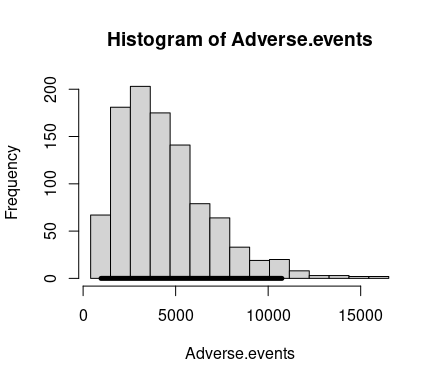
Auto-generated report from BCEAweb

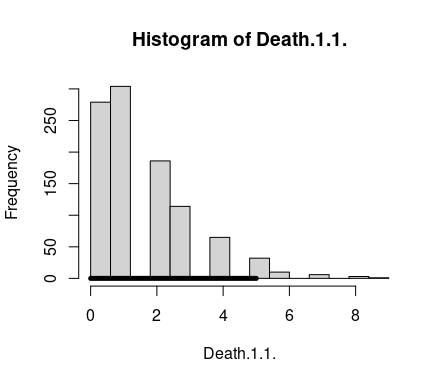
Version: 13 September, 2025

# Distributional assumptions

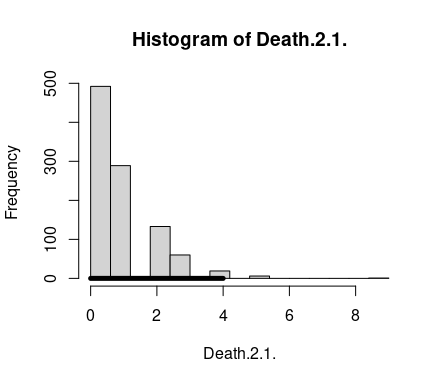
This sections presents graphical and tabular summaries to check the distributional assumptions used for the parameters included in the economic model. For each parameter, a histogram of the distribution is presented together with a summary table, reporting some relevant statistics.



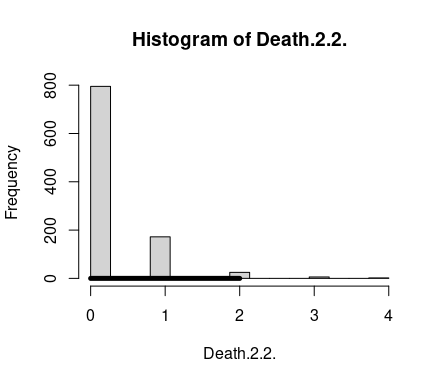
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 4384.479 | 2518.102 | 969.425 | 3874.5 | 10740.8 | 79.58956 |



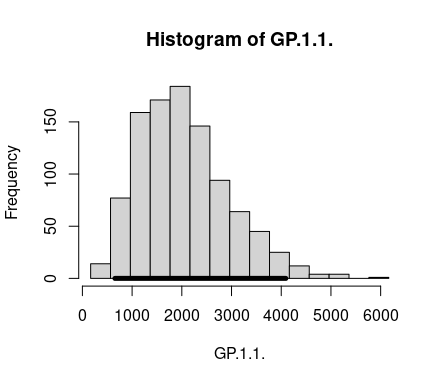
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 1.573 | 1.539169 | 0 | 1 | 5 | 0.0486484 |



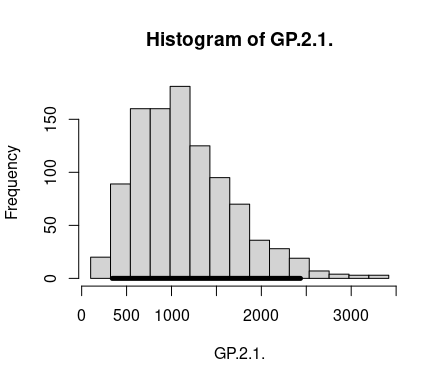
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.85 | 1.083824 | 0 | 1 | 4 | 0.0342564 |



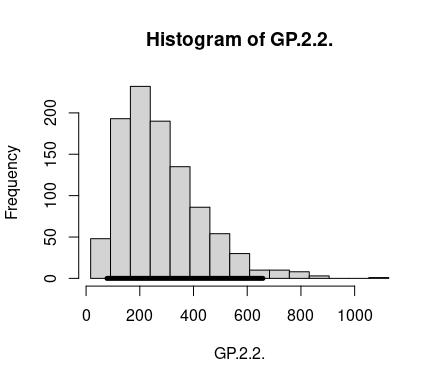
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.248 | 0.5447869 | 0 | 0 | 2 | 0.0172191 |



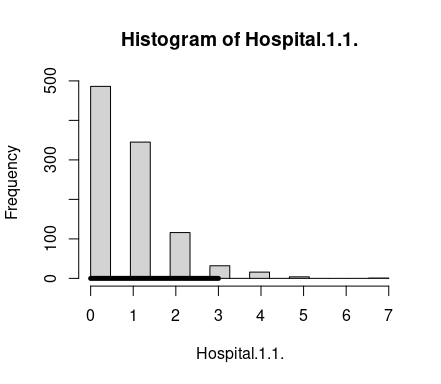
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 2045.987 | 896.964 | 654.925 | 1938.5 | 4092.15 | 28.35031 |



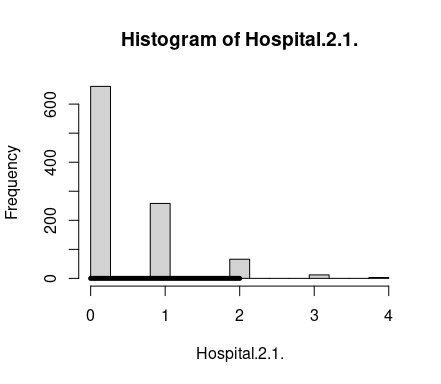
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 1148.308 | 543.1979 | 340.925 | 1083 | 2435.475 | 17.16883 |



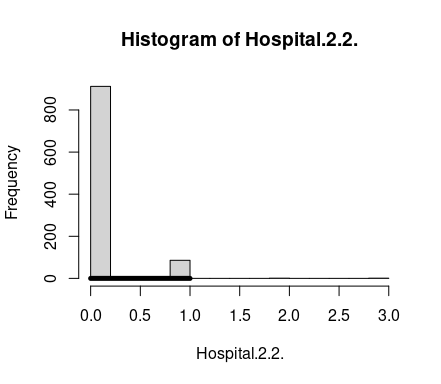
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 279.658 | 151.5797 | 78 | 249.5 | 658.325 | 4.790975 |



