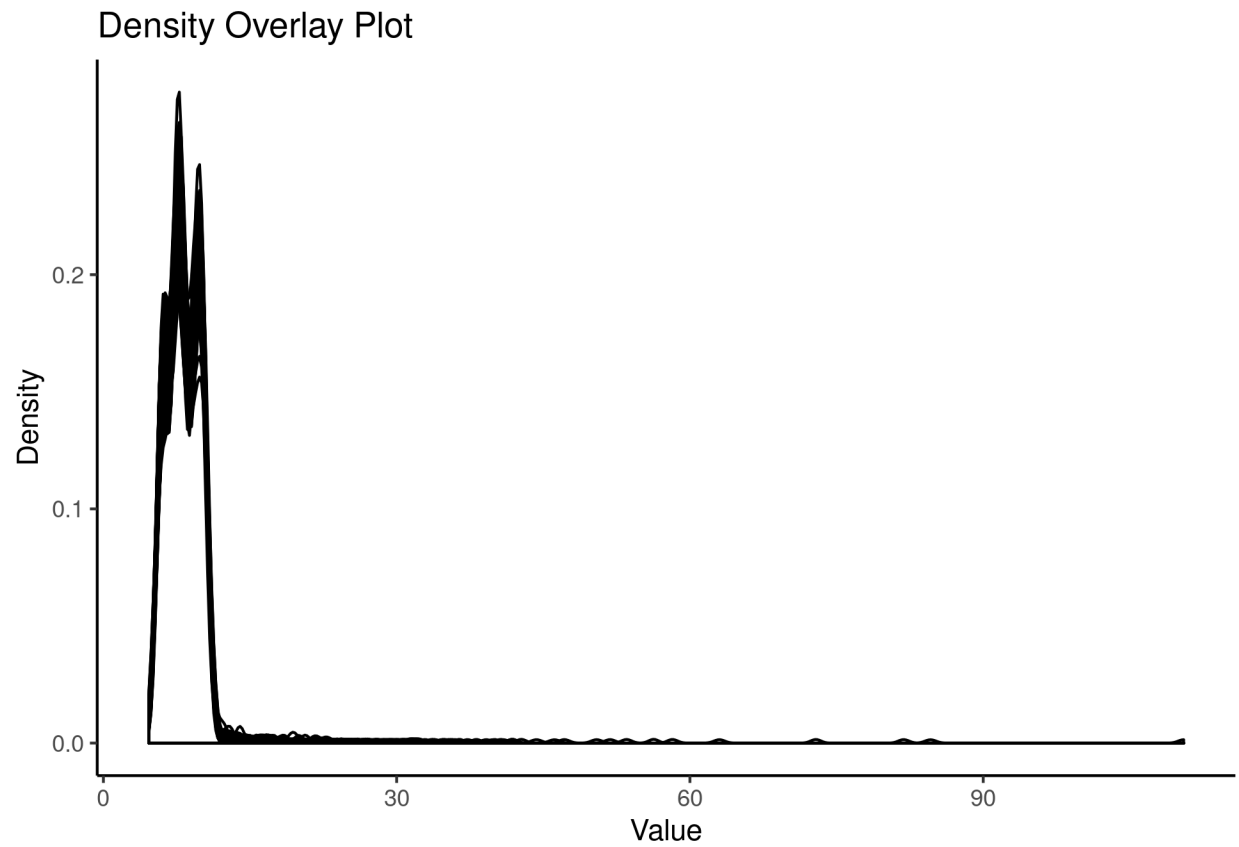
Arnab Aich

2023-10-01

Density Plots with Extreme Values
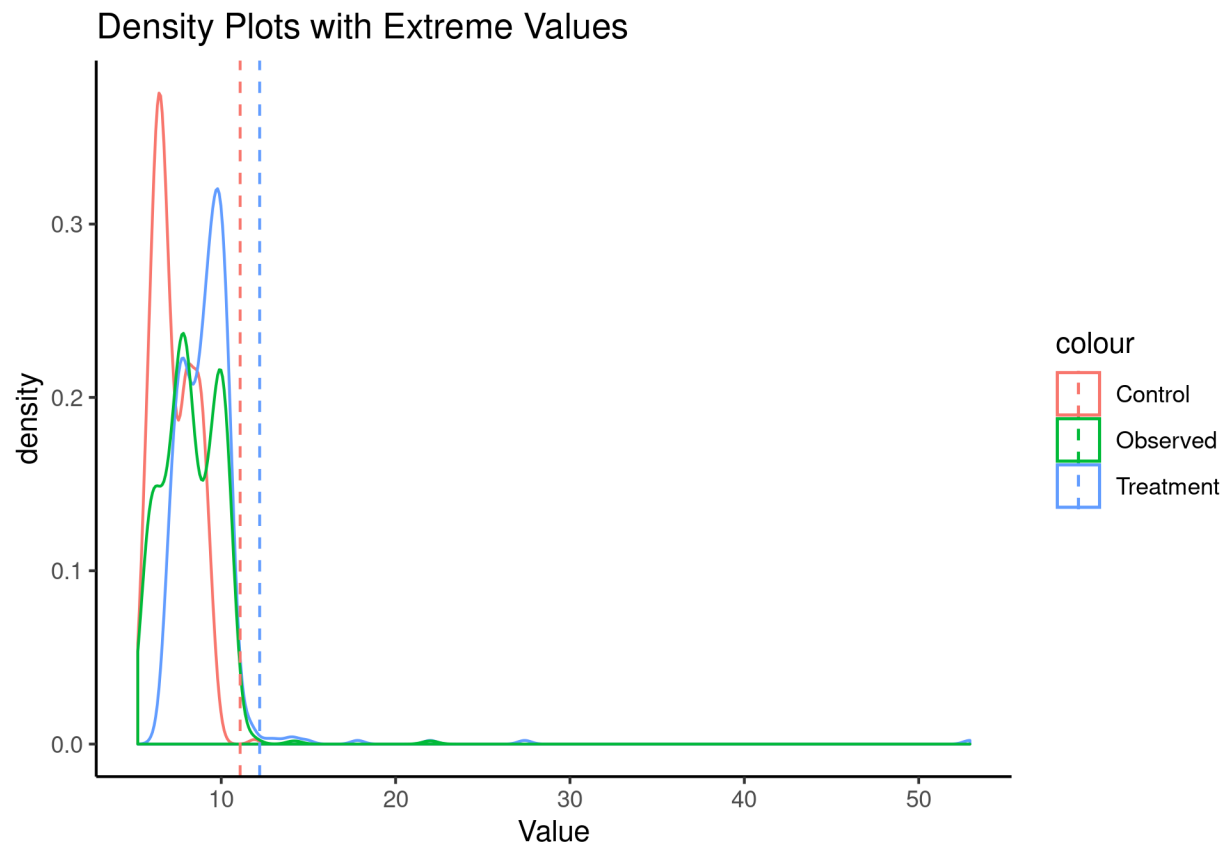
Density Plots without Extreme Values

Density Overlay Plot
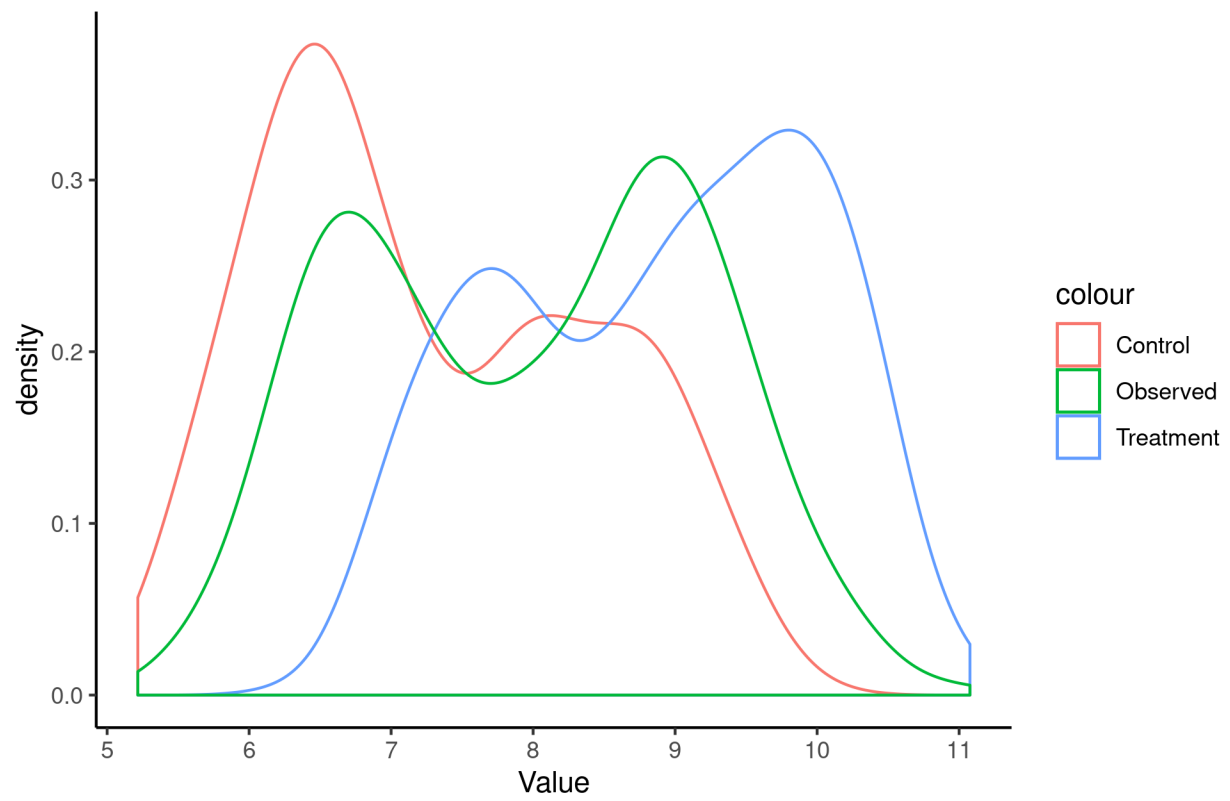

```
Final$Treatment$Mean_Int_Sq_error
```

```
[1] 0.02694397
