Synthesized_Full_Cleveland_Data

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Full Cleveland Dataset Synthesis

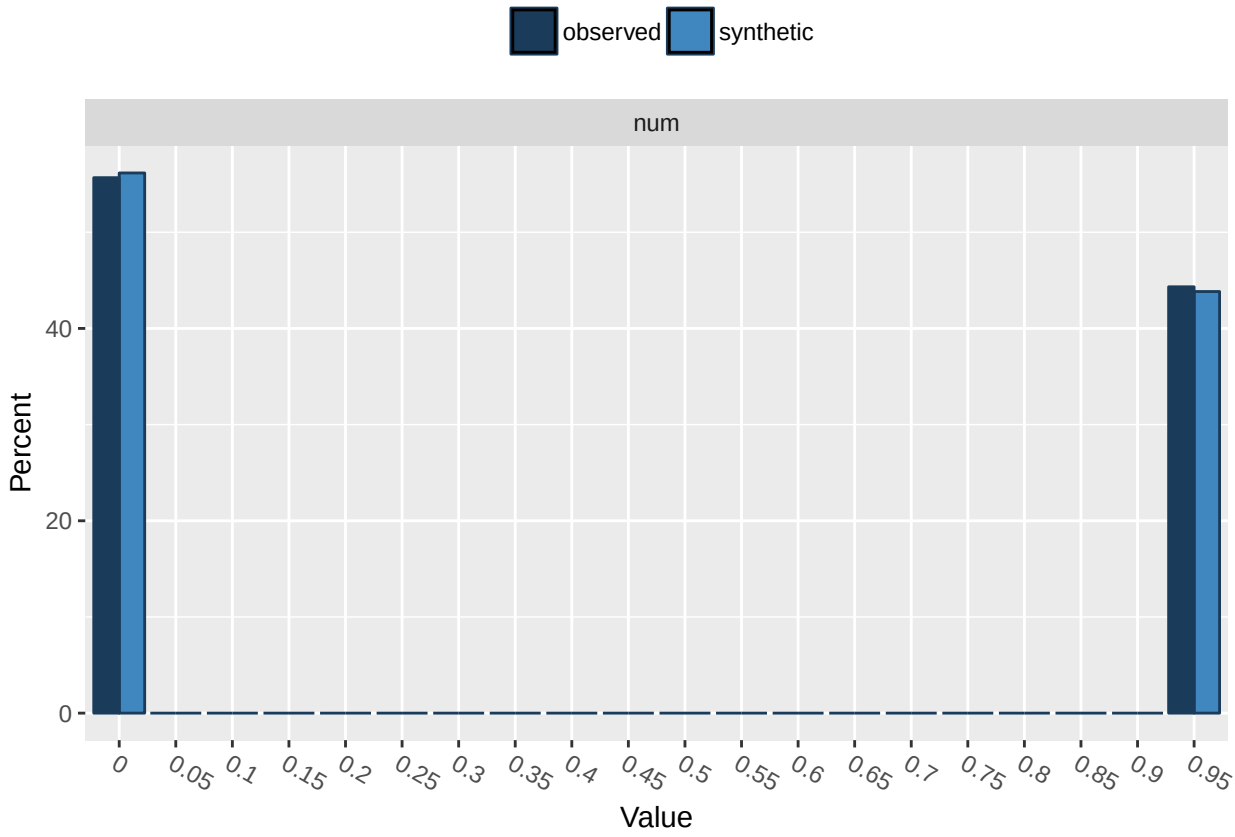
The original "cleveland.data" dataset from the UCI Repository http://archive.ics.uci.edu/ml/machine-learning-databases/heart-disease/cleveland.data, was prepared and used to synthesize 60K records (from the original 282 records) of anonymized data for use in Artificial Neural Network Models.

Below are the comparison charts that show the synthesized data having the same distribution and percentages as the original seed data.

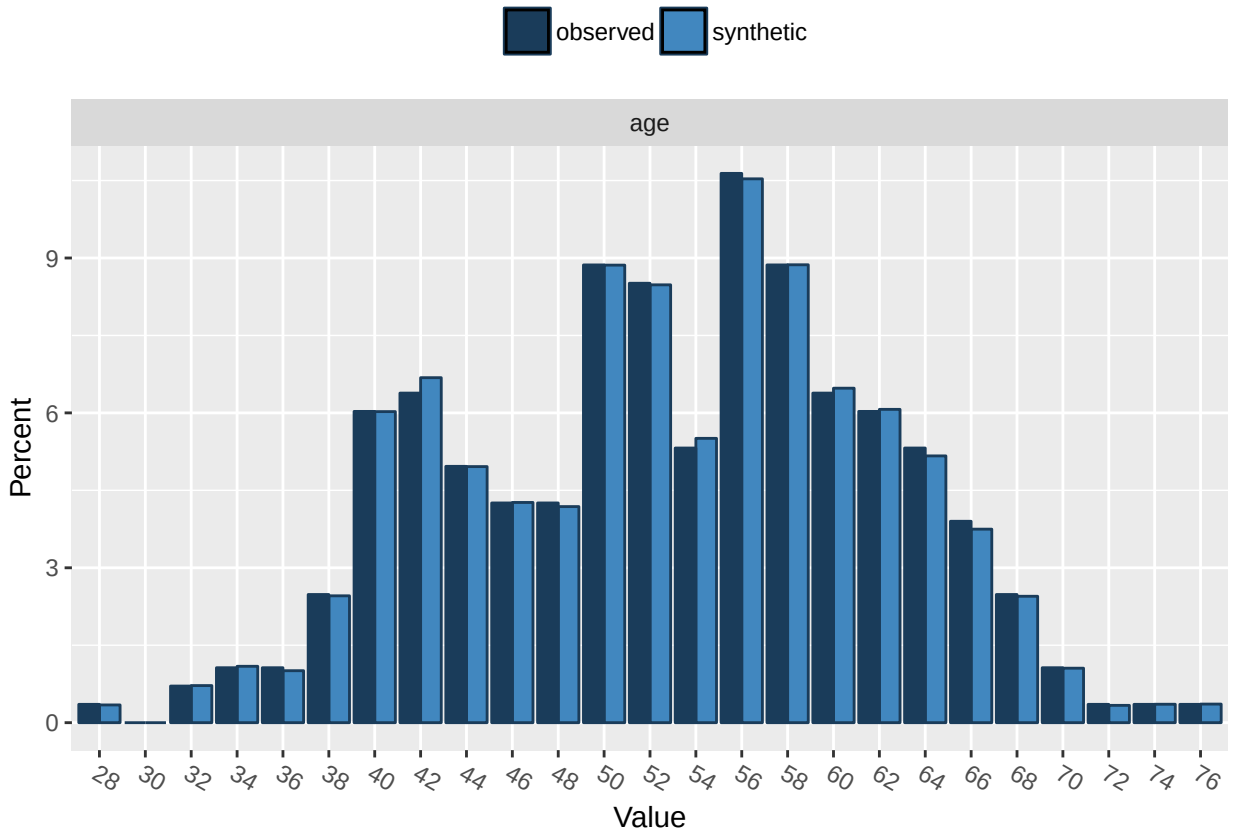
Comparison Plots

These plots compare the % of the original Cleveland dataset to the Synthesized dataset. Note that "num" is the diagnosis variable.

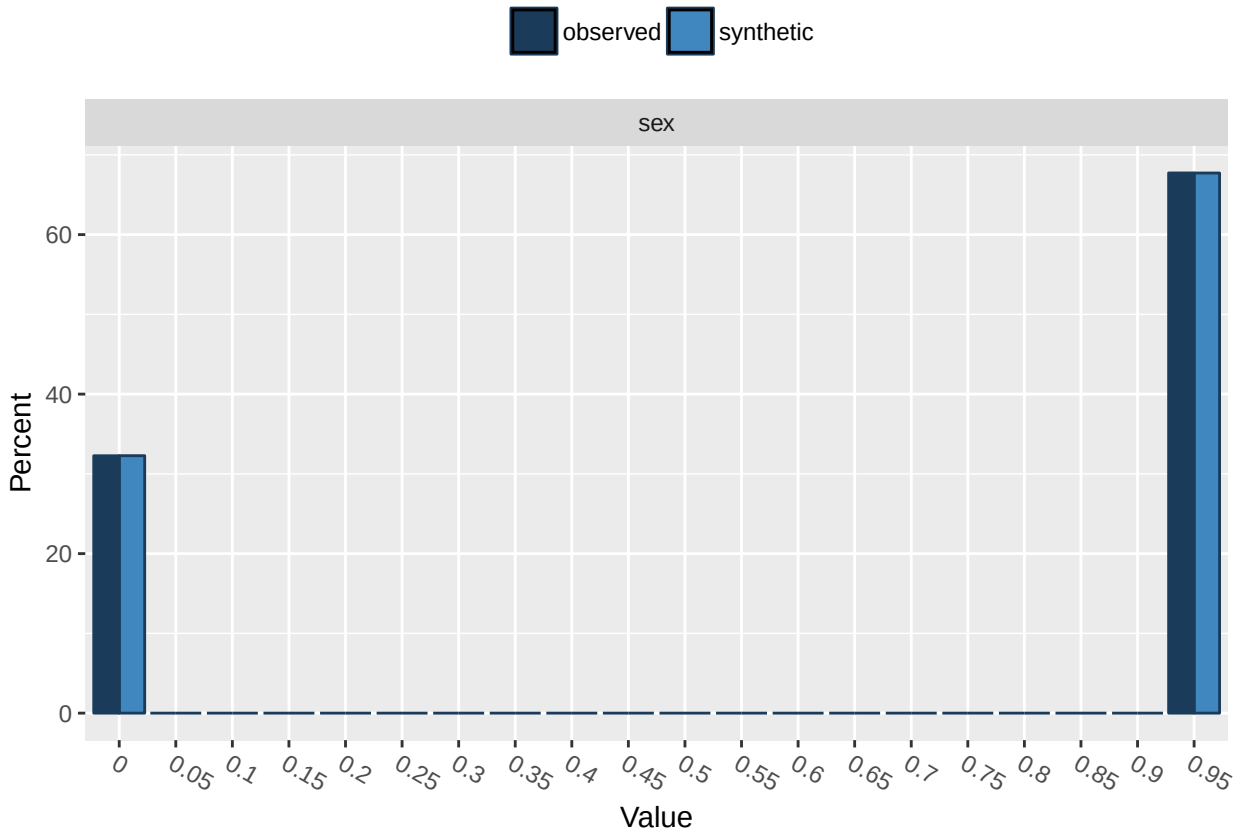
```
##
## Comparing percentages observed with synthetic
##
## $num
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  55.67376    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 56.16500    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 44.32624
## synthetic    0   0    0   0    0   0 43.83500
```



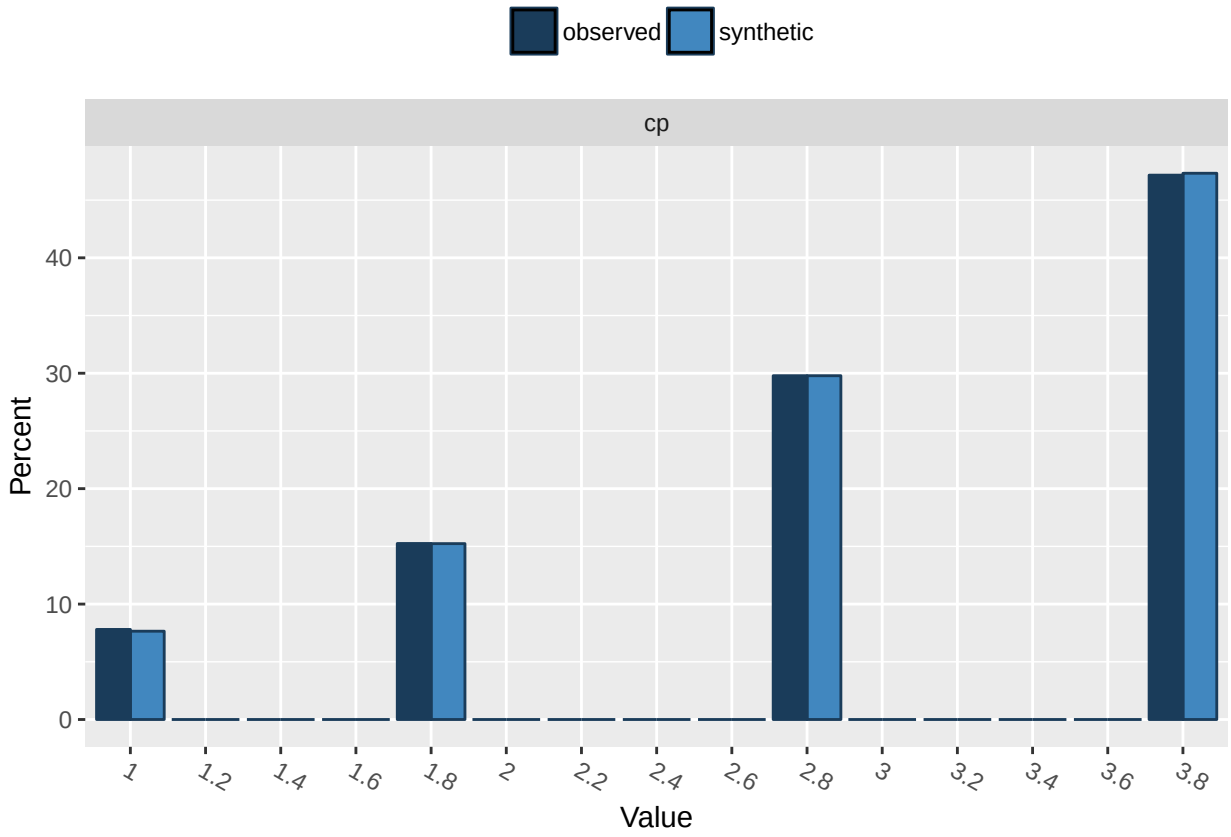

```
##
## Comparing percentages observed with synthetic
##
## $age
##                   28 30        32       34       36       38       40
## observed  0.3546099  0 0.7092199 1.063830 1.063830 2.482270 6.028369
## synthetic 0.3433333  0 0.7183333 1.091667 1.006667 2.456667 6.025000
##                 42       44       46       48       50       52       54
## observed  6.382979 4.964539 4.255319 4.255319 8.865248 8.510638 5.319149
## synthetic 6.681667 4.960000 4.265000 4.185000 8.861667 8.480000 5.506667
##                 56       58       60       62       64       66       68
## observed  10.63830 8.865248 6.382979 6.028369 5.319149 3.900709 2.482270
## synthetic 10.53333 8.868333 6.478333 6.068333 5.166667 3.748333 2.448333
##                 70        72        74        76
## observed  1.06383 0.3546099 0.3546099 0.3546099
## synthetic 1.05500 0.3350000 0.3566667 0.3600000
```