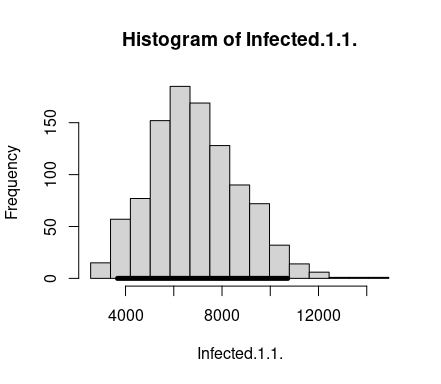
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.764 | 0.9587613 | 0 | 1 | 3 | 0.0303035 |



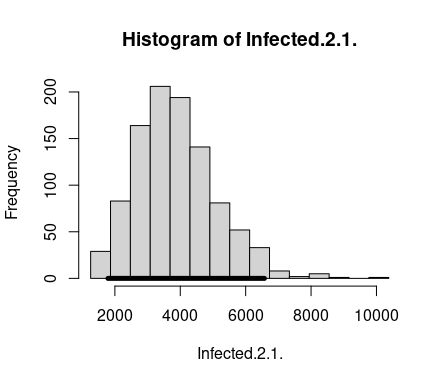
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.438 | 0.6975978 | 0 | 0 | 2 | 0.0220489 |



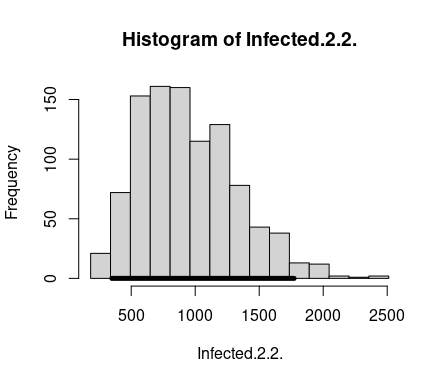
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.091 | 0.3013467 | 0 | 0 | 1 | 0.0095247 |



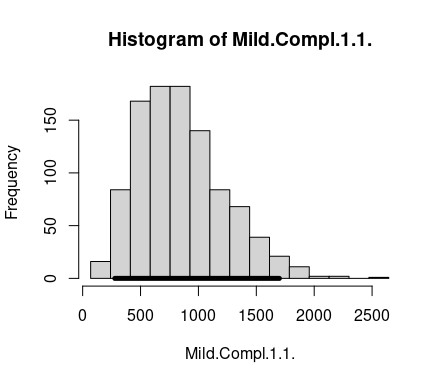
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 6904.96 | 1850.256 | 3667.9 | 6763 | 10724.17 | 58.48097 |



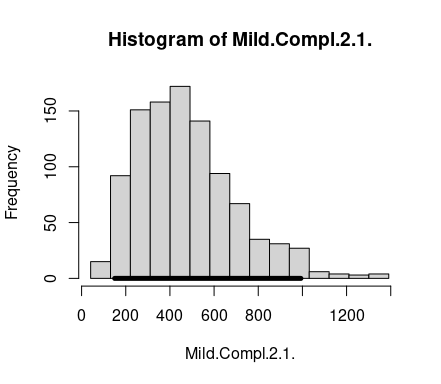
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 3874.547 | 1236.974 | 1789.575 | 3744 | 6573.125 | 39.097 |



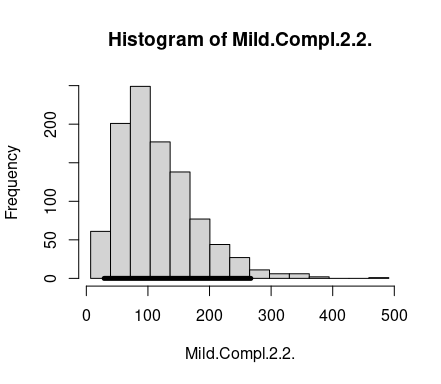
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 944.874 | 378.7866 | 348.875 | 895 | 1772.5 | 11.97229 |



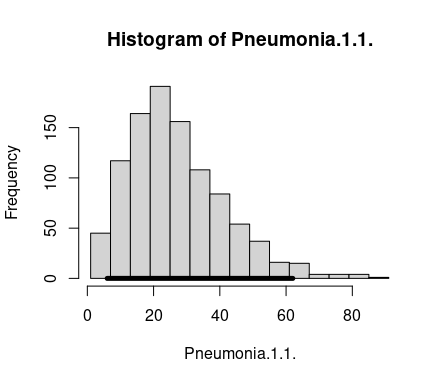
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 847.747 | 374.6328 | 277.9 | 800 | 1699.1 | 11.841 |



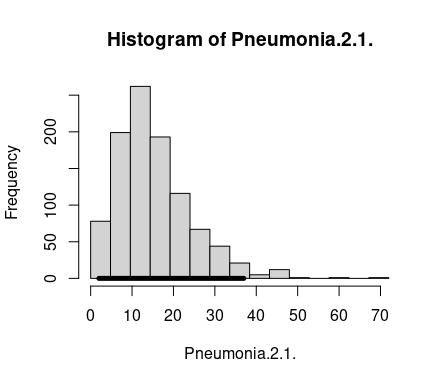
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 476.486 | 225.2089 | 149.875 | 446 | 993.075 | 7.118168 |



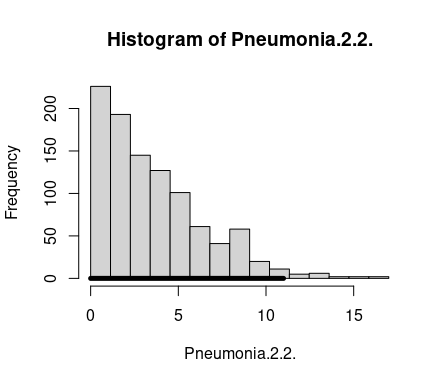
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 115.59 | 63.15335 | 29 | 102 | 267.05 | 1.996086 |



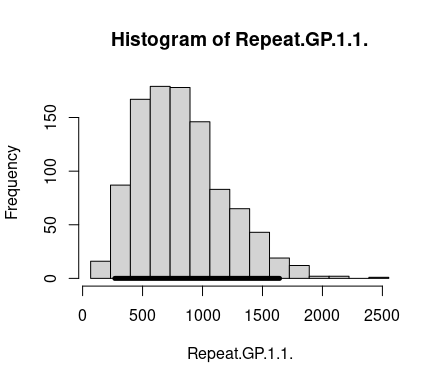
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 27.438 | 14.51919 | 6 | 25 | 62.025 | 0.4589076 |