```

```
Final$Treatment$estimated
```

```
      mu       eta
9.174143 0.499252
```

```
Final$Treatment$True
```

```
$weights
[1] 0.65 0.35
```

```
$mu
[1] 9.595473 7.547737
```

```
$eta
[1] 0.4 0.4
```

```
$u
     u1
12.2035
```
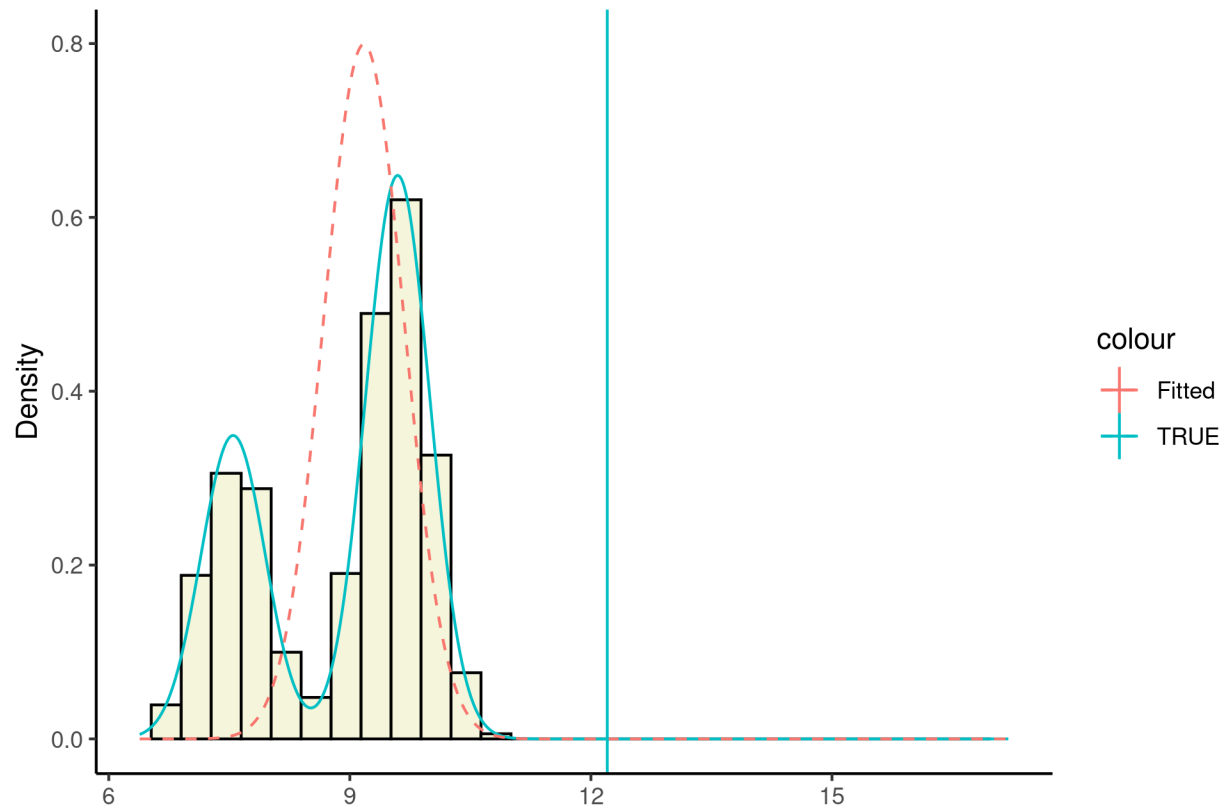
```
$sigma
[1] 4

$xi
[1] 0.3