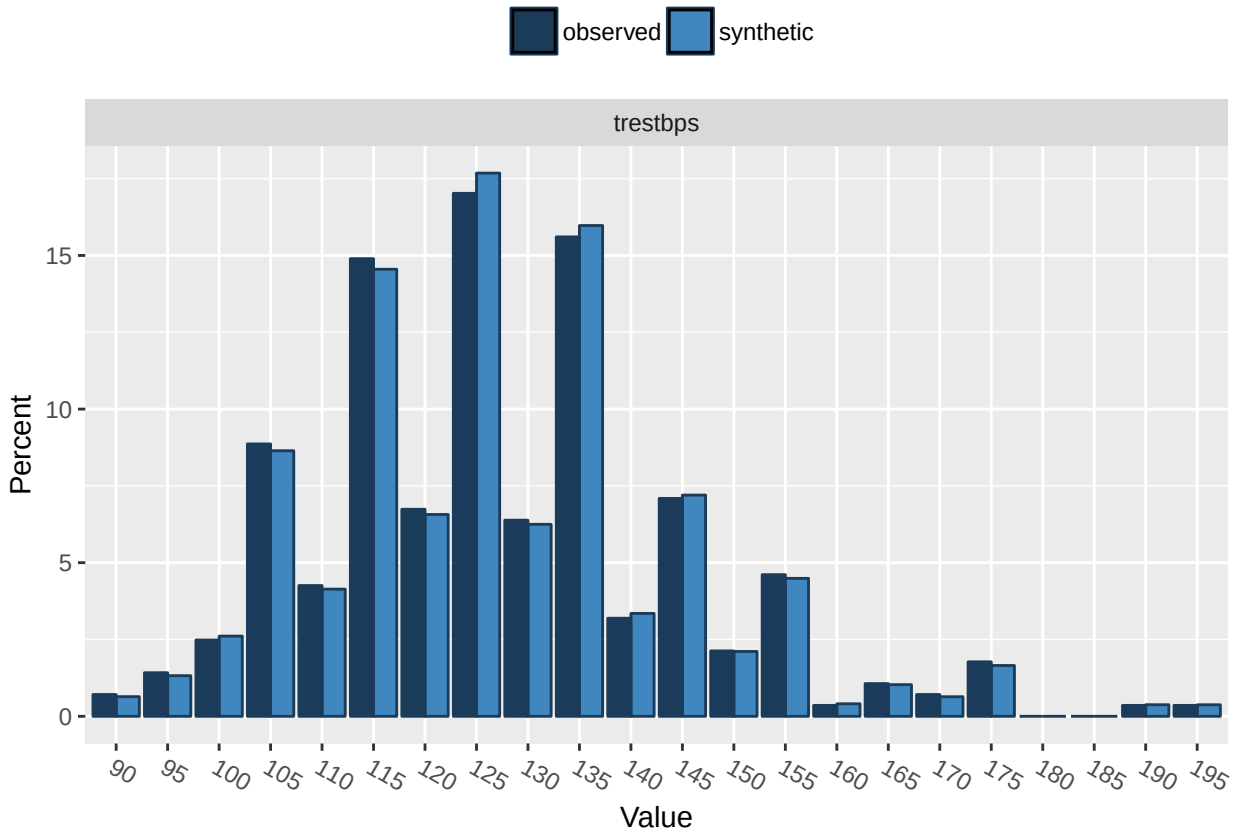

```
##
## Comparing percentages observed with synthetic
##
## $sex
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  32.26950    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 32.27833    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 67.73050
## synthetic    0   0    0   0    0   0 67.72167
```



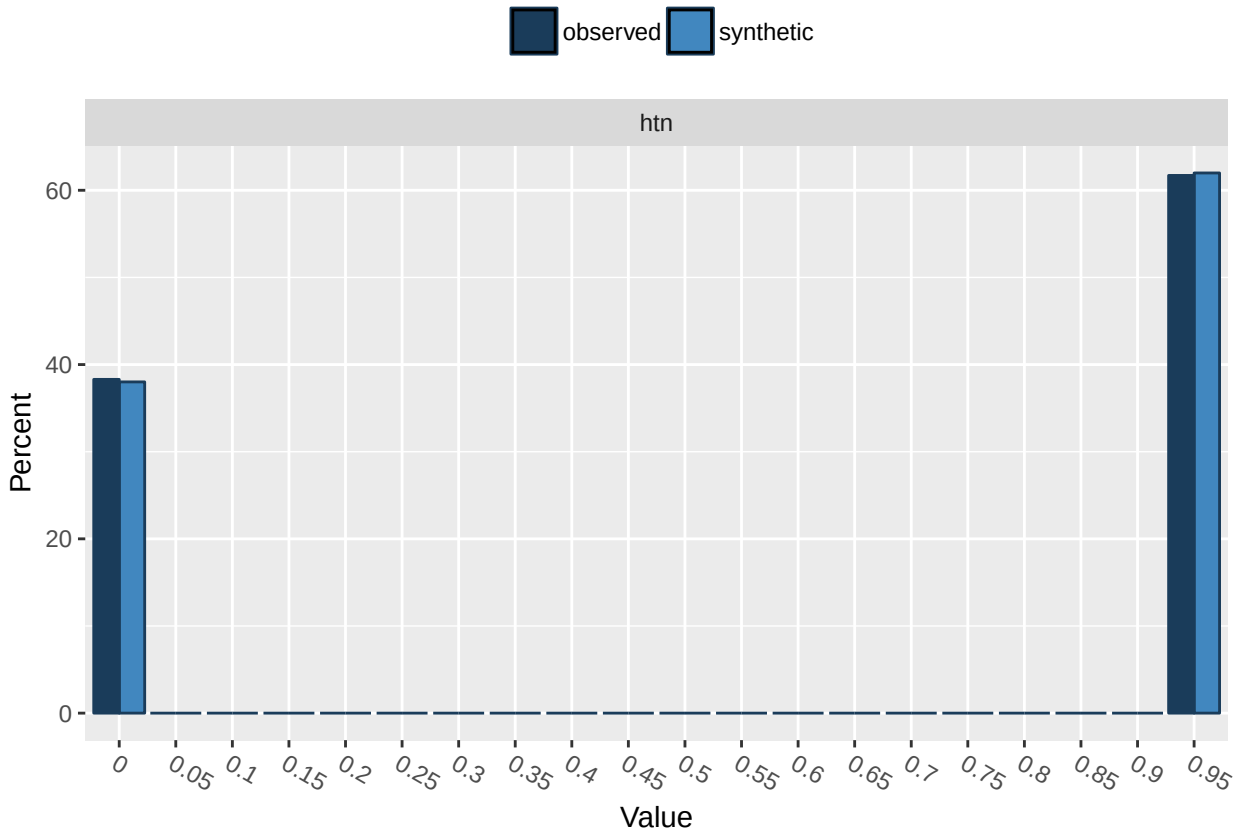

```
##
## Comparing percentages observed with synthetic
##
## $cp
##                  1 1.2 1.4 1.6      1.8 2 2.2 2.4 2.6      2.8 3 3.2 3.4
## observed  7.801418   0   0   0 15.24823 0   0   0   0 29.78723 0   0   0
## synthetic 7.650000   0   0   0 15.23833 0   0   0   0 29.78500 0   0   0
##           3.6      3.8
## observed    0 47.16312
## synthetic   0 47.32667
```



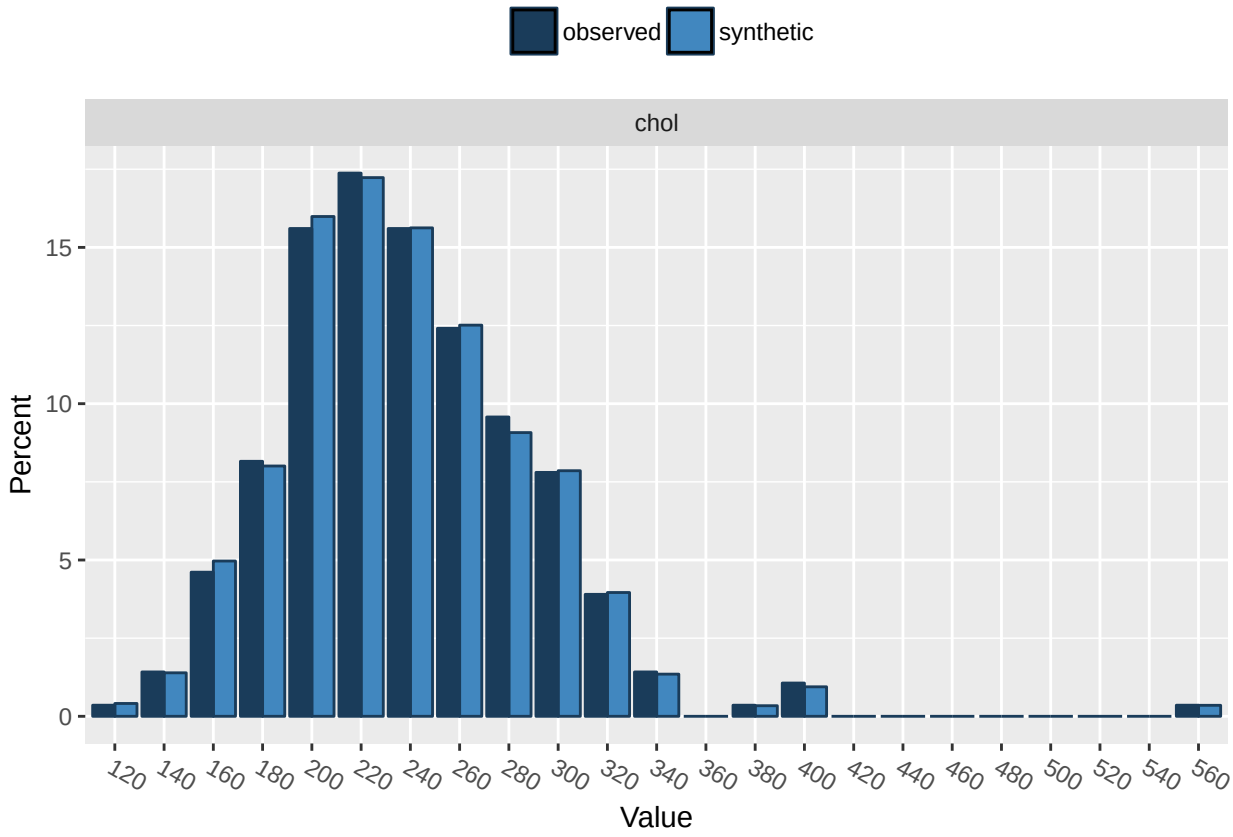

```
##
## Comparing percentages observed with synthetic
##
## $trestbps
##                   90       95      100       105       110       115       120
## observed  0.7092199 1.418440 2.48227 8.865248 4.255319 14.89362 6.737589
## synthetic 0.6400000 1.321667 2.61000 8.643333 4.138333 14.55000 6.568333
##                  125       130       135       140       145      150       155
## observed  17.02128 6.382979 15.60284 3.191489 7.092199 2.12766 4.609929
## synthetic 17.68000 6.248333 15.97333 3.348333 7.200000 2.11000 4.490000
##                  160       165       170       175 180 185       190       195
## observed  0.3546099 1.06383 0.7092199 1.773050   0   0 0.3546099 0.3546099
## synthetic 0.4066667 1.03000 0.6366667 1.653333   0   0 0.3766667 0.3750000
```



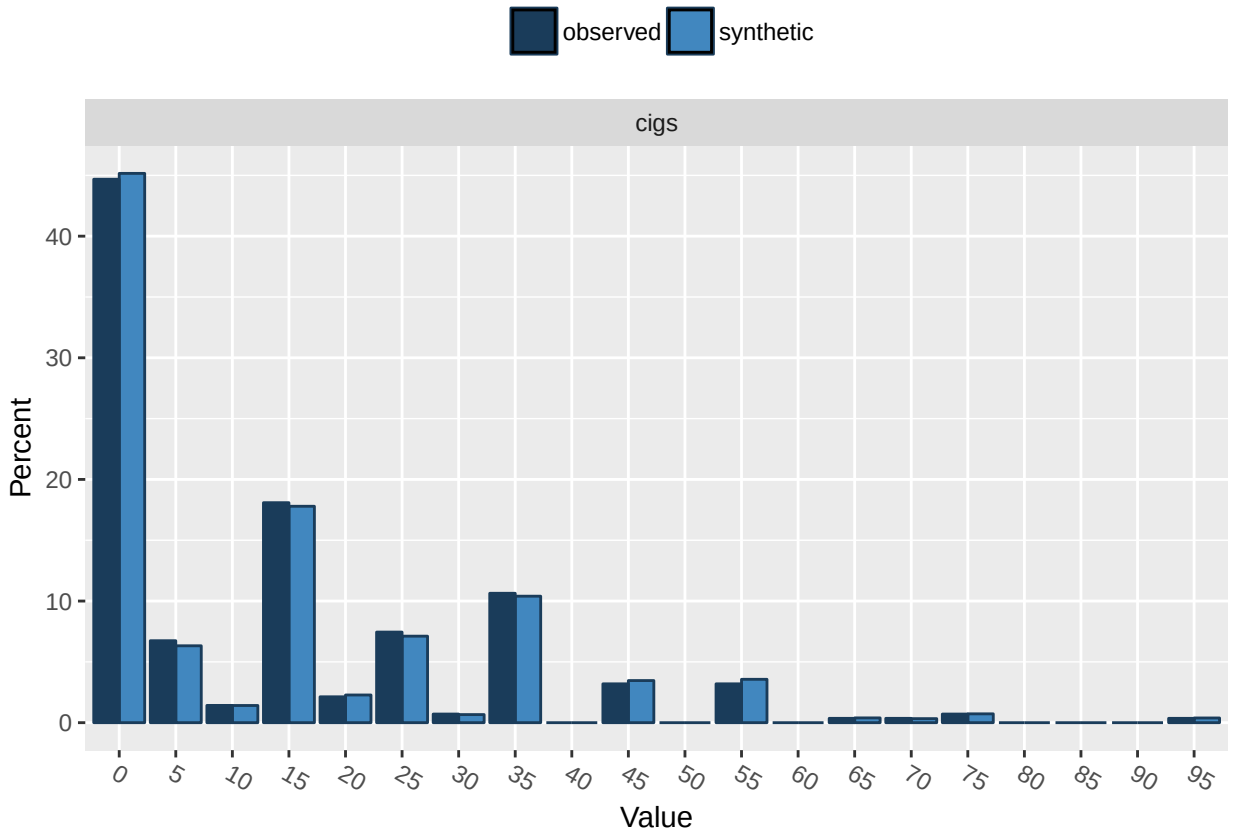

```
##
## Comparing percentages observed with synthetic
##
## $htn
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  38.29787    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 38.01167    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 61.70213
## synthetic    0   0    0   0    0   0 61.98833
```



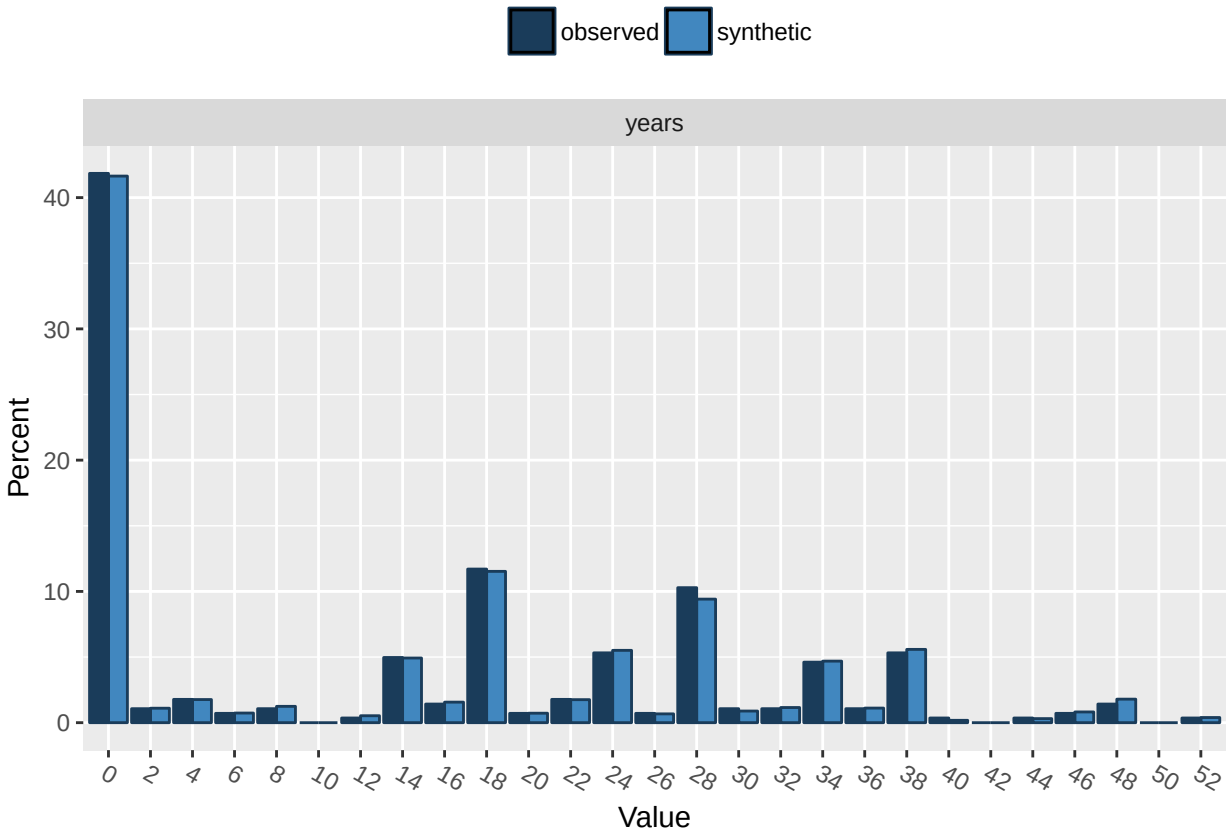

```
##
## Comparing percentages observed with synthetic
##
## $chol
##                  120      140      160      180      200      220      240
## observed  0.3546099 1.418440 4.609929 8.156028 15.60284 17.37589 15.60284
## synthetic 0.4100000 1.391667 4.966667 8.006667 15.98667 17.23167 15.62333
##                260      280      300      320      340 360       380
## observed  12.41135 9.574468 7.801418 3.900709 1.418440   0 0.3546099
## synthetic 12.51167 9.075000 7.855000 3.960000 1.348333   0 0.3383333
##                400 420 440 460 480 500 520 540       560
## observed  1.0638298   0   0   0   0   0   0   0 0.3546099
## synthetic 0.9433333   0   0   0   0   0   0   0 0.3516667
```