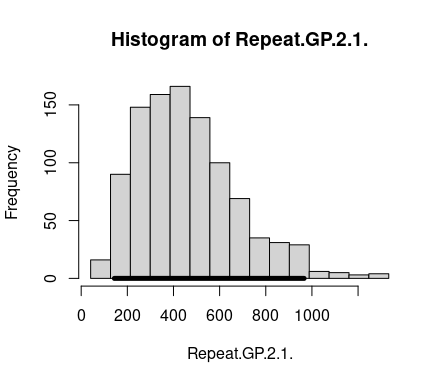
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 15.353 | 9.095555 | 2 | 14 | 37 | 0.2874829 |



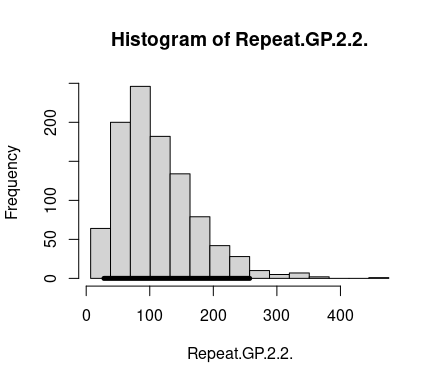
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 3.672 | 2.859824 | 0 | 3 | 11 | 0.0903904 |



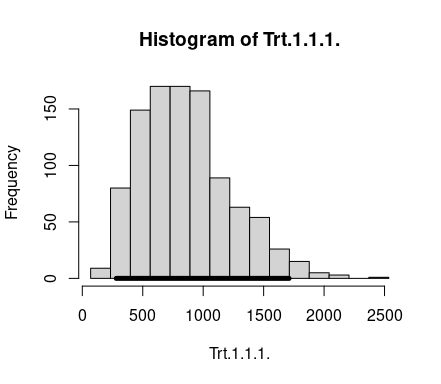
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 820.309 | 362.7582 | 269 | 773 | 1642.1 | 11.46568 |



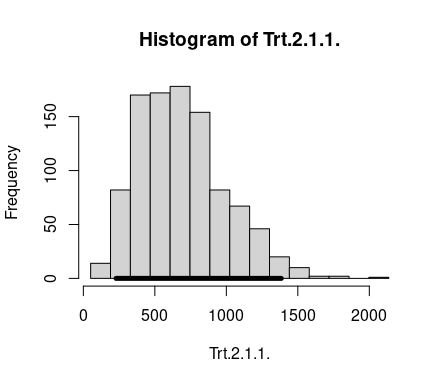
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 461.133 | 217.8635 | 143.85 | 432 | 966.075 | 6.886004 |



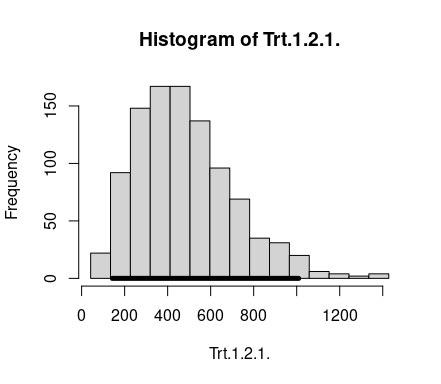
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 111.918 | 61.17493 | 27.975 | 98 | 257.175 | 1.933553 |



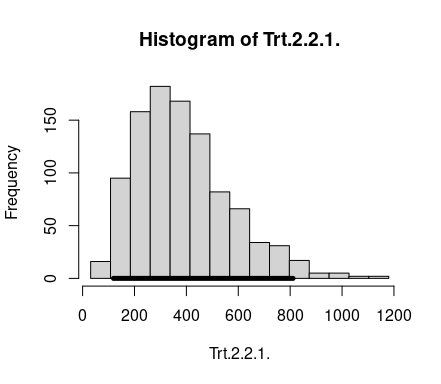
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 859.031 | 375.9444 | 281 | 816 | 1710.025 | 11.88246 |



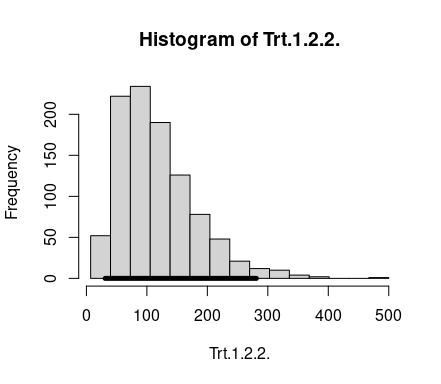
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 689.768 | 303.9169 | 228.875 | 653 | 1384.2 | 9.605891 |



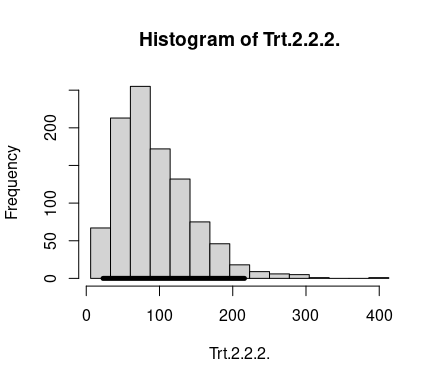
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 481.877 | 227.604 | 143 | 455 | 1009.075 | 7.19387 |



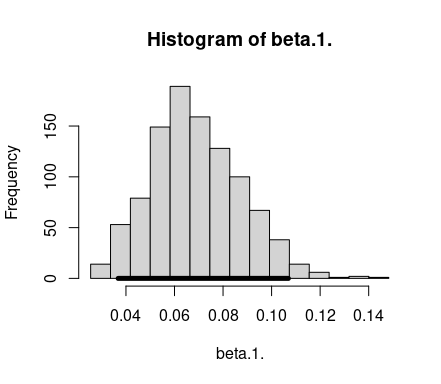
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 388.103 | 183.2891 | 118.975 | 364 | 811.05 | 5.793213 |



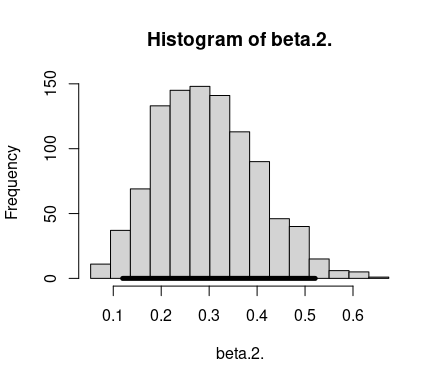
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 117.33 | 64.61155 | 30.975 | 105 | 281.025 | 2.042175 |