```

Final**$**Treatment**$**True_vs_Fitted

Final**$**Control**$**Mean_Int_Sq_error

```
[1] 0.0602208
```

Final**$**Control**$**estimated

```
      mu       eta
6.990657 0.968856
```

Final**$**Control**$**True

```
$weights
[1] 0.55 0.45

$mu
```

```
[1] 6.321605 8.369341

$eta
[1] 0.3 0.3

$u
        u0
11.08416

$sigma
[1] 3

$xi
[1] 0.4
```
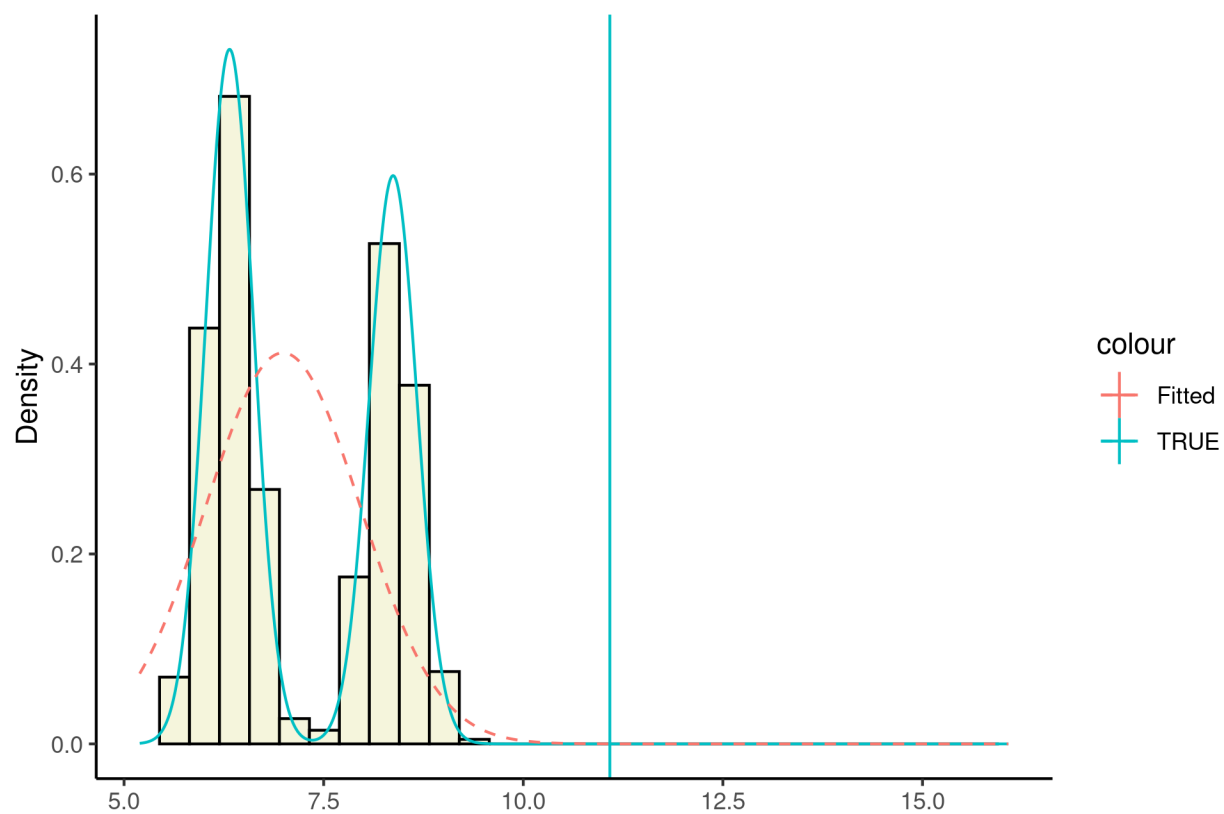
Final$Control$True_vs_Fitted


```
[[1]]
                     True Estimated       Bias
Treated          6.773863  8.013205 -1.2393412
Control          5.691112  4.738410  0.9527027
Treatment Effect 1.082751  3.274795 -2.1920439