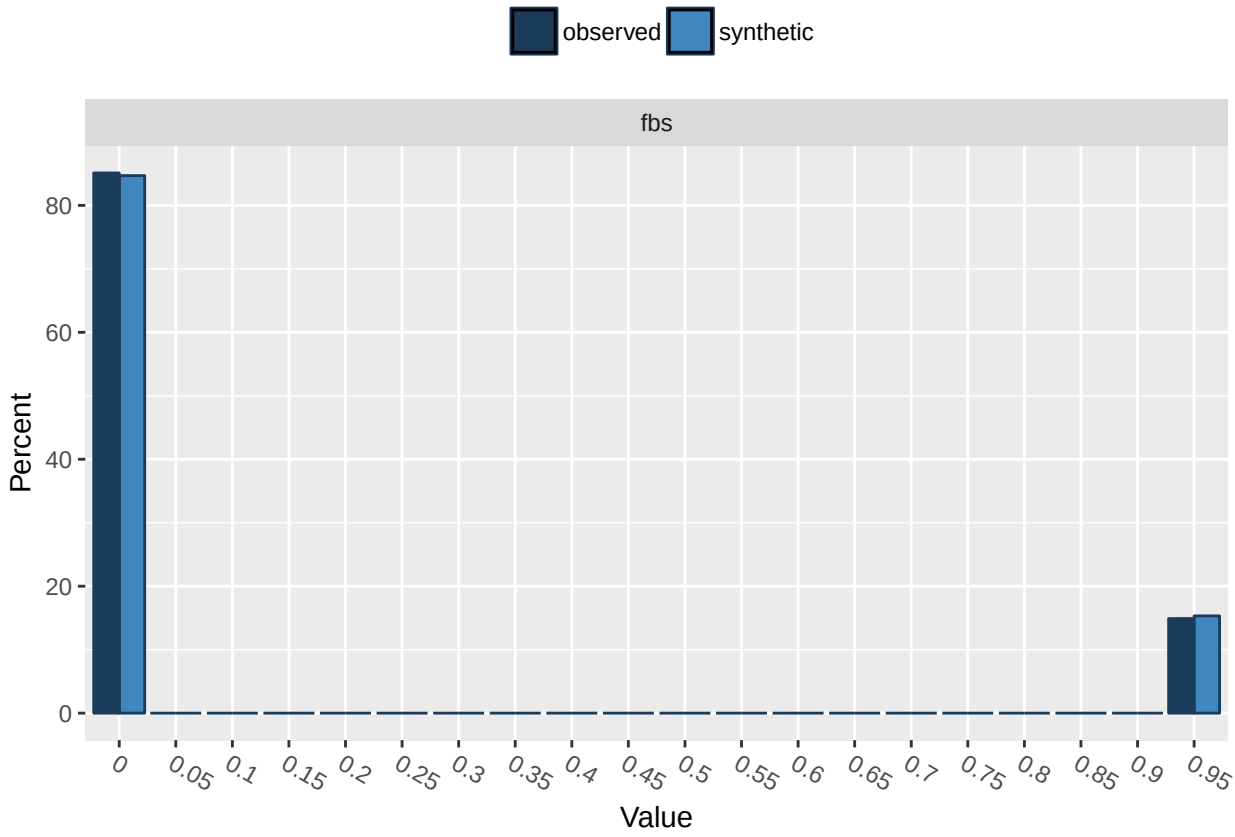

```
##
## Comparing percentages observed with synthetic
##
## $cigs
##                  0        5       10       15       20       25        30
## observed  44.68085 6.737589 1.418440 18.08511 2.127660 7.446809 0.7092199
## synthetic 45.16000 6.321667 1.411667 17.79167 2.276667 7.113333 0.6650000
##                 35 40       45 50       55 60        65        70
## observed  10.63830  0 3.191489  0 3.191489  0 0.3546099 0.3546099
## synthetic 10.39833  0 3.461667  0 3.565000  0 0.3916667 0.3316667
##                  75 80 85 90        95
## observed  0.7092199  0  0  0 0.3546099
## synthetic 0.7266667  0  0  0 0.3850000
```



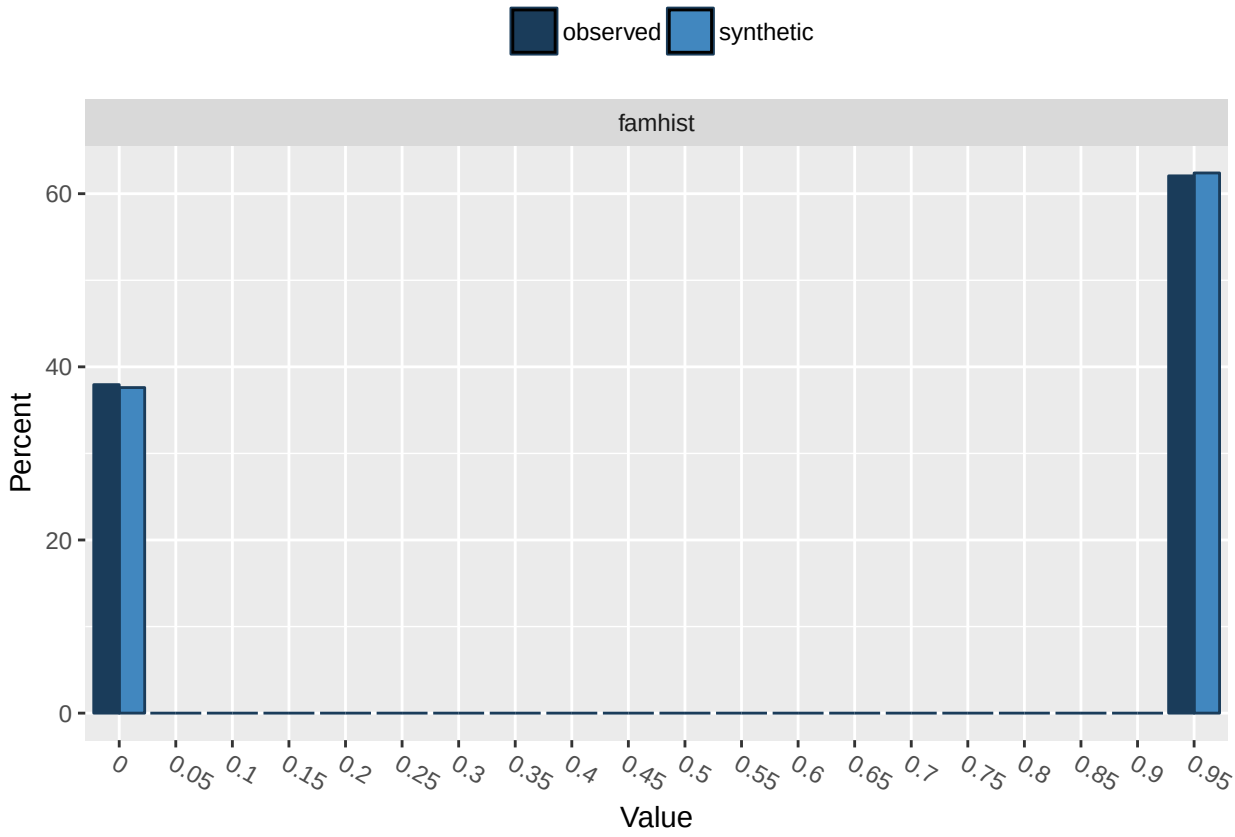

```
##
## Comparing percentages observed with synthetic
##
## $years
##                  0        2        4         6        8 10        12
## observed  41.84397 1.063830 1.773050 0.7092199 1.063830  0 0.3546099
## synthetic 41.64000 1.101667 1.761667 0.7333333 1.243333  0 0.5283333
##                 14       16       18        20       22       24        26
## observed  4.964539 1.418440 11.70213 0.7092199 1.773050 5.319149 0.7092199
## synthetic 4.926667 1.563333 11.52667 0.7216667 1.753333 5.510000 0.6700000
##                 28       30       32       34       36       38        40
## observed  10.283688 1.06383 1.063830 4.609929 1.063830 5.319149 0.3546099
## synthetic  9.411667 0.88500 1.153333 4.688333 1.111667 5.583333 0.1783333
##           42        44        46       48 50        52
## observed   0 0.3546099 0.7092199 1.418440  0 0.3546099
## synthetic  0 0.3083333 0.8166667 1.791667  0 0.3916667
```



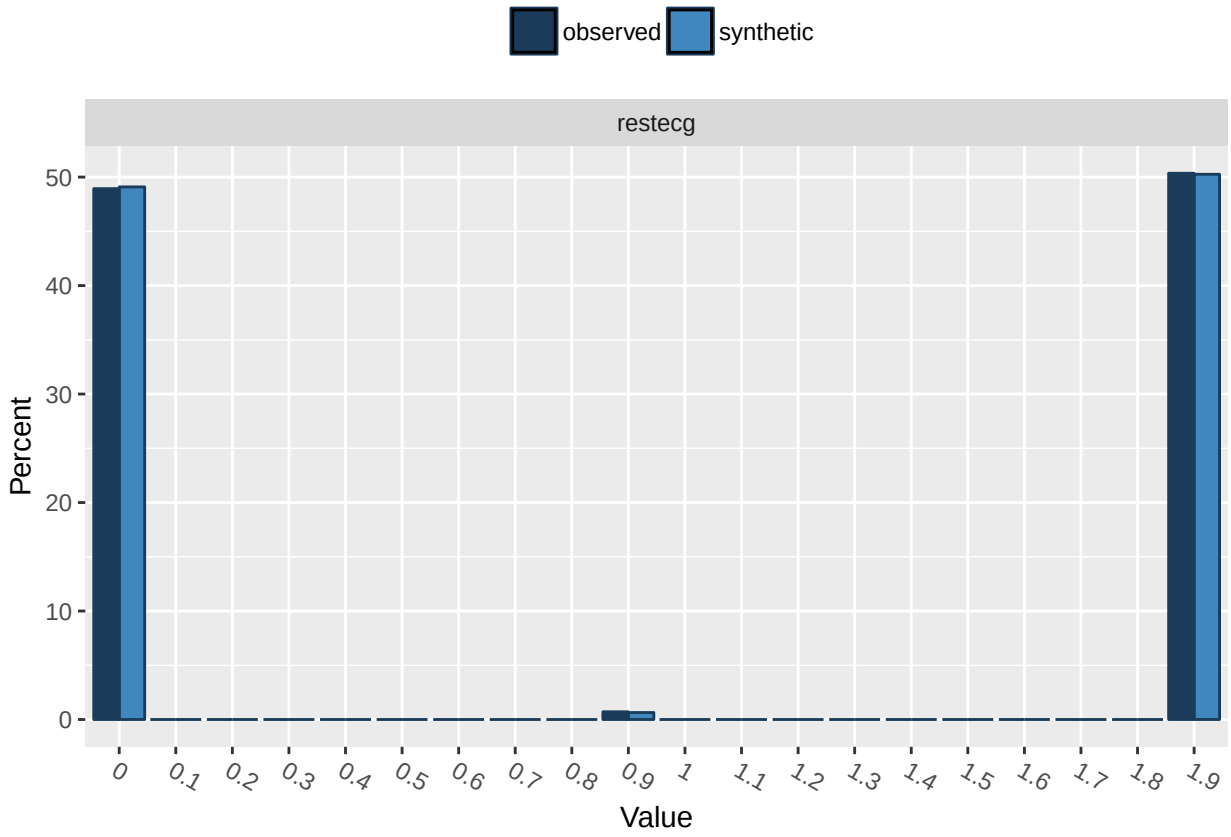

```
##
## Comparing percentages observed with synthetic
##
## $fbs
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  85.10638    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 84.68333    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 14.89362
## synthetic    0   0    0   0    0   0 15.31667
```



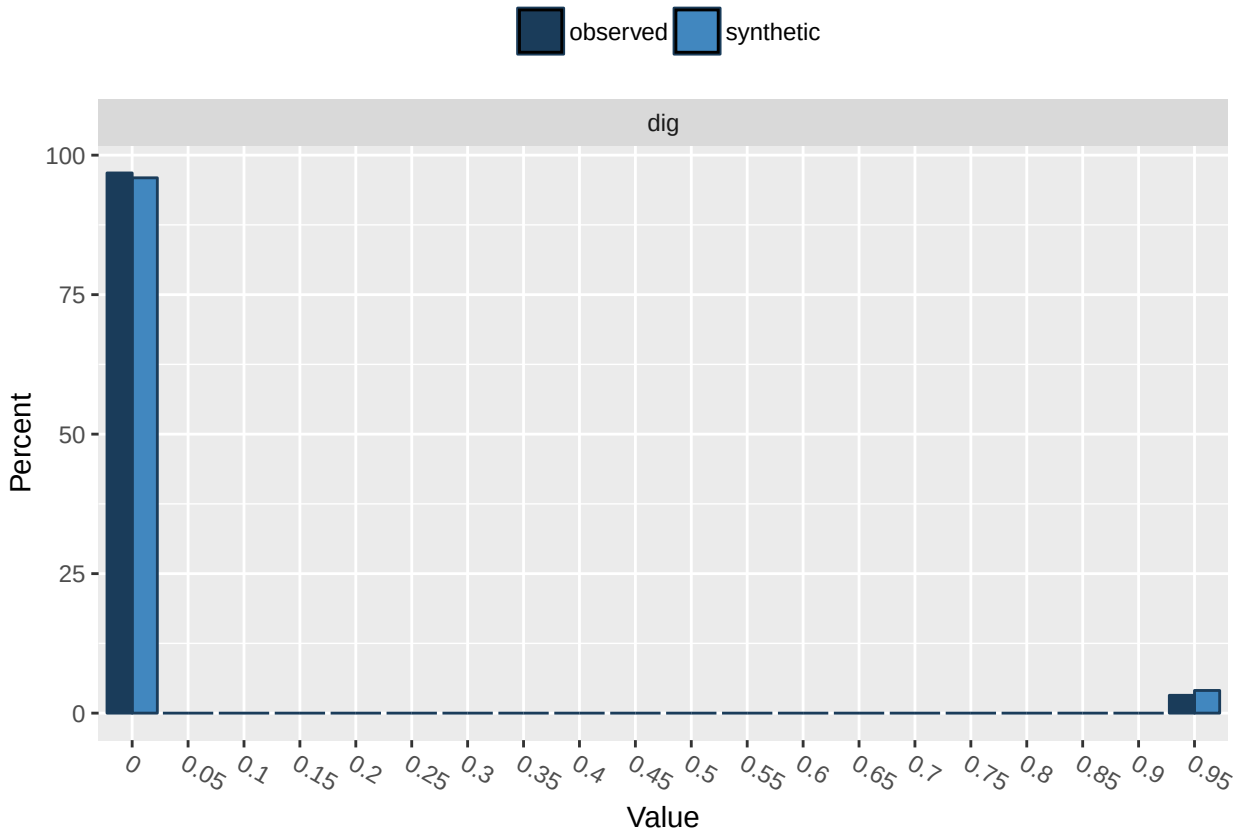

```
##
## Comparing percentages observed with synthetic
##
## $famhist
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  37.94326    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 37.60500    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 62.05674
## synthetic    0   0    0   0    0   0 62.39500
```