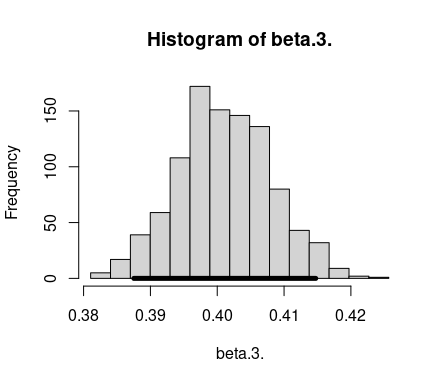
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 94.158 | 51.4585 | 22.975 | 83 | 216 | 1.626447 |



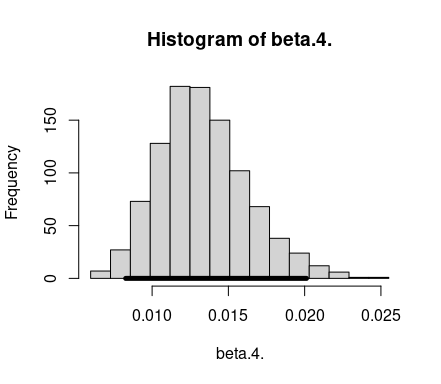
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0690728 | 0.0185195 | 0.0367975 | 0.0676216 | 0.1069079 | 0.0005853 |



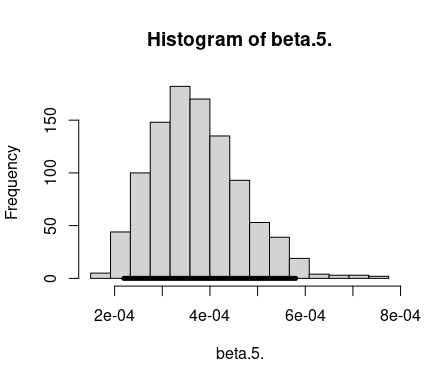
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.2971902 | 0.1047984 | 0.1196443 | 0.2898017 | 0.5211321 | 0.0033124 |



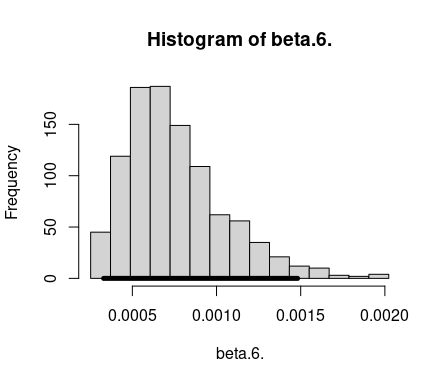
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.4010433 | 0.00703 | 0.3875232 | 0.4009802 | 0.4147382 | 0.0002222 |



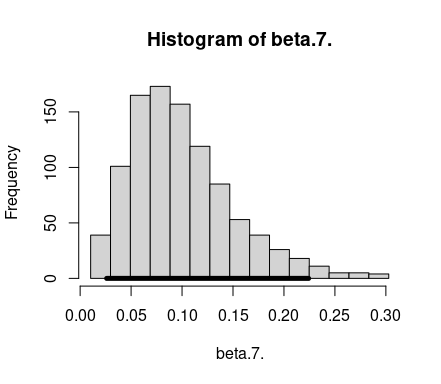
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.013347 | 0.0029279 | 0.0082679 | 0.0130898 | 0.020119 | 9.25e-05 |



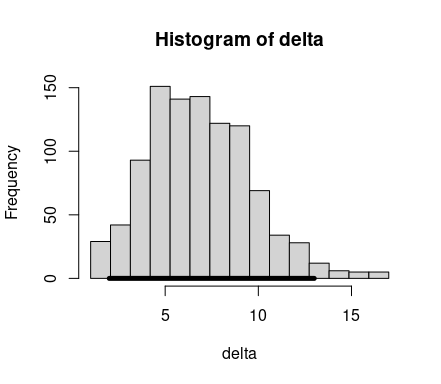
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0003727 | 9.44e-05 | 0.0002194 | 0.0003636 | 0.0005799 | 3e-06 |



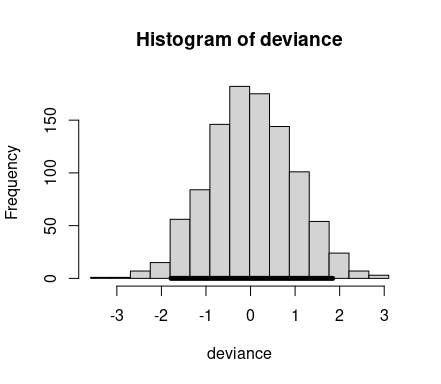
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0007564 | 0.0002967 | 0.0003294 | 0.0007006 | 0.0014815 | 9.4e-06 |



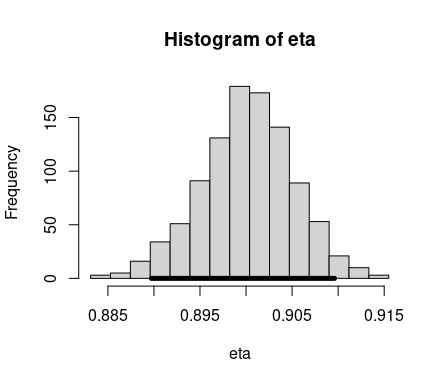
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0997926 | 0.051201 | 0.0260358 | 0.0906289 | 0.2241951 | 0.0016183 |



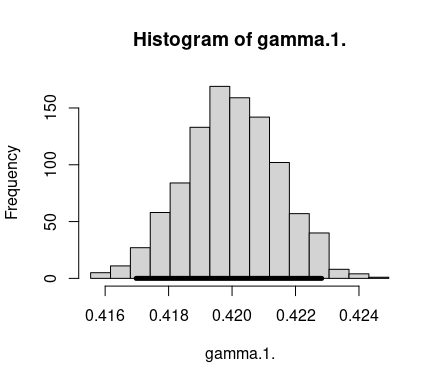
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 7.004 | 2.643667 | 2 | 7 | 13 | 0.0835583 |



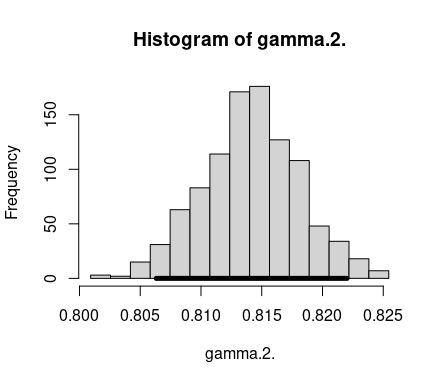
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0065729 | 0.9573016 | -1.784163 | 0.0010277 | 1.844494 | 0.0302574 |