[[2]]
                     True Estimated       Bias
```

```
Treated              7.113162  8.352203 -1.2390416
Control              5.926823  5.395361  0.5314619
Treatment Effect 1.186339  2.956843 -1.7705035

[[3]]
                       True Estimated       Bias
Treated              9.297995  9.174123  0.1238720
Control              6.703454  6.991581 -0.2881276
Treatment Effect 2.594541  2.182541  0.4119996

[[4]]
                       True Estimated       Bias
Treated             10.169067  9.995311 0.17375567
Control              8.717604  8.582473 0.13513060
Treatment Effect  1.451463  1.412838 0.03862507

[[5]]
                       True Estimated       Bias
Treated             10.466656 10.332352  0.1343038
Control              8.952089  9.235627 -0.2835374
Treatment Effect  1.514567  1.096726  0.4178411

[[1]]
```
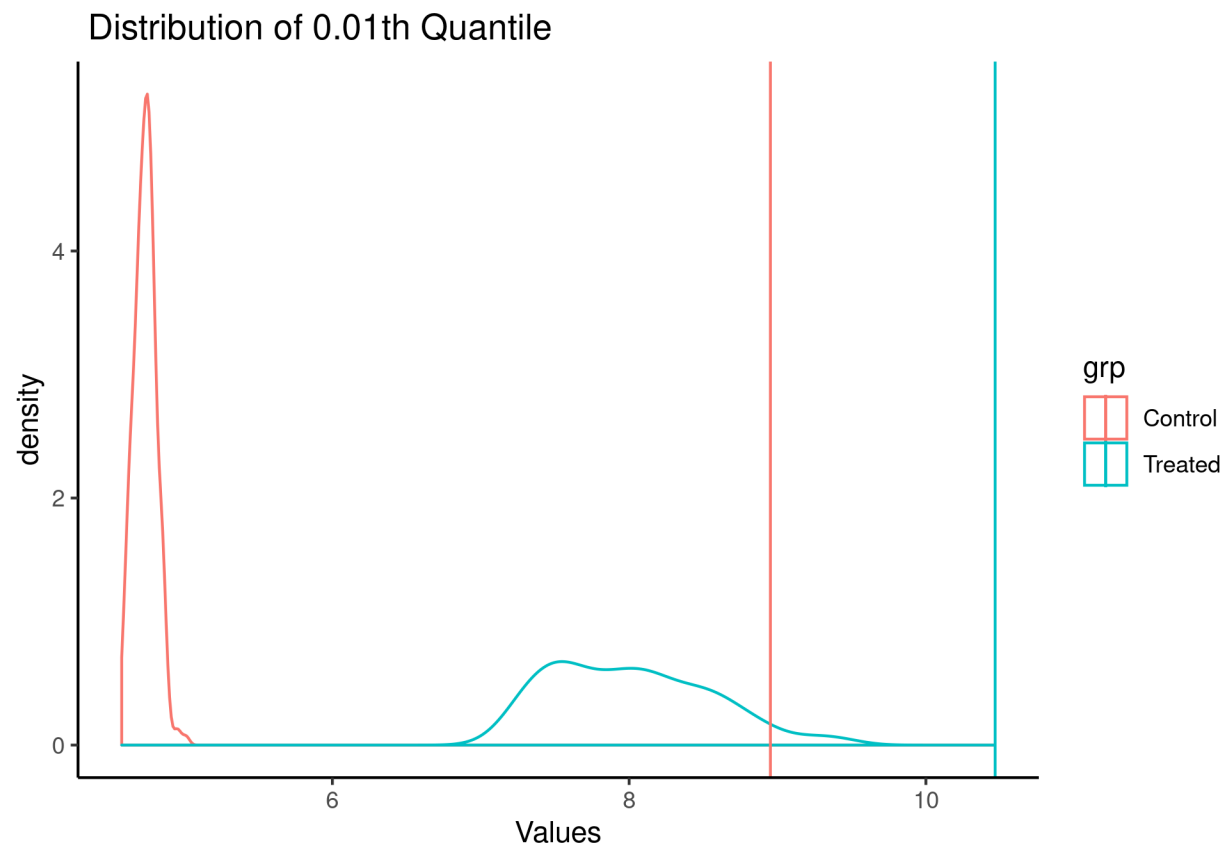