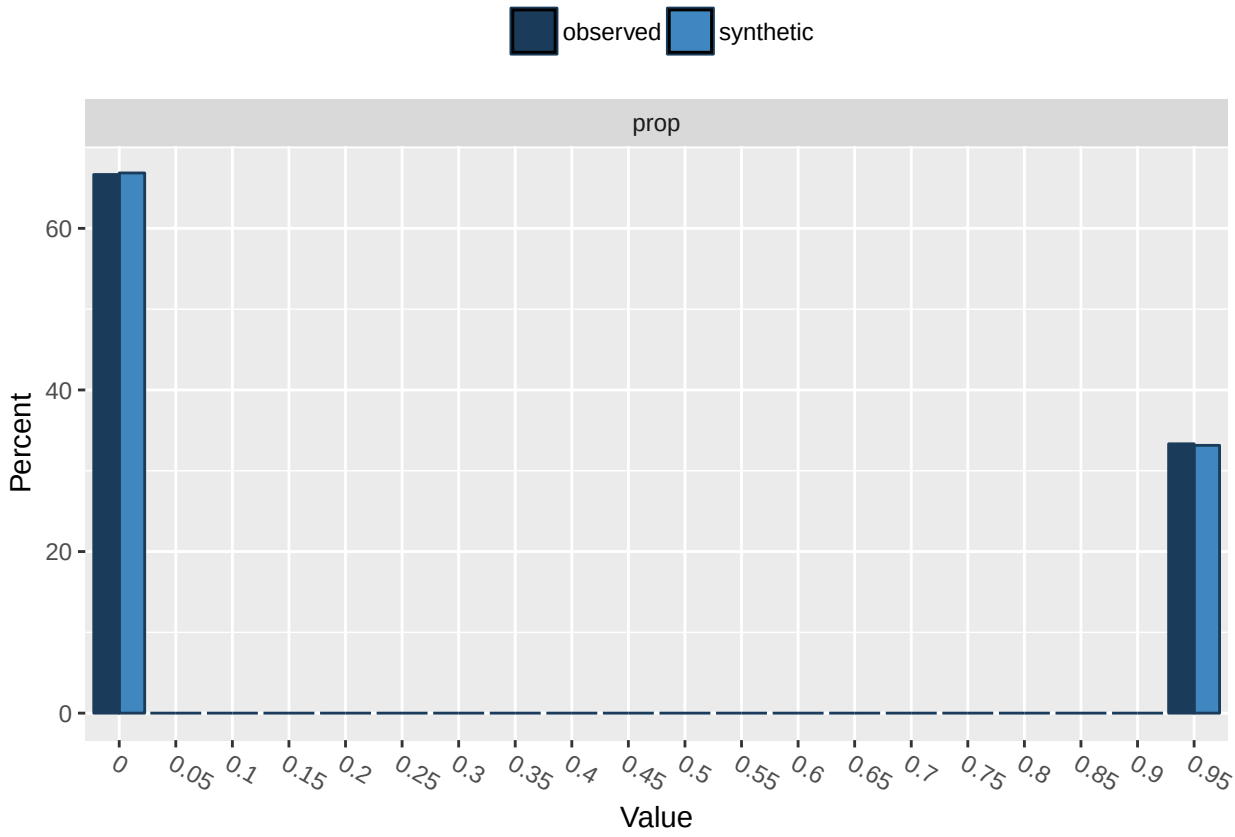

```
##
## Comparing percentages observed with synthetic
##
## $restecg
##                  0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8       0.9 1 1.1 1.2 1.3
## observed  48.93617   0   0   0   0   0   0   0   0 0.7092199 0   0   0   0
## synthetic 49.09667   0   0   0   0   0   0   0   0 0.6416667 0   0   0   0
##           1.4 1.5 1.6 1.7 1.8      1.9
## observed    0   0   0   0   0 50.35461
## synthetic   0   0   0   0   0 50.26167
```



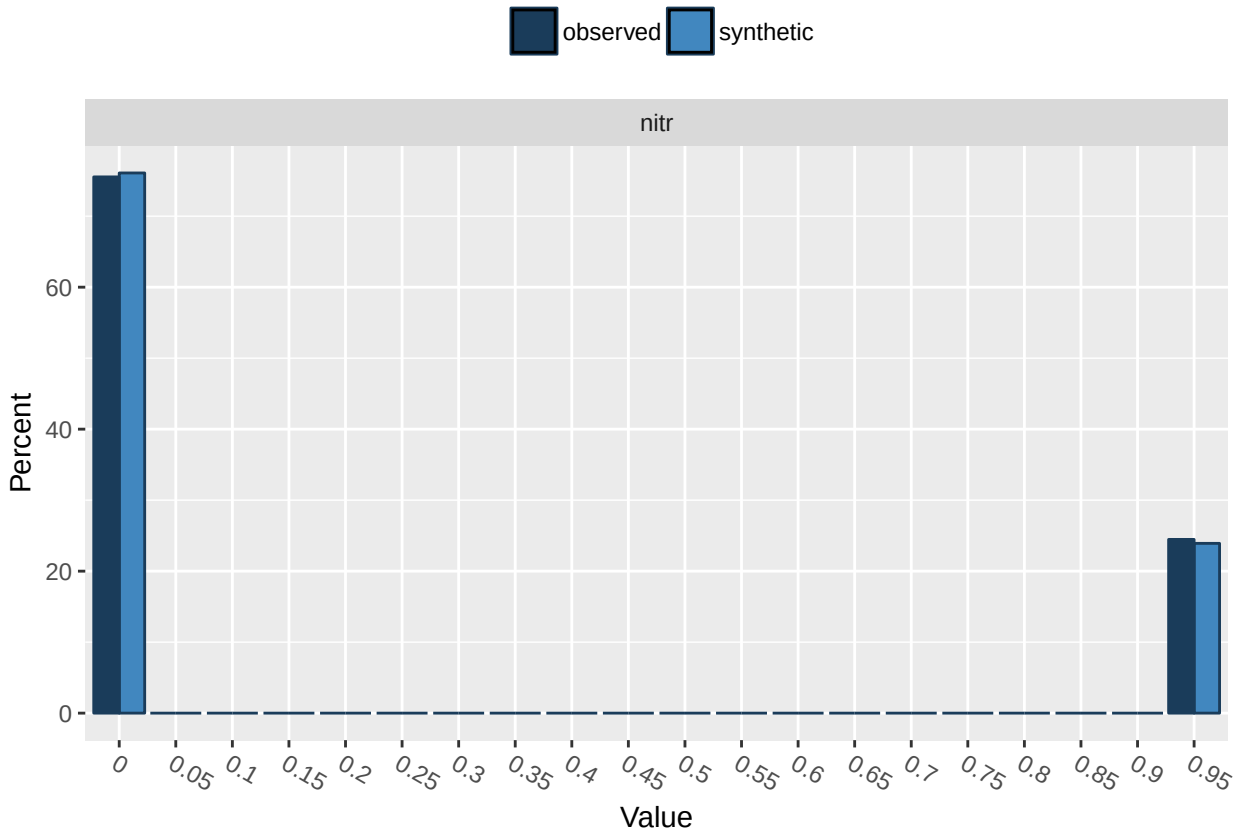

```
##
## Comparing percentages observed with synthetic
##
## $dig
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  96.80851    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 95.93667    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 3.191489
## synthetic    0   0    0   0    0   0 4.063333
```



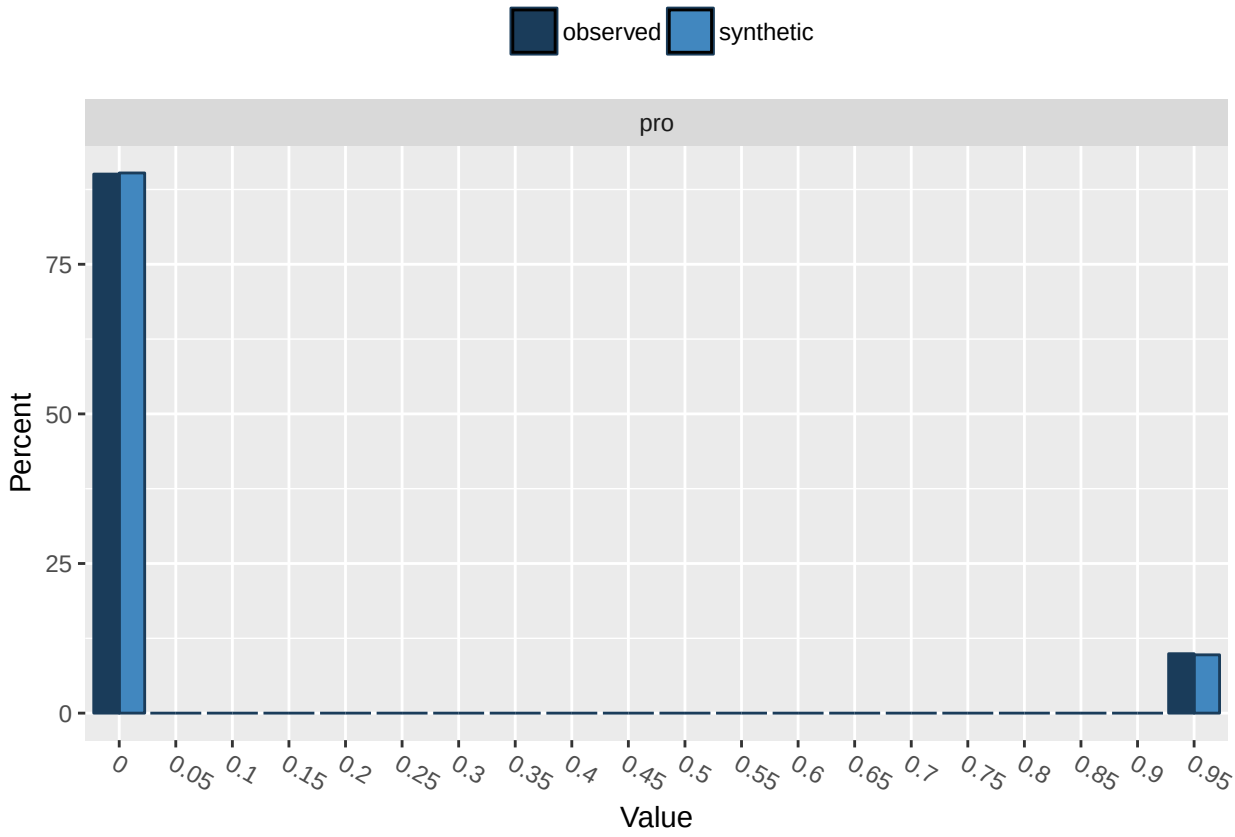

```
##
## Comparing percentages observed with synthetic
##
## $prop
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  66.66667    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 66.85833    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 33.33333
## synthetic    0   0    0   0    0   0 33.14167
```



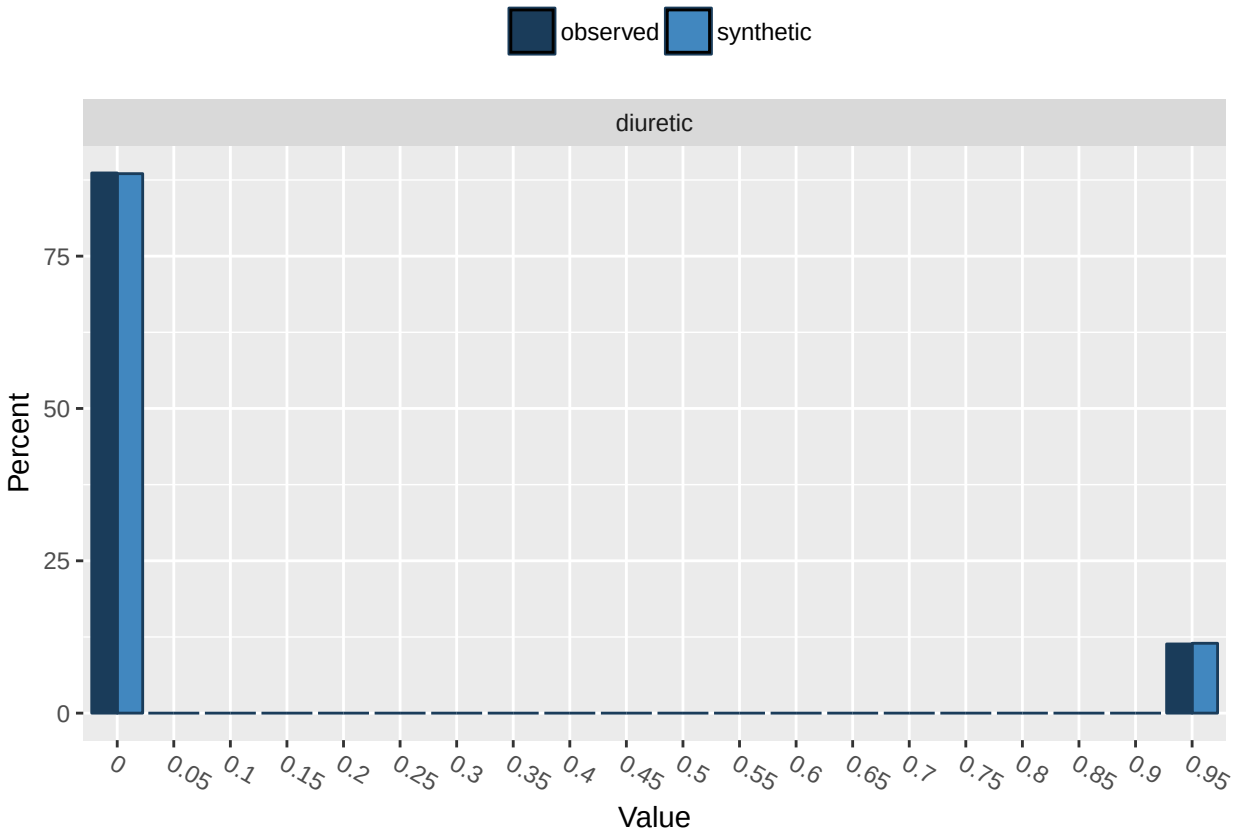

```
##
## Comparing percentages observed with synthetic
##
## $nitr
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  75.53191    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 76.08833    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 24.46809
## synthetic    0   0    0   0    0   0 23.91167
```



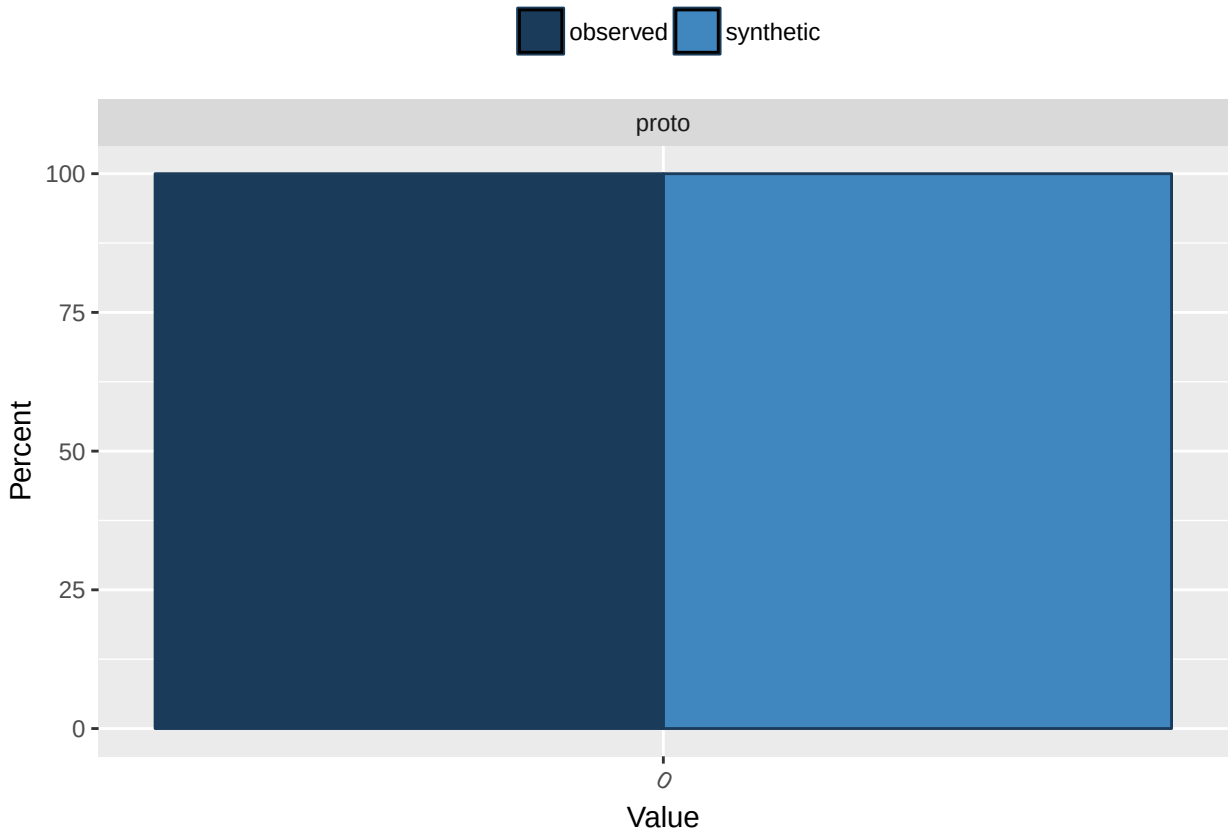

```
##
## Comparing percentages observed with synthetic
##
## $pro
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  90.07092    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 90.25833    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 9.929078
## synthetic    0   0    0   0    0   0 9.741667
```