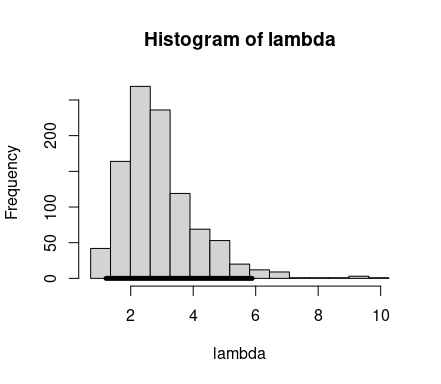
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.9001309 | 0.0050356 | 0.8897217 | 0.9002975 | 0.9096117 | 0.0001592 |



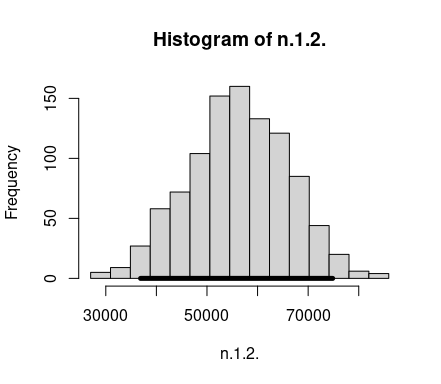
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.4199825 | 0.0014766 | 0.4169795 | 0.4199816 | 0.4228245 | 4.67e-05 |



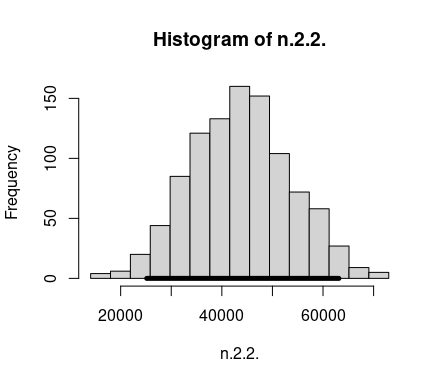
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.8141167 | 0.004001 | 0.8063162 | 0.8141551 | 0.822019 | 0.0001265 |



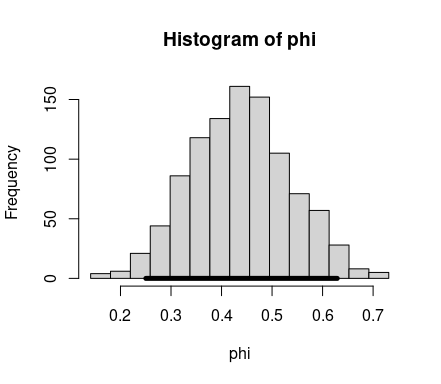
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 2.905089 | 1.225704 | 1.211919 | 2.681323 | 5.88241 | 0.0387408 |



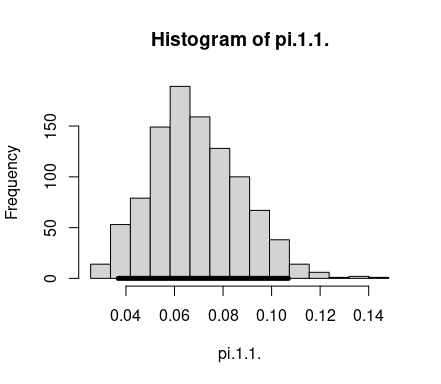
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 56170.33 | 9860.615 | 36874.55 | 56216.5 | 74843.7 | 311.6641 |



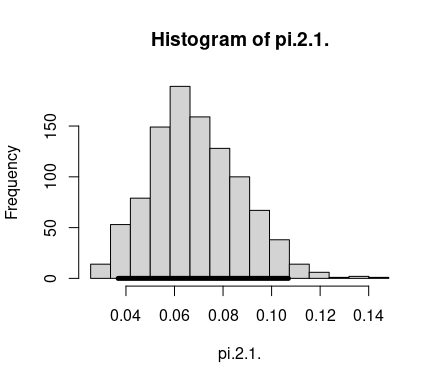
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 43829.67 | 9860.615 | 25156.3 | 43783.5 | 63125.45 | 311.6641 |



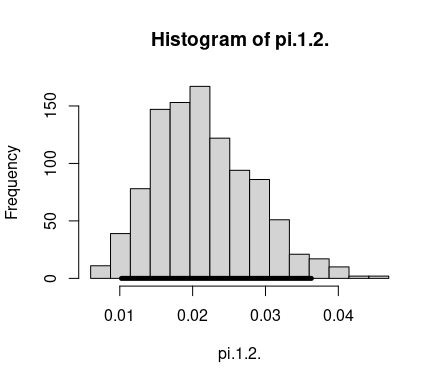
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.4382939 | 0.098694 | 0.2502404 | 0.4381762 | 0.6289504 | 0.0031194 |



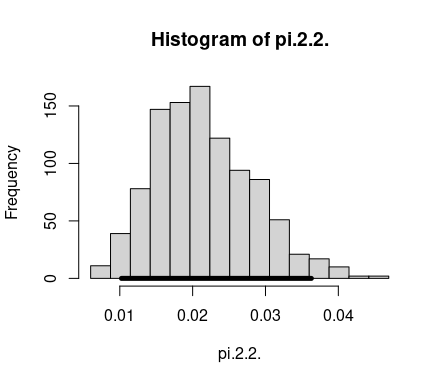
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0690728 | 0.0185195 | 0.0367975 | 0.0676216 | 0.1069079 | 0.0005853 |



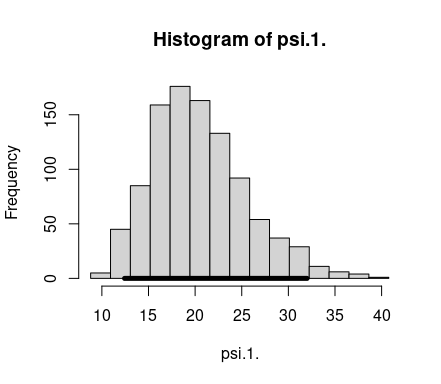
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0690728 | 0.0185195 | 0.0367975 | 0.0676216 | 0.1069079 | 0.0005853 |



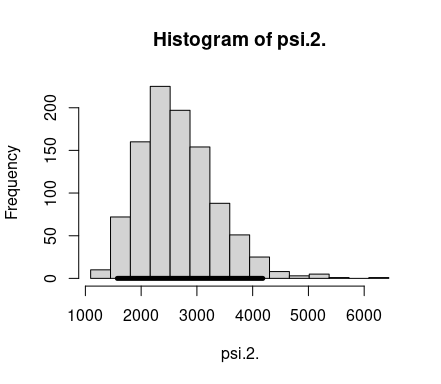
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0215133 | 0.0068073 | 0.0102327 | 0.0207813 | 0.0362975 | 0.0002152 |