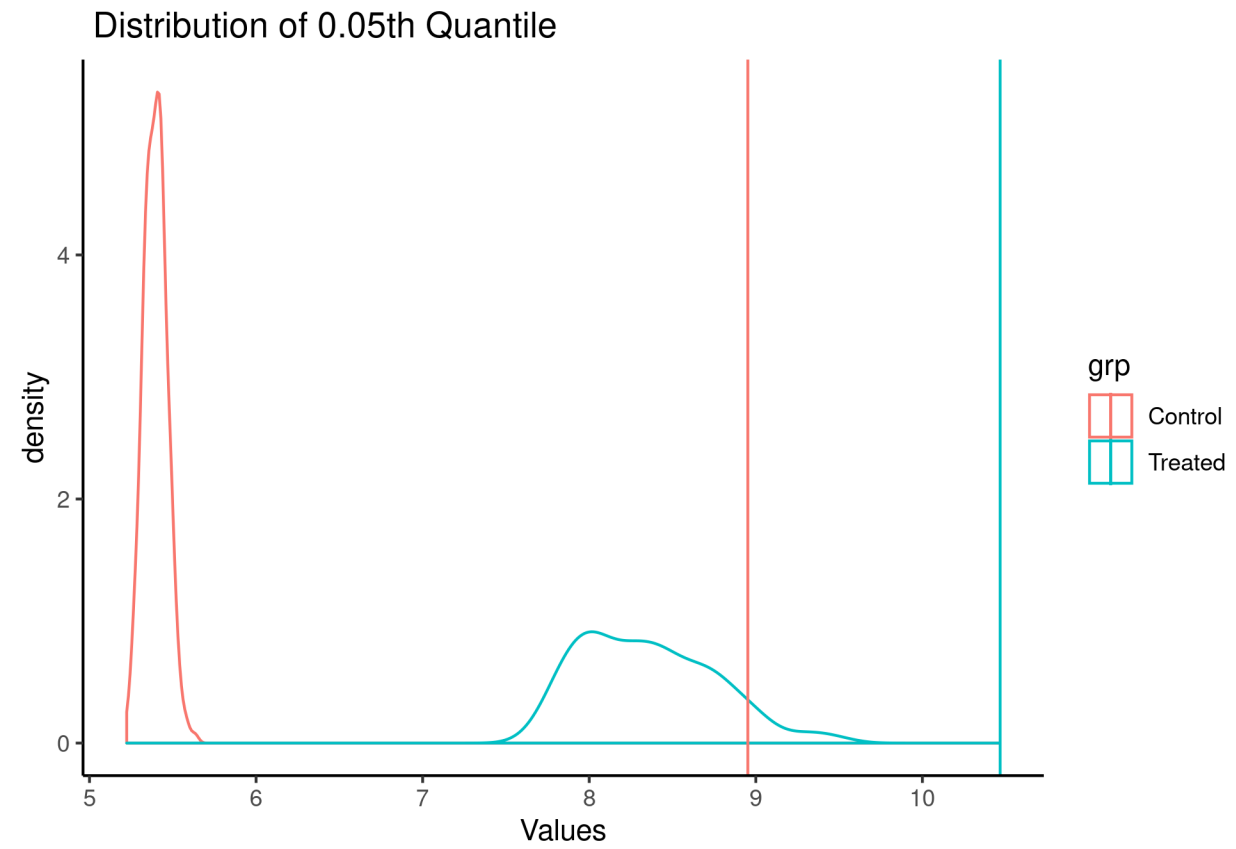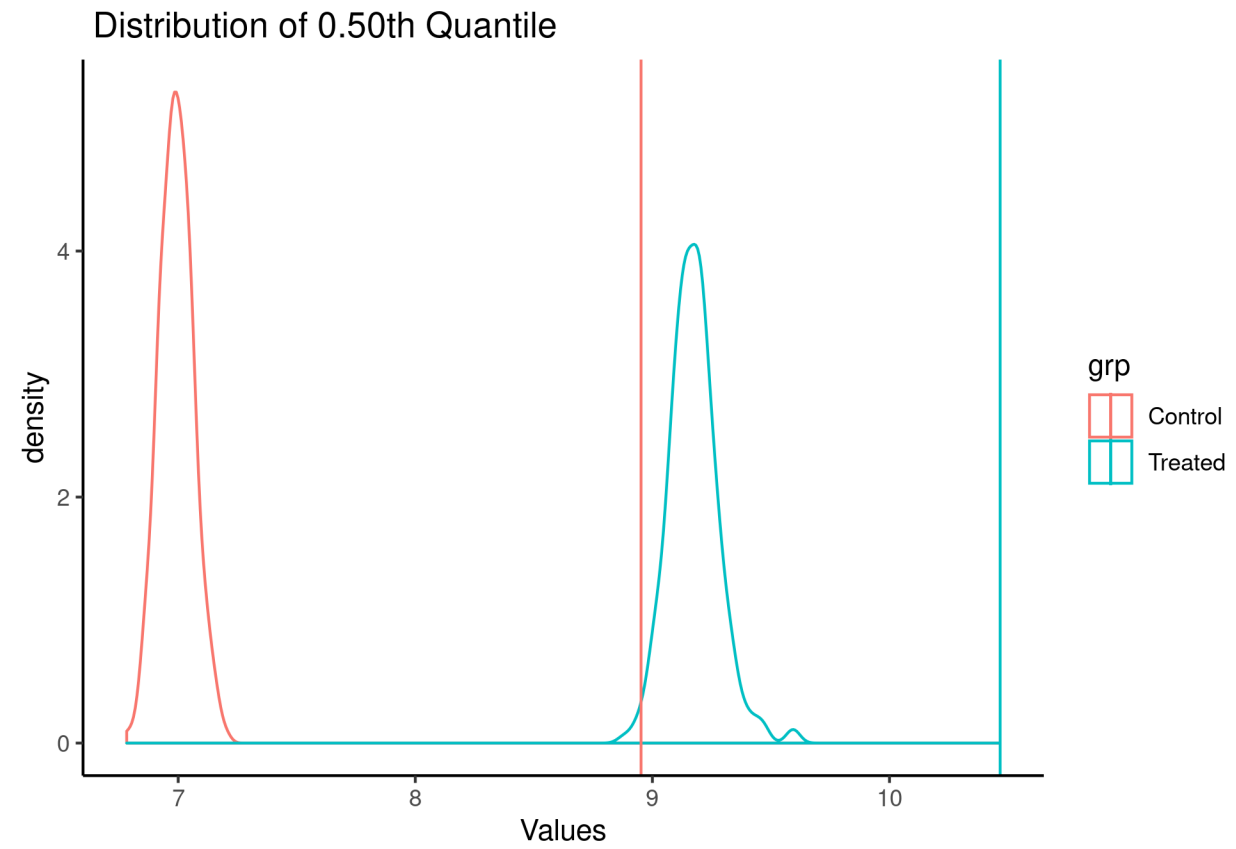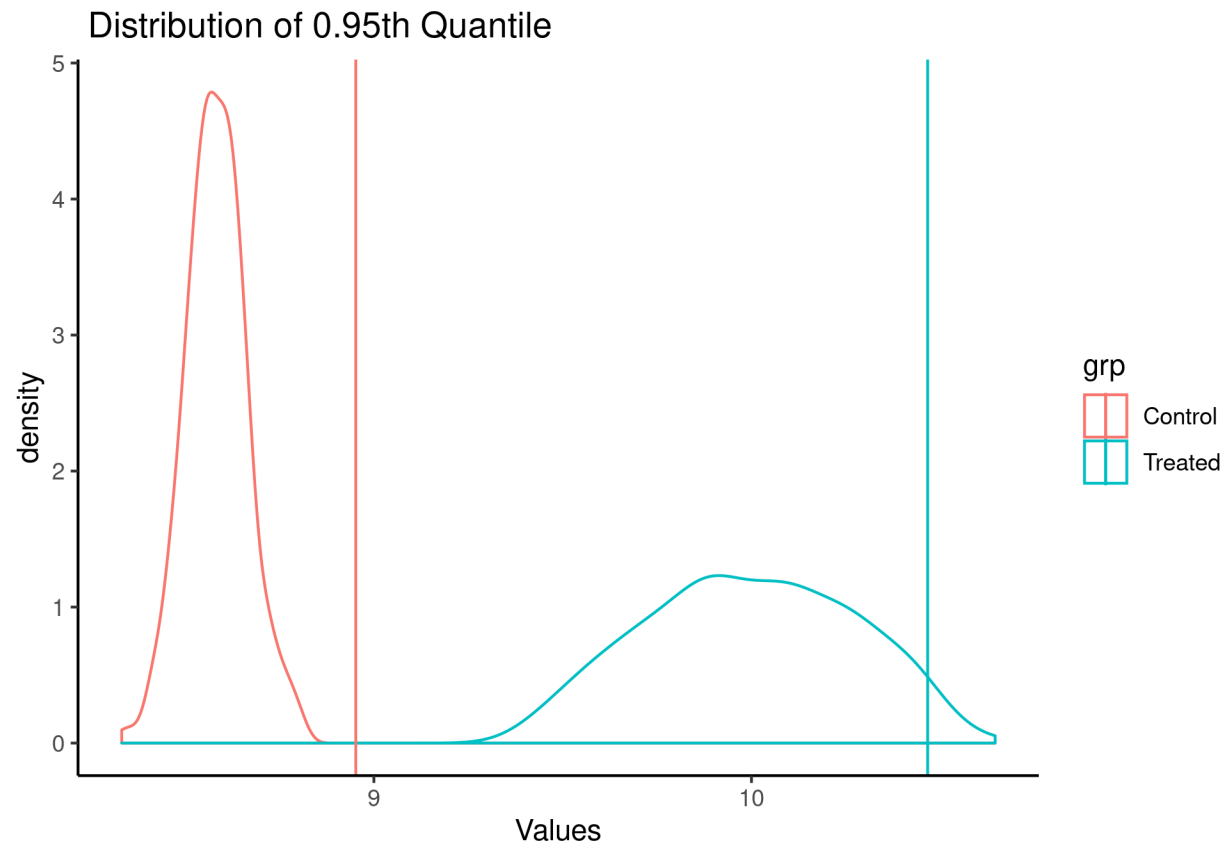
Distribution of 0.01th Quantile


```
[[2]]
```

Distribution of 0.05th Quantile

[[3]]

Distribution of 0.50th Quantile

[[4]]

Distribution of 0.95th Quantile

[[5]]

Distribution of 0.99th Quantile