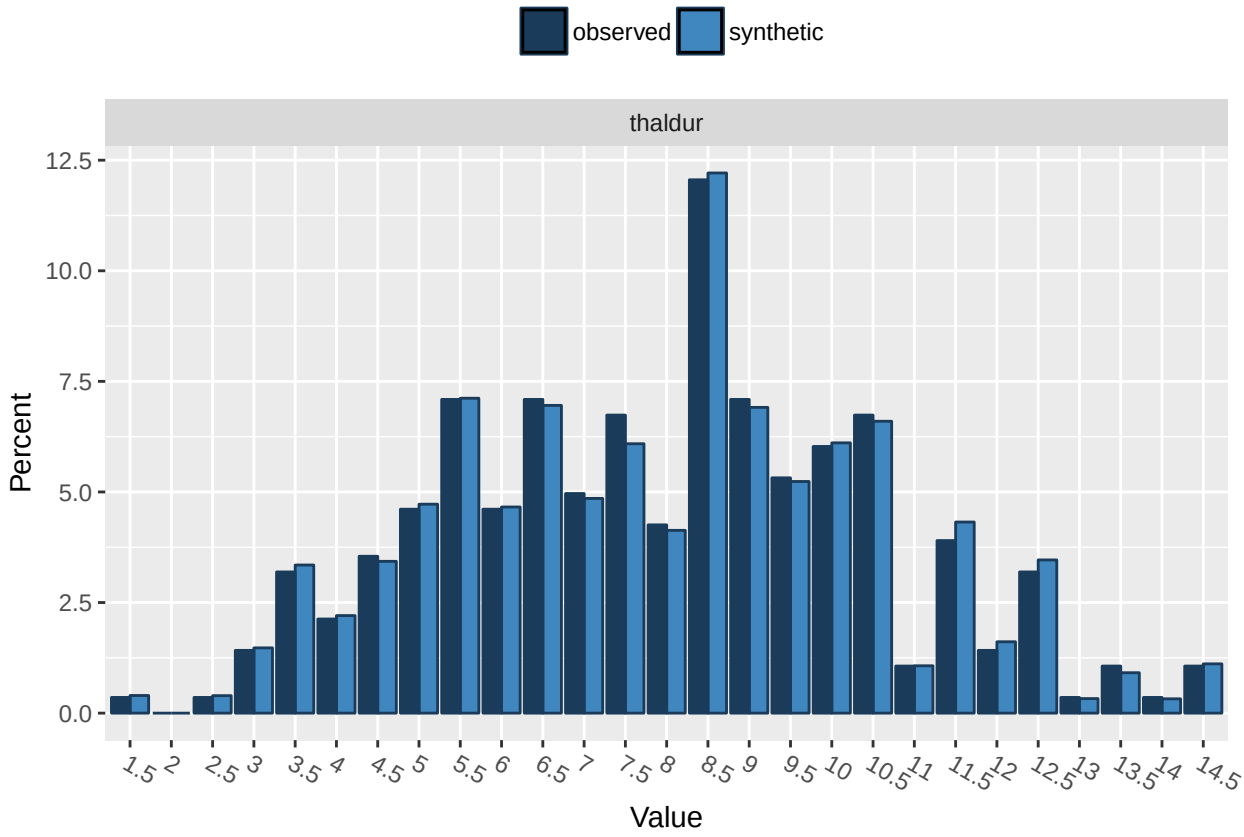

```
##
## Comparing percentages observed with synthetic
##
## $diuretic
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  88.65248    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 88.53833    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 11.34752
## synthetic    0   0    0   0    0   0 11.46167
```



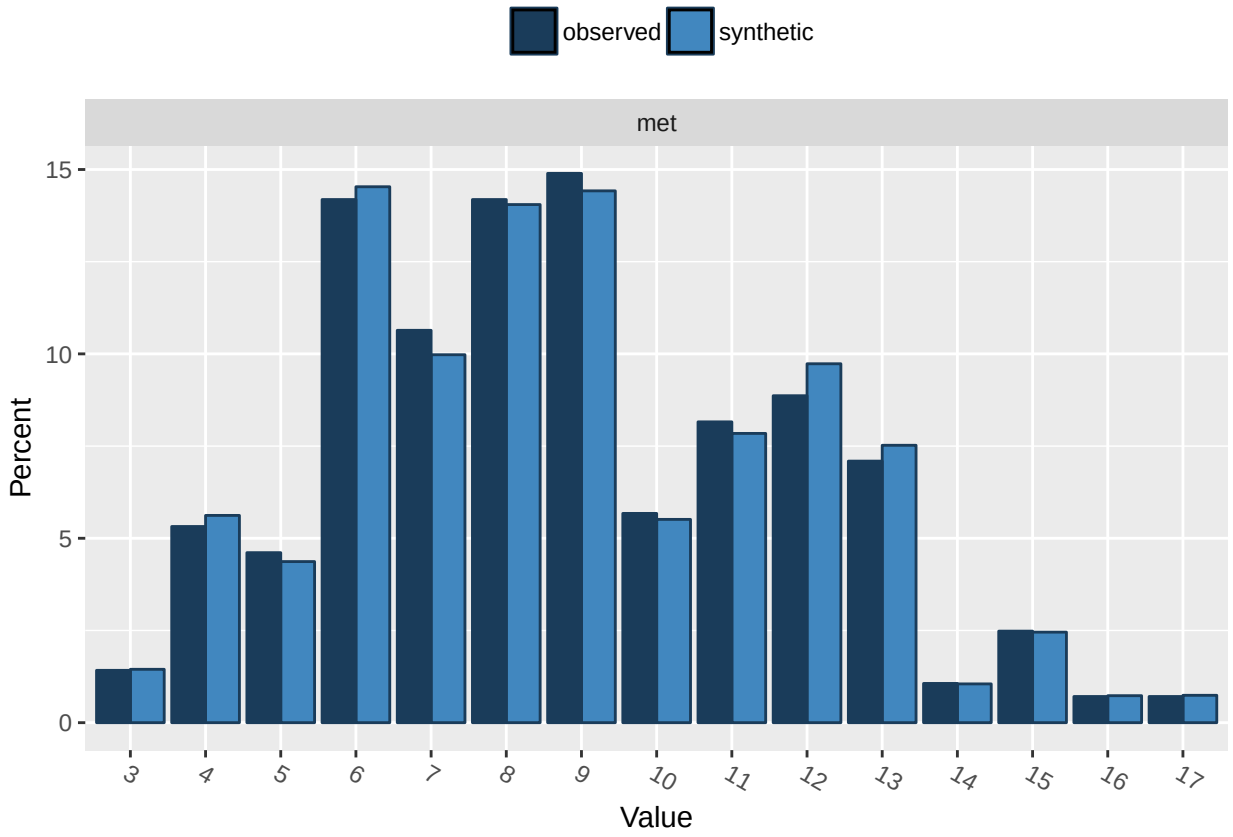

```
##
## Comparing percentages observed with synthetic
##
## $proto
##                0
## observed  100
## synthetic 100
```



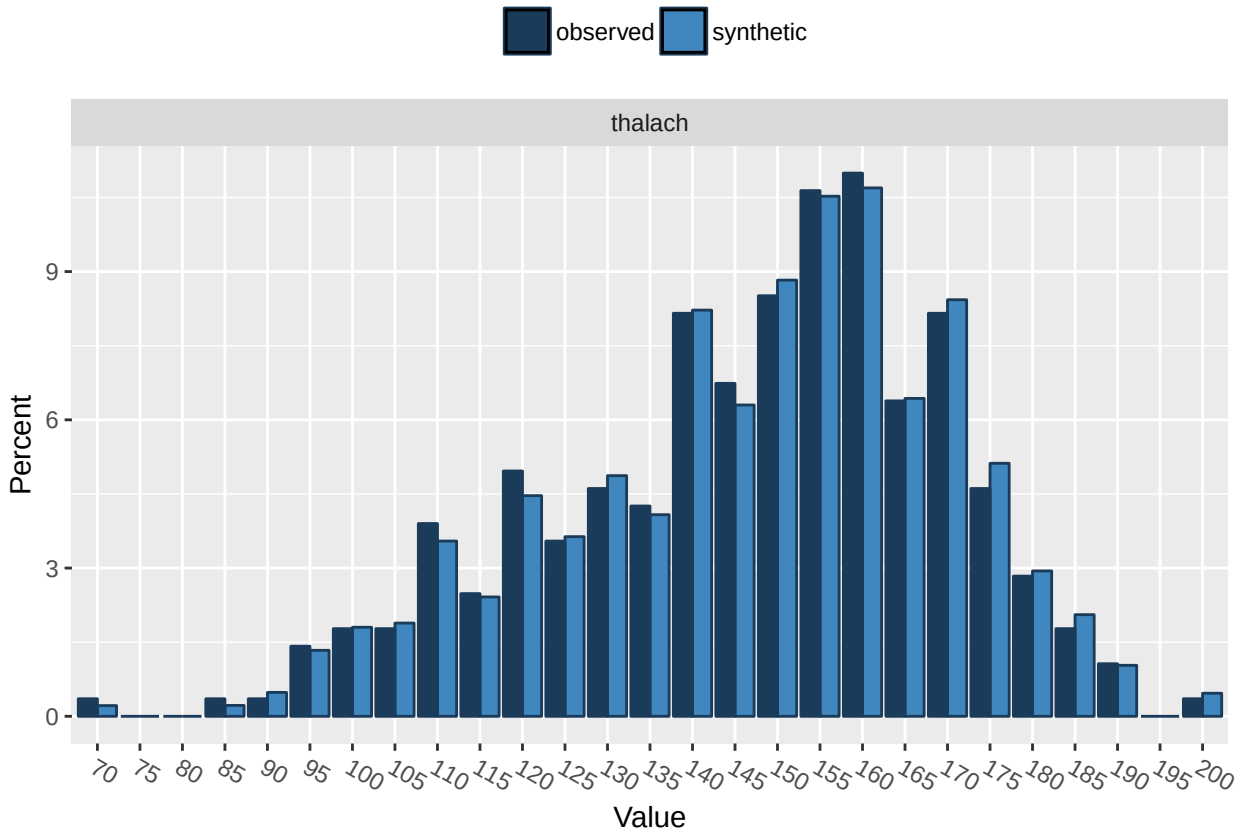

```
##
## Comparing percentages observed with synthetic
##
## $thaldur
##                 1.5 2       2.5       3      3.5       4      4.5        5
## observed  0.3546099 0 0.3546099 1.41844 3.191489 2.12766 3.546099 4.609929
## synthetic 0.3983333 0 0.3950000 1.47500 3.348333 2.20500 3.431667 4.723333
##                 5.5        6      6.5        7      7.5        8      8.5
## observed  7.092199 4.609929 7.092199 4.964539 6.737589 4.255319 12.05674
## synthetic 7.118333 4.660000 6.956667 4.853333 6.090000 4.131667 12.21167
##                   9      9.5       10     10.5      11     11.5       12
## observed  7.092199 5.319149 6.028369 6.737589 1.06383 3.900709 1.418440
## synthetic 6.911667 5.236667 6.110000 6.598333 1.07000 4.320000 1.613333
##                12.5        13      13.5        14     14.5
## observed  3.191489 0.3546099 1.0638298 0.3546099 1.063830
## synthetic 3.463333 0.3283333 0.9133333 0.3233333 1.113333
```



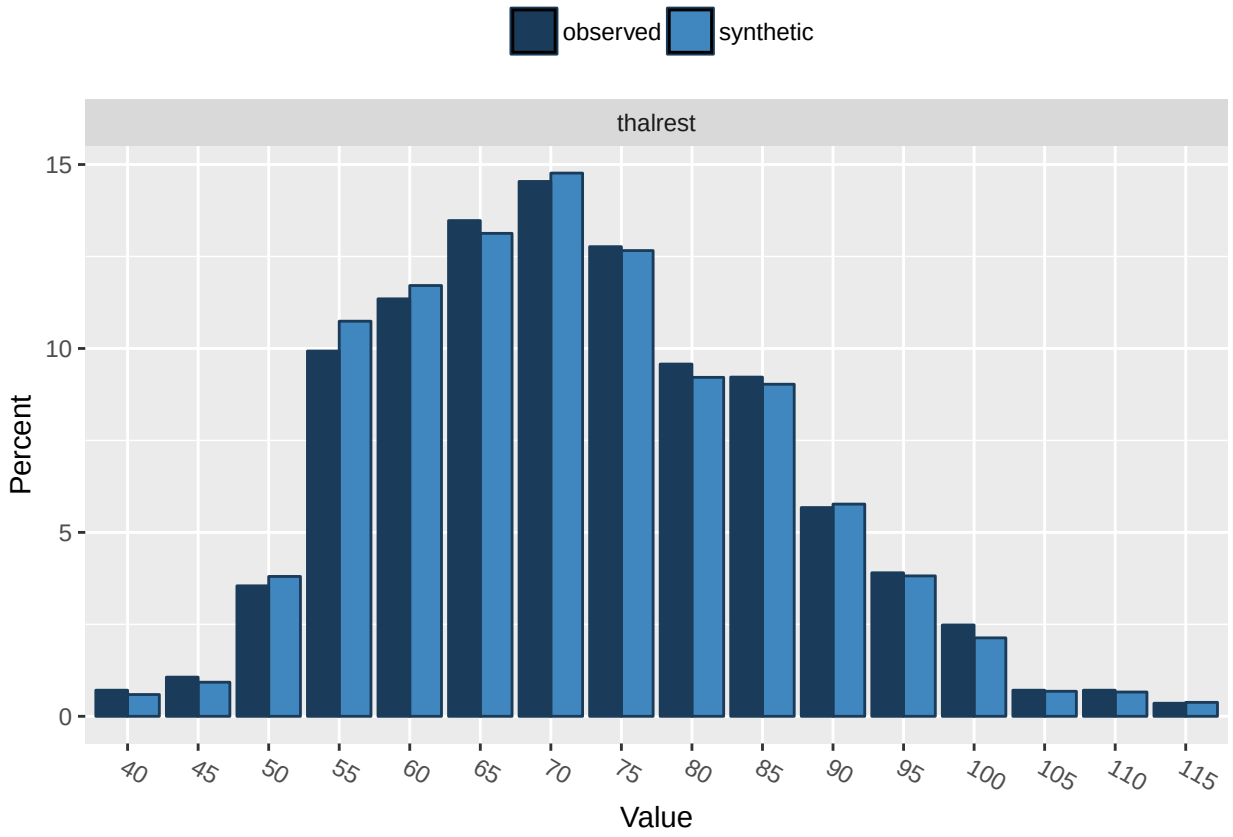

```
##
## Comparing percentages observed with synthetic
##
## $met
##                  3        4        5        6         7        8        9
## observed  1.418440 5.319149 4.609929 14.18440 10.638298 14.18440 14.89362
## synthetic 1.446667 5.620000 4.368333 14.53167  9.976667 14.04833 14.42000
##                 10       11       12       13        14       15        16
## observed  5.673759 8.156028 8.865248 7.092199 1.063830 2.48227 0.7092199
## synthetic 5.511667 7.843333 9.731667 7.521667 1.051667 2.45500 0.7316667
##                 17
## observed  0.7092199
## synthetic 0.7416667
```