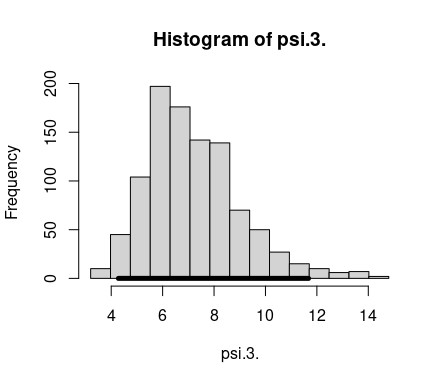
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.0215133 | 0.0068073 | 0.0102327 | 0.0207813 | 0.0362975 | 0.0002152 |



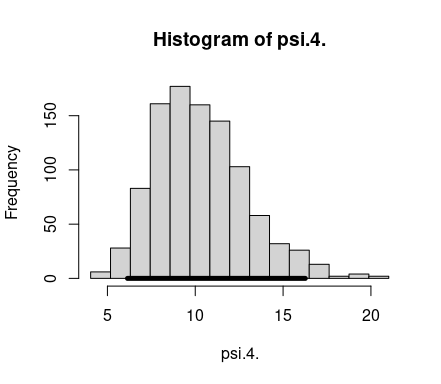
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 20.50602 | 5.086617 | 12.4331 | 20.01152 | 32.00584 | 0.1607725 |



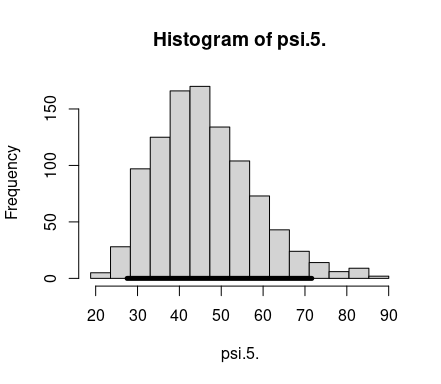
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 2661.843 | 684.1538 | 1573.676 | 2583.913 | 4181.041 | 21.62402 |



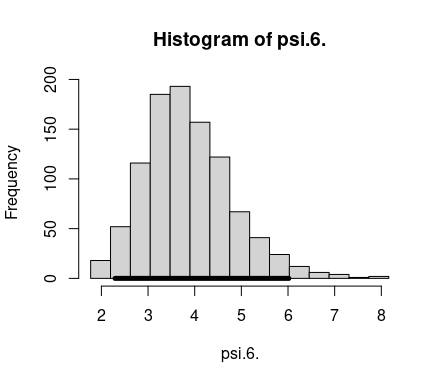
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 7.199515 | 1.83873 | 4.279942 | 6.90417 | 11.67563 | 0.0581167 |



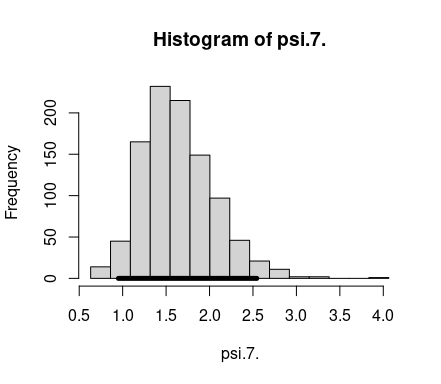
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 10.29213 | 2.607787 | 6.143624 | 9.955699 | 16.26332 | 0.0824242 |



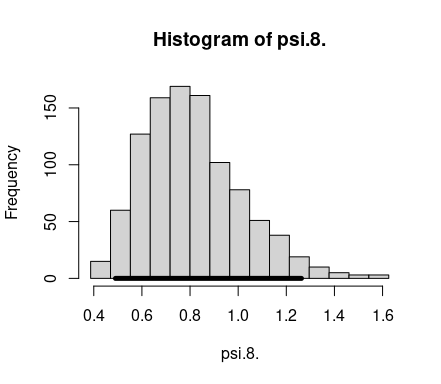
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 45.91777 | 11.68489 | 27.51898 | 44.53583 | 71.62707 | 0.3693238 |



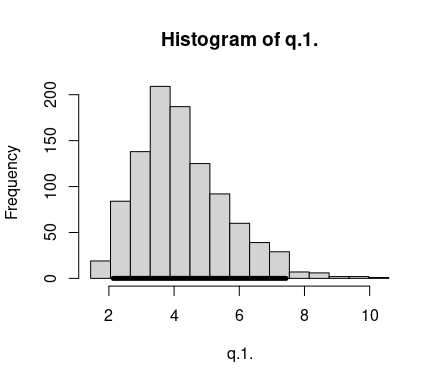
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 3.854695 | 0.9479262 | 2.292722 | 3.755557 | 6.017339 | 0.0299611 |



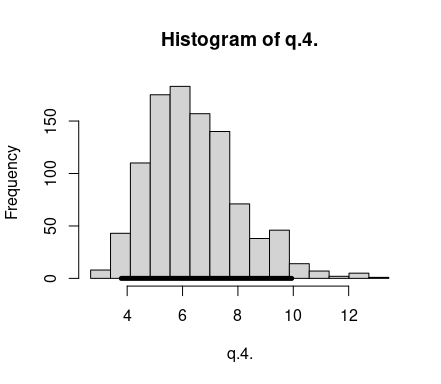
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 1.635824 | 0.4130969 | 0.9513184 | 1.591567 | 2.543868 | 0.0130567 |



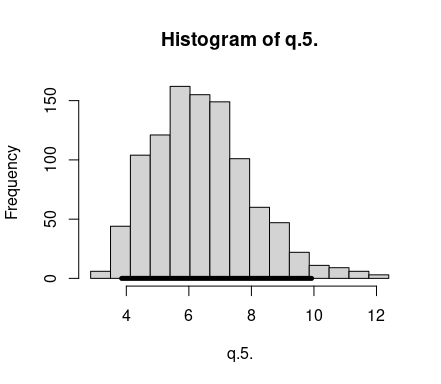
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.8108407 | 0.2026673 | 0.4901607 | 0.7876551 | 1.262942 | 0.0064057 |



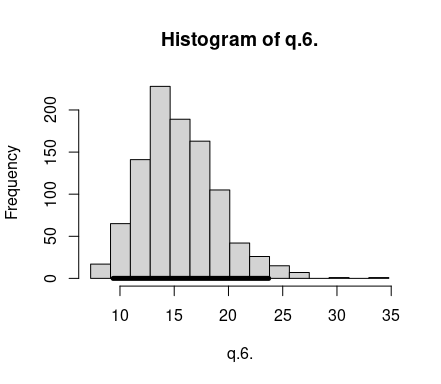
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 4.245515 | 1.380328 | 2.133401 | 4.020643 | 7.43128 | 0.043628 |