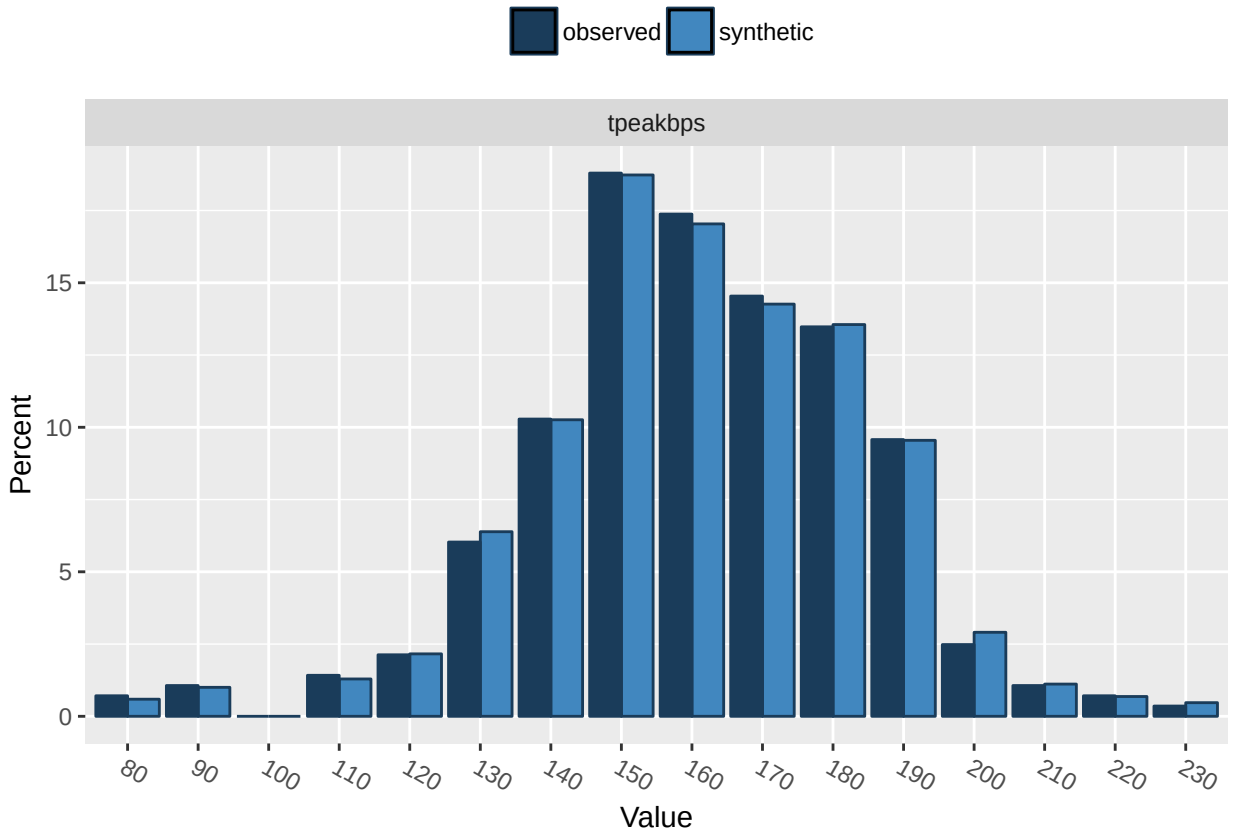

```
##
## Comparing percentages observed with synthetic
##
## $thalach
##                   70 75 80        85        90      95       100       105
## observed  0.3546099  0  0 0.3546099 0.3546099 1.41844 1.773050 1.773050
## synthetic 0.2166667  0  0 0.2200000 0.4833333 1.33500 1.801667 1.886667
##                110      115       120       125       130       135       140
## observed  3.900709 2.48227 4.964539 3.546099 4.609929 4.255319 8.156028
## synthetic 3.546667 2.41500 4.465000 3.635000 4.870000 4.080000 8.220000
##                145       150      155       160       165       170       175
## observed  6.737589 8.510638 10.6383 10.99291 6.382979 8.156028 4.609929
## synthetic 6.300000 8.826667 10.5250 10.69333 6.433333 8.430000 5.120000
##                180       185       190 195       200
## observed  2.836879 1.773050 1.063830   0 0.3546099
## synthetic 2.941667 2.056667 1.031667   0 0.4666667
```



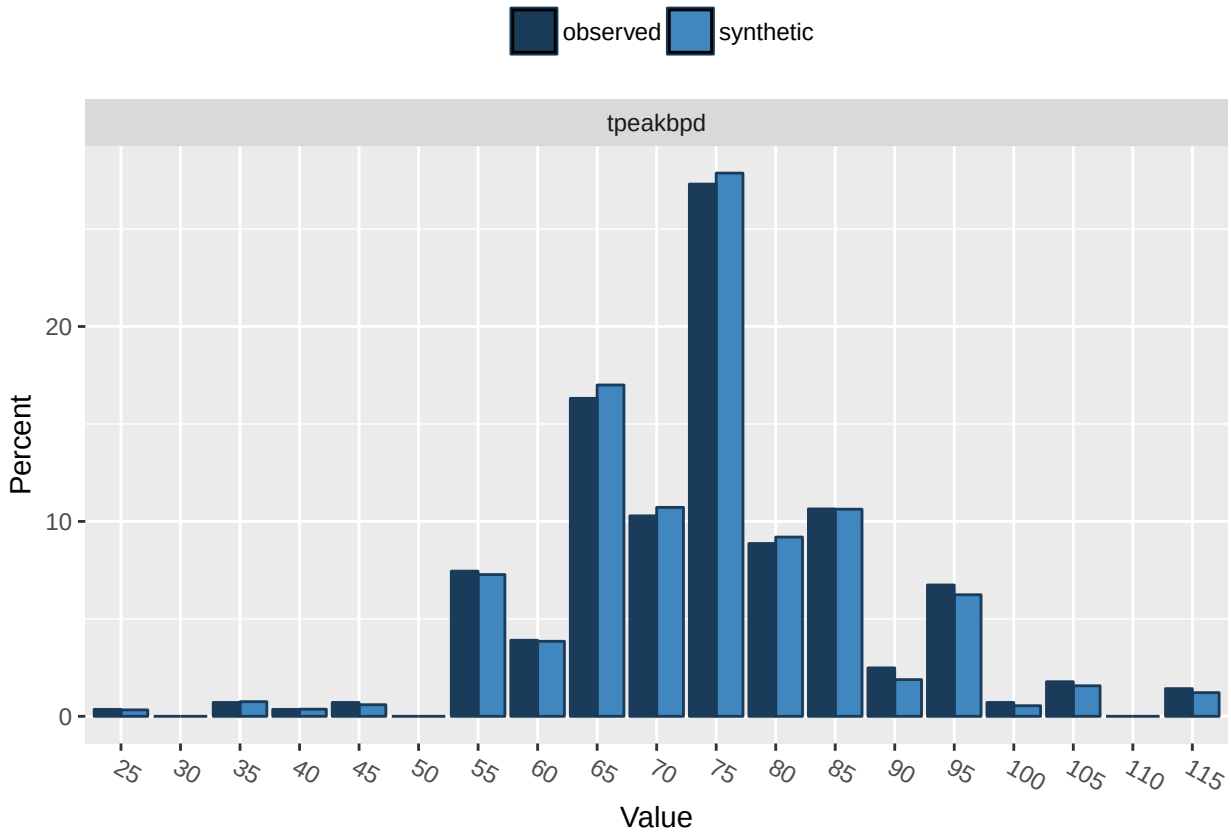

```
##
## Comparing percentages observed with synthetic
##
## $thalrest
##                  40        45       50        55       60       65
## observed  0.7092199 1.0638298 3.546099  9.929078 11.34752 13.47518
## synthetic 0.5916667 0.9266667 3.801667 10.740000 11.71000 13.12833
##                  70       75       80       85       90       95      100
## observed  14.53901 12.76596 9.574468 9.219858 5.673759 3.900709 2.482270
## synthetic 14.76667 12.66000 9.213333 9.026667 5.768333 3.816667 2.131667
##                 105       110       115
## observed  0.7092199 0.7092199 0.3546099
## synthetic 0.6800000 0.6600000 0.3783333
```



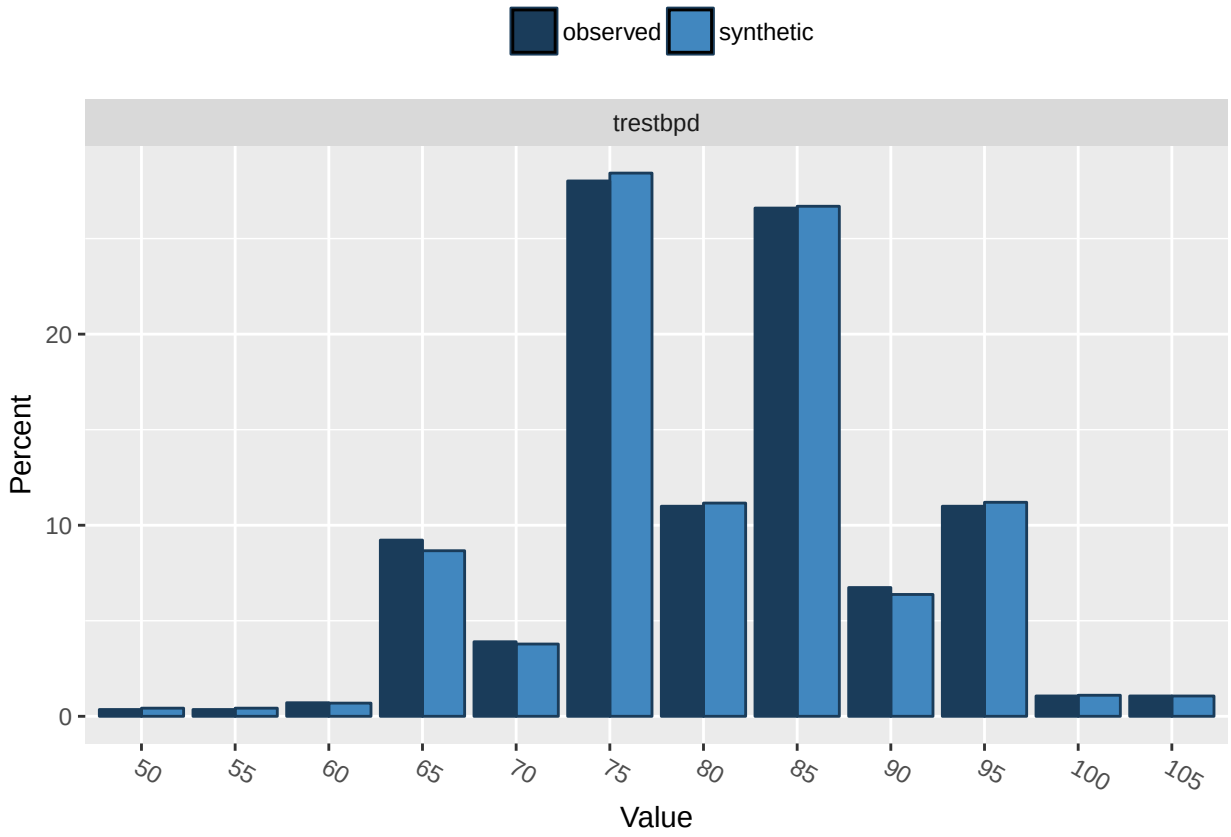

```
##
## Comparing percentages observed with synthetic
##
## $tpeakbps
##                   80       90 100       110      120       130       140
## observed  0.7092199 1.063830   0 1.418440 2.12766 6.028369 10.28369
## synthetic 0.5916667 1.001667   0 1.291667 2.16000 6.386667 10.26000
##                150       160       170       180       190       200      210
## observed  18.79433 17.37589 14.53901 13.47518 9.574468 2.482270 1.06383
## synthetic 18.73000 17.03667 14.26167 13.55333 9.548333 2.906667 1.11500
##                220       230
## observed  0.7092199 0.3546099
## synthetic 0.6850000 0.4716667
```



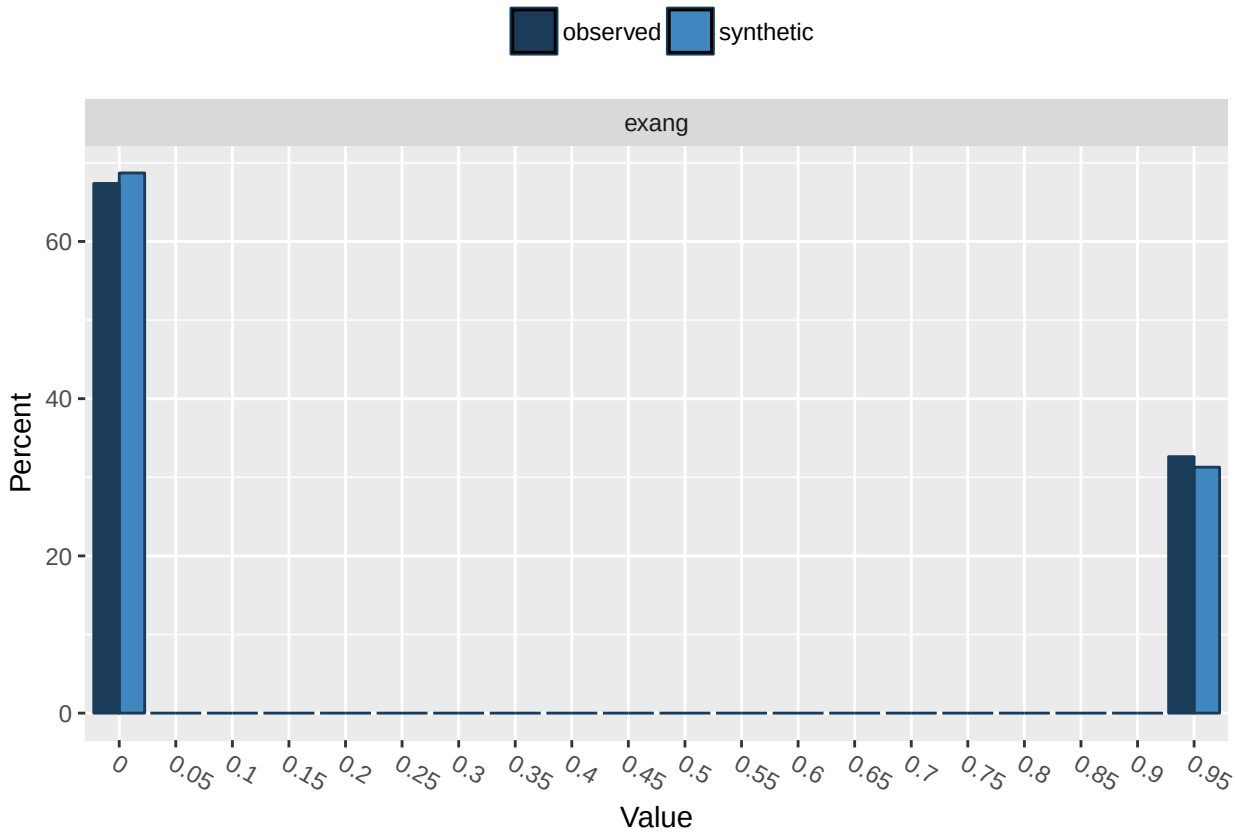

```
##
## Comparing percentages observed with synthetic
##
## $tpeakbpd
##                   25 30        35        40        45 50       55       60
## observed  0.3546099  0 0.7092199 0.3546099 0.7092199  0 7.446809 3.900709
## synthetic 0.3283333  0 0.7500000 0.3633333 0.5933333  0 7.271667 3.846667
##                  65       70       75       80       85       90       95
## observed  16.31206 10.28369 27.30496 8.865248 10.6383 2.482270 6.737589
## synthetic 16.99833 10.71833 27.87000 9.195000 10.6250 1.881667 6.236667
##                 100      105 110       115
## observed  0.7092199 1.77305   0 1.418440
## synthetic 0.5433333 1.56500   0 1.213333
```