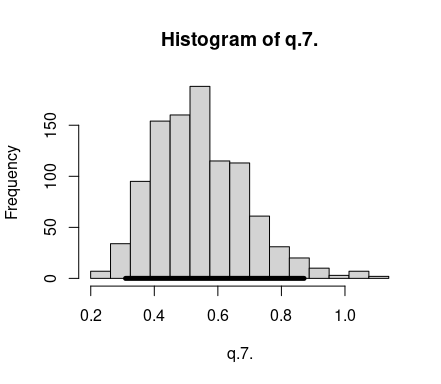
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 6.414003 | 1.640791 | 3.78795 | 6.185502 | 9.942465 | 0.0518604 |



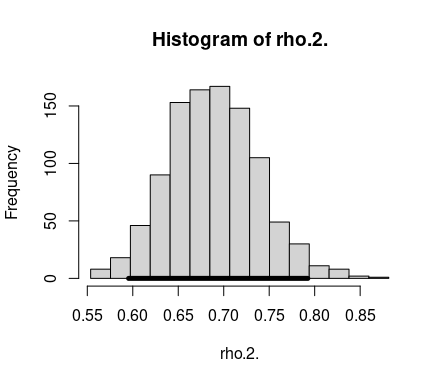
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 6.42076 | 1.584056 | 3.850581 | 6.285484 | 9.924699 | 0.0500672 |



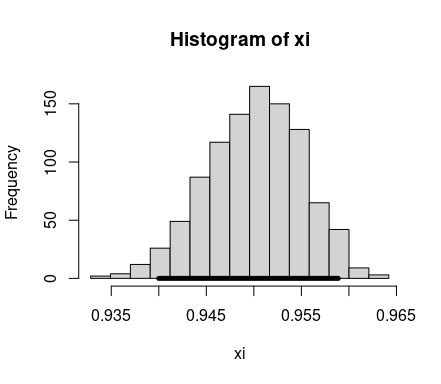
| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 15.48614 | 3.549163 | 9.37079 | 15.09543 | 23.70509 | 0.1121783 |



| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.5424171 | 0.1463549 | 0.3095674 | 0.528529 | 0.8712211 | 0.0046258 |



| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.6888042 | 0.0496164 | 0.5954323 | 0.6872181 | 0.7924515 | 0.0015682 |



| Mean | Standard deviation | 2.5% | Median | 97.5% | Monte Carlo SE |
| --- | --- | --- | --- | --- | --- |
| 0.9500773 | 0.0049722 | 0.9400008 | 0.9502989 | 0.9588729 | 0.0001572 |

# Economic Analysis

This section contains a summary of the economic evaluation.

## Cost-effectiveness analysis

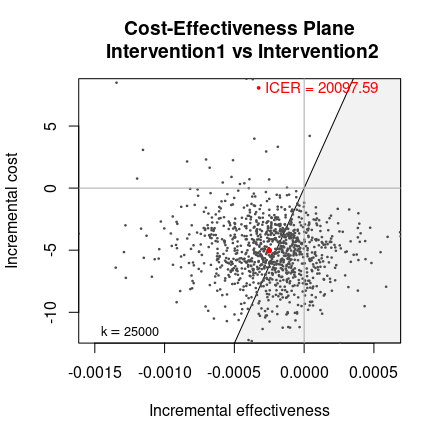
This sub-section presents a summary table reporting basic economic results as well as the optimal decision, given the selected willingness-to-pay threshold .

Cost-effectiveness analysis summary   
   
 Reference intervention: Intervention1  
 Comparator intervention: Intervention2  
   
 Optimal decision: choose Intervention1 for k < 20100 and Intervention2 for k >= 20100  
   
   
 Analysis for willingness to pay parameter k = 25000  
   
 Expected net benefit  
 Intervention1 -36.054  
 Intervention2 -34.826  
   
 EIB CEAC ICER  
 Intervention1 vs Intervention2 -1.2284 0.471 20098  
   
 Optimal intervention (max expected net benefit) for k = 25000: Intervention2  
   
 EVPI 2.4145

## Cost-effectiveness plane

The following graph shows the cost-effectiveness plane. This presents the joint distribution of the population average benefit and cost differential, .

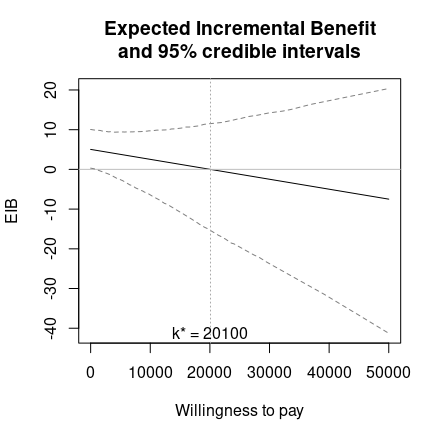
Each point in the graph represents a ‘potential future’ in terms of expected incremental economic outcomes. The shaded portion of the plane is the ‘*sustainability area*’. The more points lay in the sustainability area, the more likely that the reference intervention will turn out to be cost-effective, at a given willingness to pay threshold, (in this case selected at 25000)



## Expected Incremental Benefit

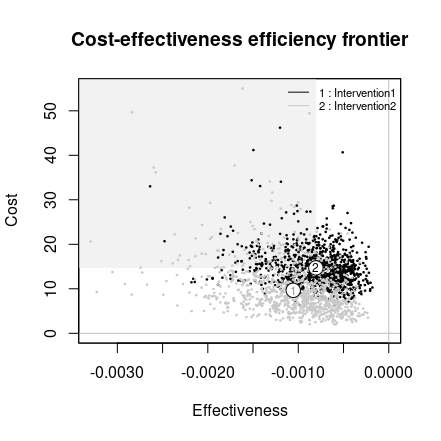
The following graph shows the Expected Incremental Benefit (EIB), as a function of a grid of values for the willingness to pay (in this case in the interval 0 - 50000).

The value for in correspondence of which the line crosses the axis is termed the ‘*break-even point*’ and represents the point(s) at which the optimal decision changes. The graph also reports the 95% credible limits around the EIB.