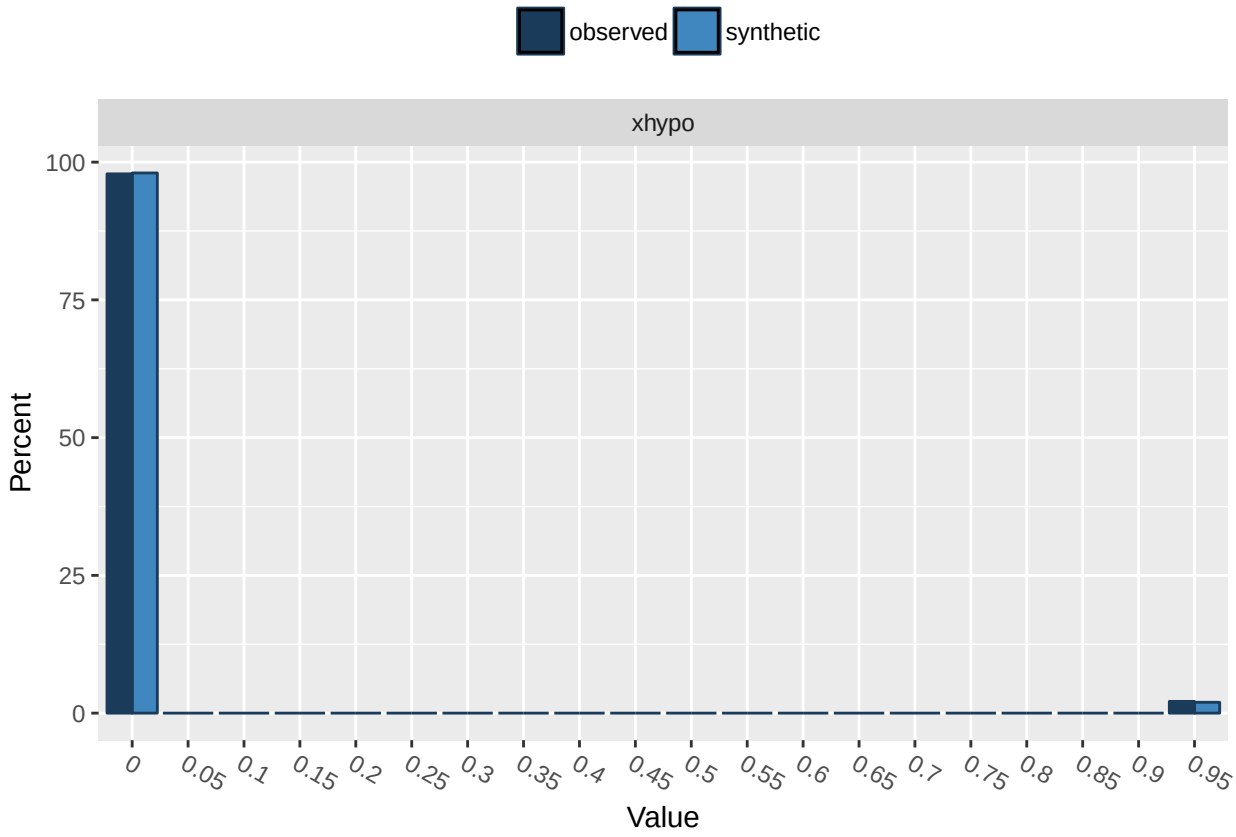

```
##
## Comparing percentages observed with synthetic
##
## $trestbpd
##                   50        55        60       65       70       75
## observed  0.3546099 0.3546099 0.7092199 9.219858 3.900709 28.01418
## synthetic 0.4250000 0.4250000 0.6900000 8.665000 3.781667 28.42667
##                   80       85       90       95      100      105
## observed  10.99291 26.59574 6.737589 10.99291 1.063830 1.063830
## synthetic 11.15833 26.69000 6.376667 11.19833 1.101667 1.061667
```



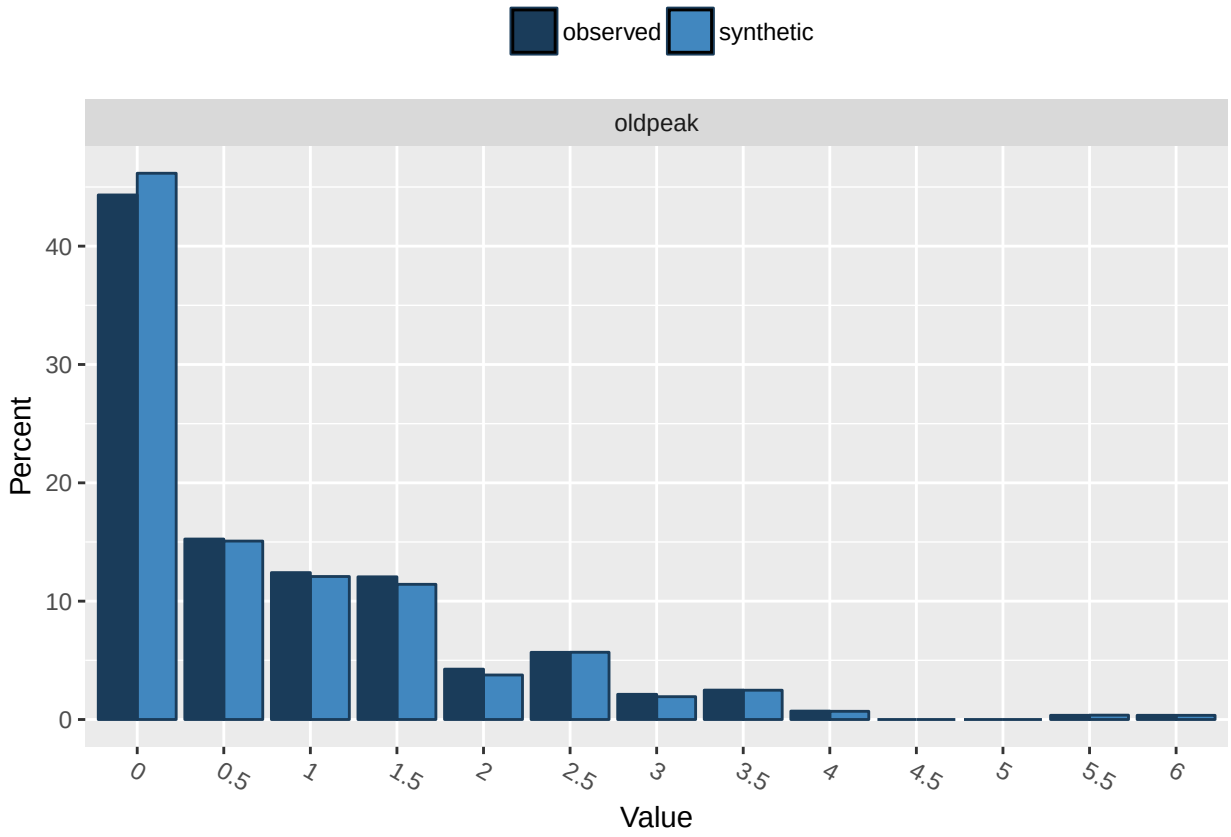

```
##
## Comparing percentages observed with synthetic
##
## $exang
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  67.37589    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 68.71333    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 32.62411
## synthetic    0   0    0   0    0   0 31.28667
```



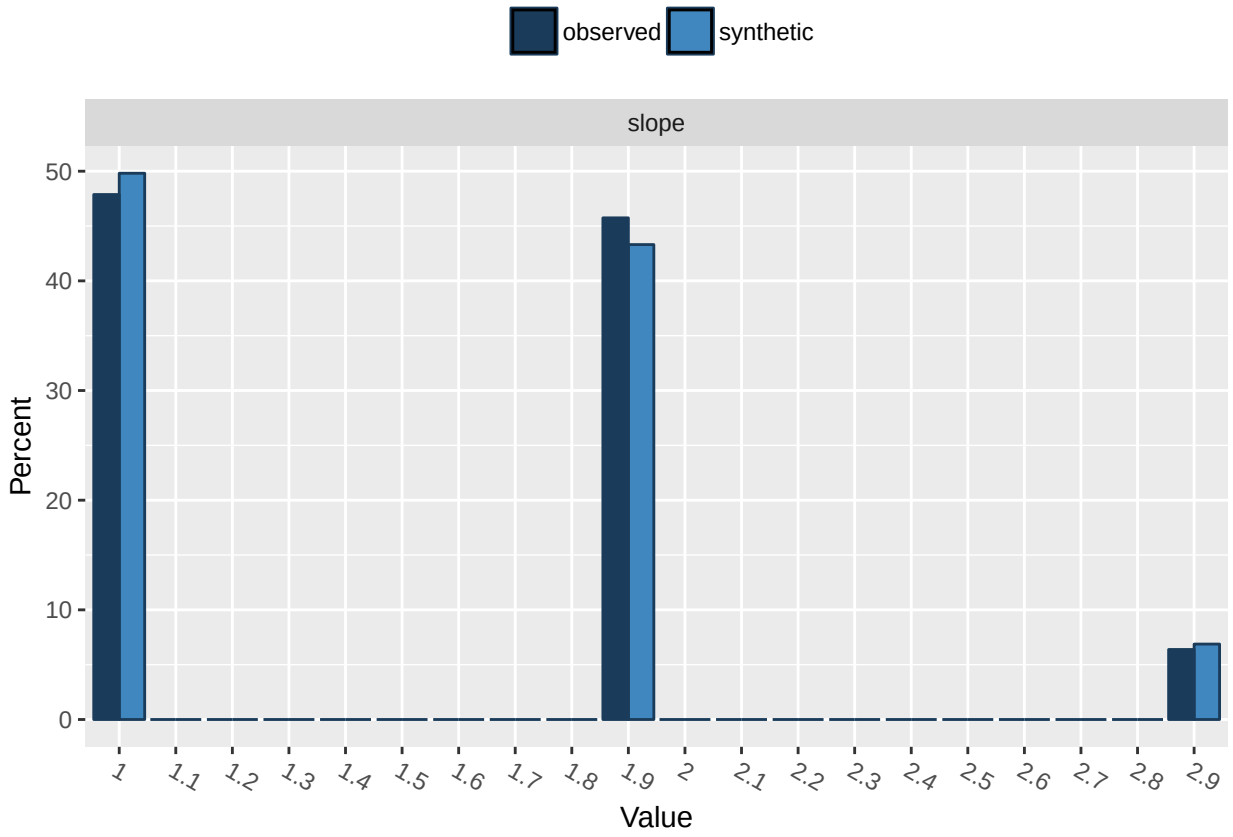

```
##
## Comparing percentages observed with synthetic
##
## $xhypo
##                  0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6
## observed  97.87234    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 98.03667    0   0    0   0    0   0    0   0    0   0    0   0
##           0.65 0.7 0.75 0.8 0.85 0.9     0.95
## observed     0   0    0   0    0   0 2.127660
## synthetic    0   0    0   0    0   0 1.963333
```



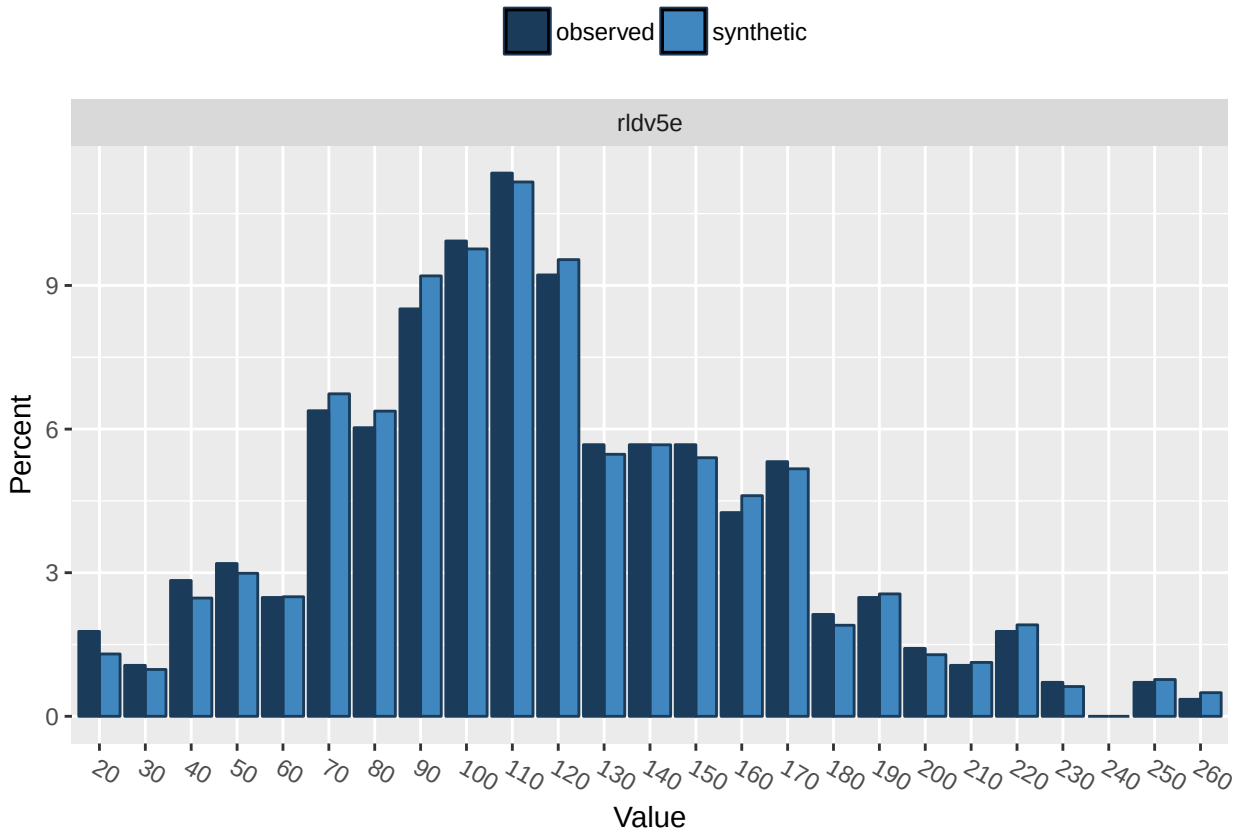

```
##
## Comparing percentages observed with synthetic
##
## $oldpeak
##                   0      0.5        1      1.5        2      2.5       3
## observed  44.32624 15.24823 12.41135 12.05674 4.255319 5.673759 2.12766
## synthetic 46.16000 15.07833 12.08333 11.42333 3.760000 5.680000 1.93000
##                 3.5         4 4.5 5       5.5         6
## observed  2.482270 0.7092199   0 0 0.3546099 0.3546099
## synthetic 2.473333 0.6916667   0 0 0.3683333 0.3516667
```



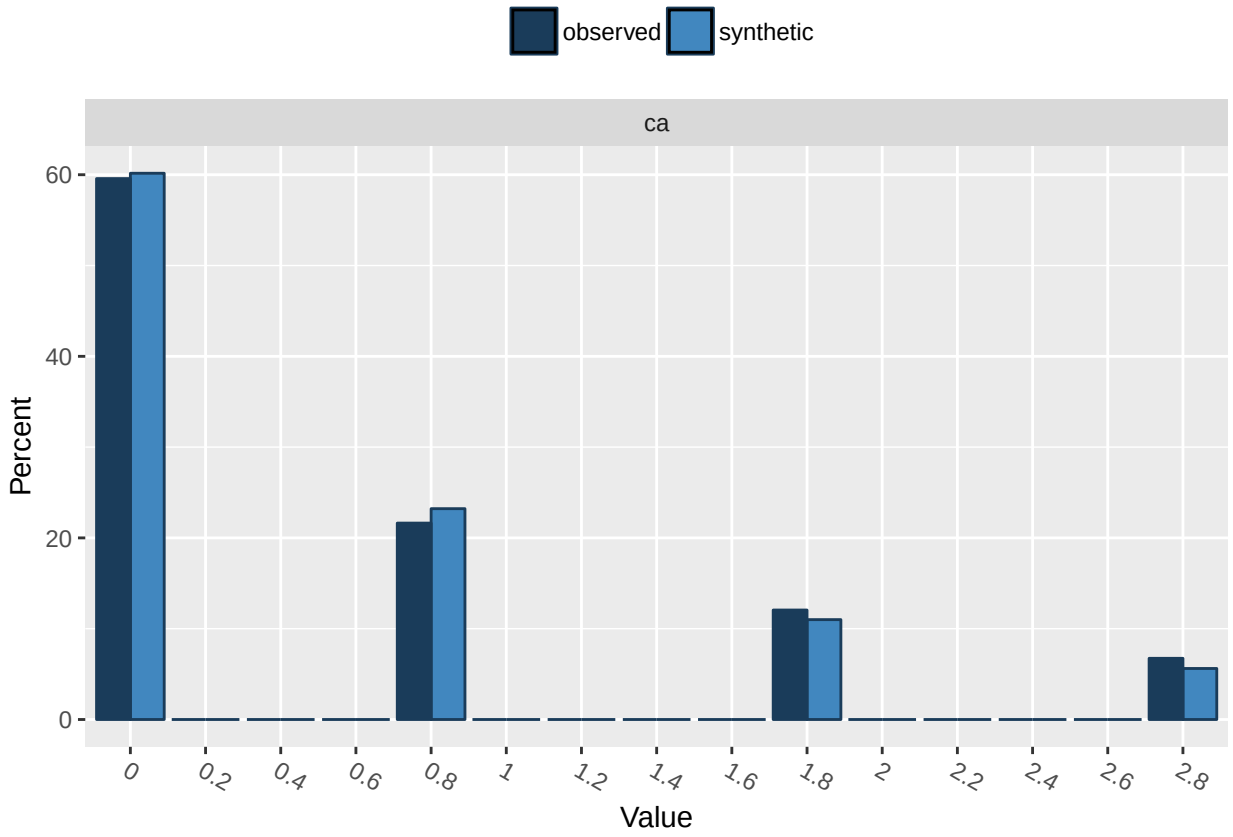

```
##
## Comparing percentages observed with synthetic
##
## $slope
##                  1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8      1.9 2 2.1 2.2 2.3
## observed  47.87234   0   0   0   0   0   0   0   0 45.74468 0   0   0   0
## synthetic 49.81333   0   0   0   0   0   0   0   0 43.30833 0   0   0   0
##           2.4 2.5 2.6 2.7 2.8      2.9
## observed    0   0   0   0   0 6.382979
## synthetic   0   0   0   0   0 6.878333
```