## Cost-effectiveness efficiency frontier

Cost-effectiveness efficiency frontier summary   
   
 Interventions on the efficiency frontier:  
 Effectiveness Costs Increase slope Increase angle  
 Intervention2 -0.00080537 14.691 NA NA  
   
 Interventions not on the efficiency frontier:  
 Effectiveness Costs Dominance type  
 Intervention1 -0.0010559 9.6555 Extended dominance

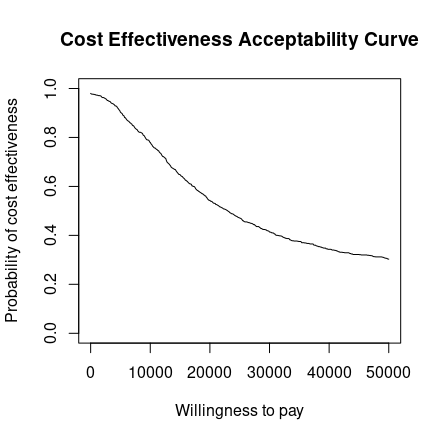


# Probabilistic Sensitivity Analysis

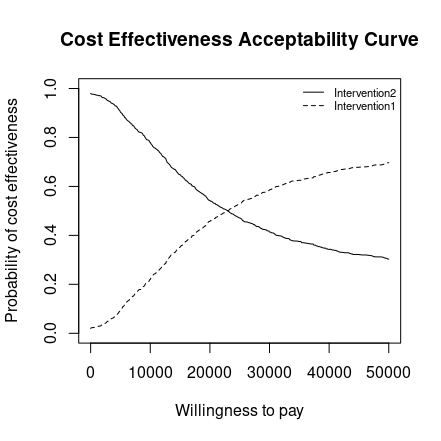
This section presents the results of Probabilistic Sensitivity Analysis (PSA). PSA is used to assess the impact of parameter uncertainty on the decision-making process.

## Cost-effectiveness acceptability curve

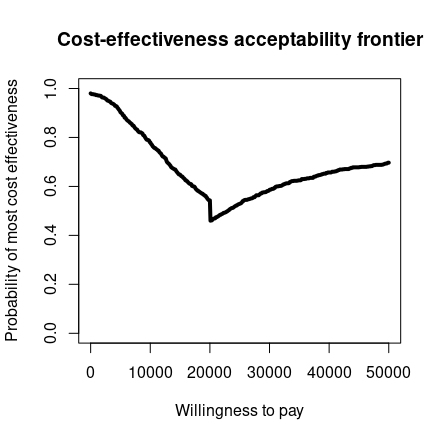
The following graph shows the cost-effectiveness acceptability curve (CEAC). The CEAC represents the proportion of ‘potential futures’ in which the reference intervention is estimated to be more cost-effective than the comparator. Thus, it can be interpreted as the ‘probability of cost-effectiveness’.



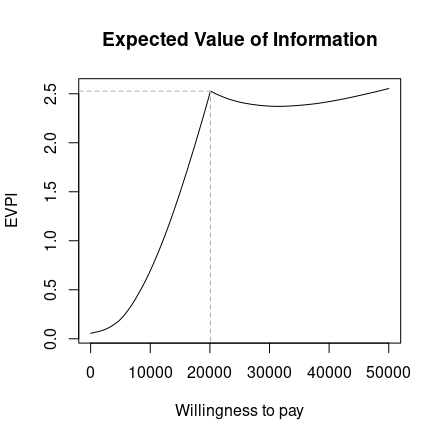
## Multi-comparison Cost-effectiveness acceptability curve



## Cost-effectiveness acceptability frontier



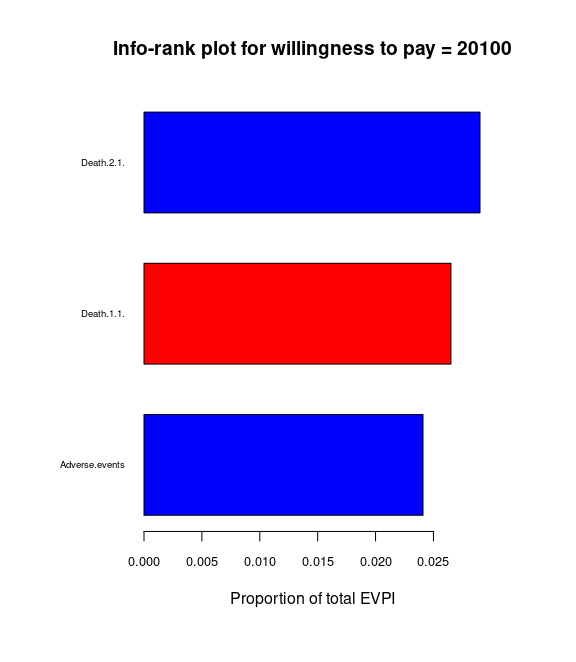
## Expected value of perfect information



## Info-rank plot

This section presents the results of the Info-rank plot. This is an extension of the Tornado plot, which is used to identify the most important parameters. Instead of using deterministic sensitivity analysis, however, the Info-rank plot is based on the analysis of the Expected Value of Partial Perfect Information (EVPPI).

For each parameter and value of the willingness-to-pay threshold , a barchart is plotted to describe the ratio of EVPPI (specific to that parameter) to EVPI. This represents the relative ‘importance’ of each parameter in terms of the expected value of information.

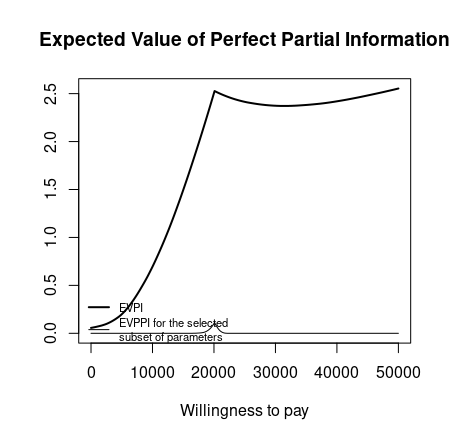


## Expected value of perfect partial information

This section presents the results of the analysis of the Expected Value of Partial Perfect Information (EVPPI). The analysis considers specifically the set of *important* parameters Death.2.1., Death.1.1., Adverse.events. The resulting EVPPI describes the value of learning about , while all the other parameters remain uncertain at the current level of knowledge.

### Estimation of the EVPPI

The EVPPI has been estimated using Gaussian Process regression with a total running time of 0 seconds. The following graph shows the EVPPI as a function of the willingness-to-pay .



### Diagnostics

The following graphs can be used to assess the model and method used to perform the calculations. The *Residual Plot* shows the model residuals, separately for the costs and the effects. A scatter plot with no evident pattern indicates satisfactory fit.

Since the calculation methods are based on some form of underlying normality of the process describing the distribution of the Net Benefits, the *Q-Q Plot* for both costs and effects should show points lying on top of the 45 degrees line. Substantial departure from linearity in this graph indicate poor model fitting.