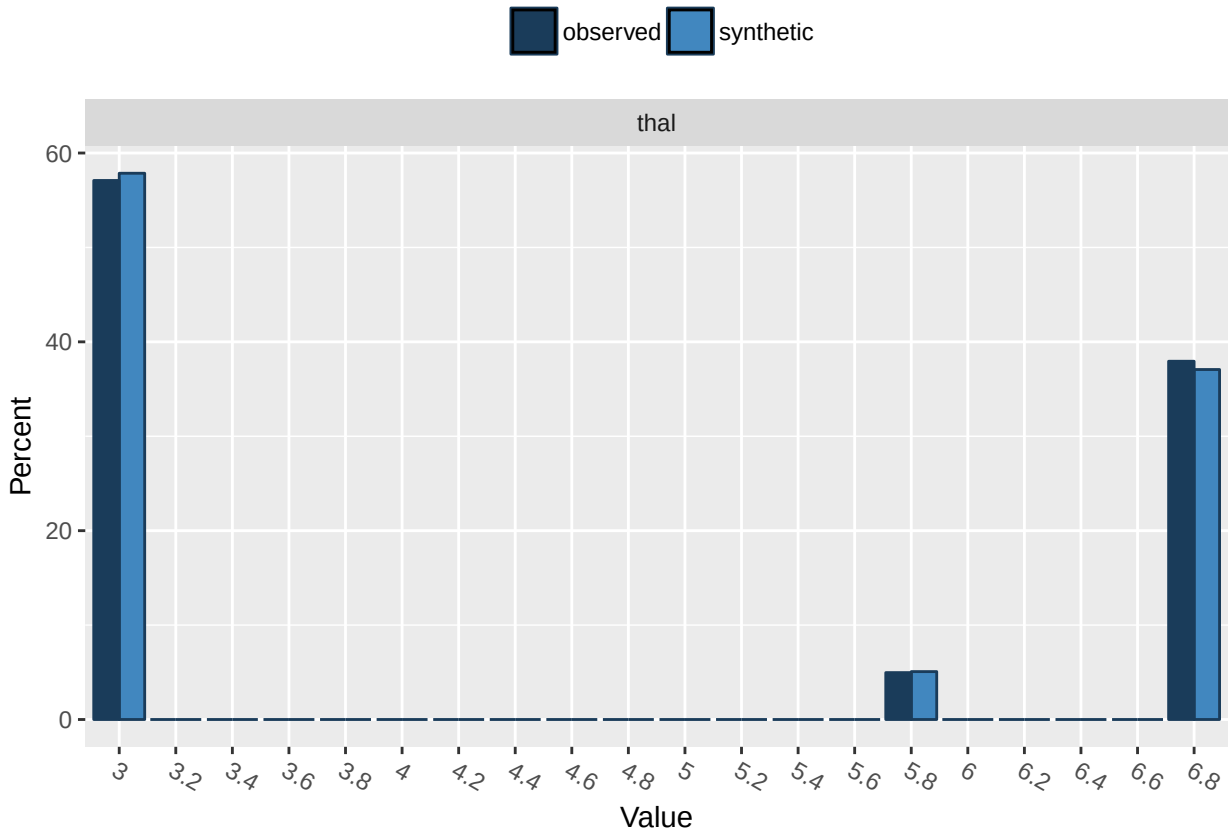

```
##
## Comparing percentages observed with synthetic
##
## $rldv5e
##                  20        30       40       50       60       70       80
## observed  1.773050 1.0638298 2.836879 3.191489 2.482270 6.382979 6.028369
## synthetic 1.301667 0.9783333 2.470000 2.988333 2.496667 6.736667 6.375000
##                  90      100      110      120      130      140      150
## observed  8.510638 9.929078 11.34752 9.219858 5.673759 5.673759 5.673759
## synthetic 9.200000 9.763333 11.16167 9.540000 5.473333 5.671667 5.401667
##                 160      170      180      190      200     210     220
## observed  4.255319 5.319149 2.127660 2.482270 1.418440 1.06383 1.77305
## synthetic 4.608333 5.170000 1.901667 2.556667 1.286667 1.12500 1.91000
##                 230 240       250       260
## observed  0.7092199   0 0.7092199 0.3546099
## synthetic 0.6216667   0 0.7683333 0.4933333
```



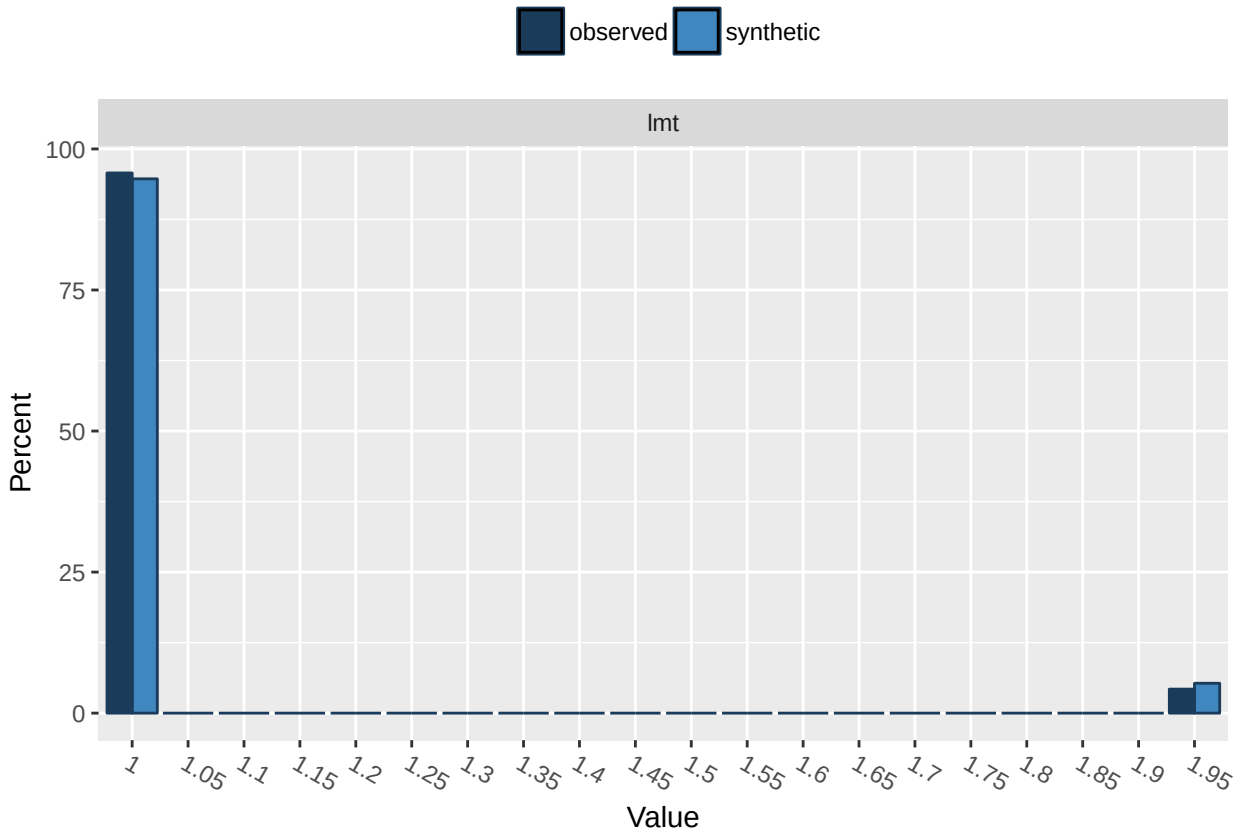

```
##
## Comparing percentages observed with synthetic
##
## $ca
##                  0 0.2 0.4 0.6      0.8 1 1.2 1.4 1.6      1.8 2 2.2 2.4
## observed  59.57447   0   0   0 21.63121 0   0   0   0 12.05674 0   0   0
## synthetic 60.16167   0   0   0 23.22000 0   0   0   0 11.00000 0   0   0
##           2.6      2.8
## observed    0 6.737589
## synthetic   0 5.618333
```



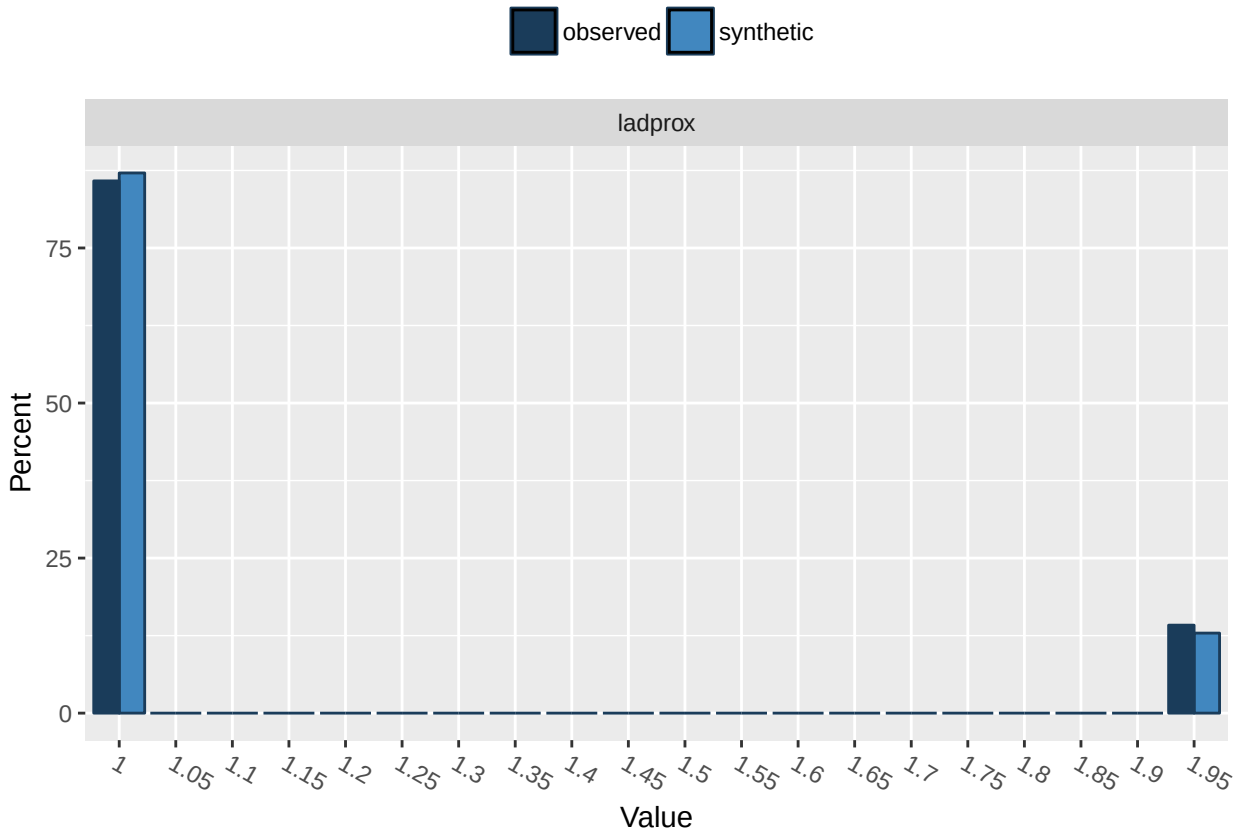

```
##
## Comparing percentages observed with synthetic
##
## $thal
##                   3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6
## observed  57.09220   0   0   0   0 0   0   0   0   0 0   0   0   0
## synthetic 57.85667   0   0   0   0 0   0   0   0   0 0   0   0   0
##                 5.8 6 6.2 6.4 6.6      6.8
## observed  4.964539 0   0   0   0 37.94326
## synthetic 5.073333 0   0   0   0 37.07000
```



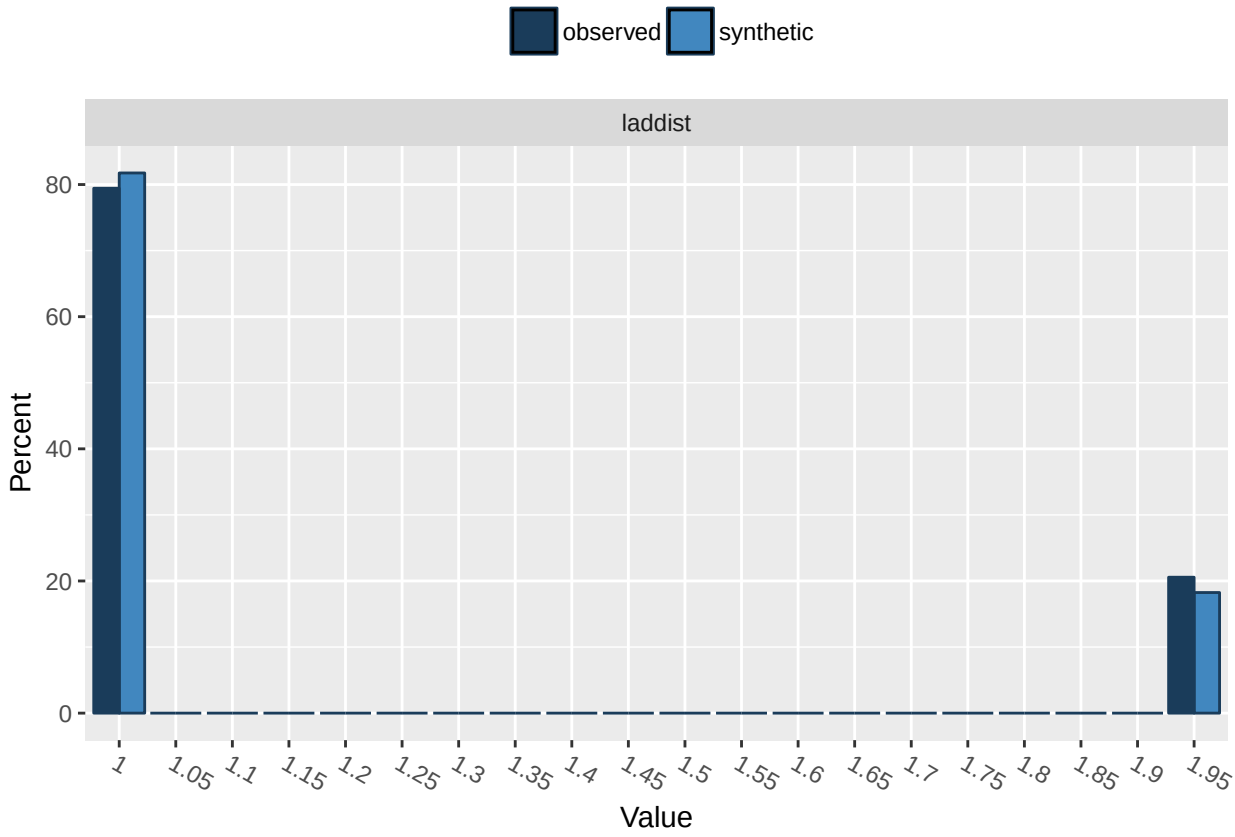

```
##
## Comparing percentages observed with synthetic
##
## $lmt
##                  1 1.05 1.1 1.15 1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6
## observed  95.74468    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 94.70500    0   0    0   0    0   0    0   0    0   0    0   0
##           1.65 1.7 1.75 1.8 1.85 1.9     1.95
## observed     0   0    0   0    0   0 4.255319
## synthetic    0   0    0   0    0   0 5.295000
```



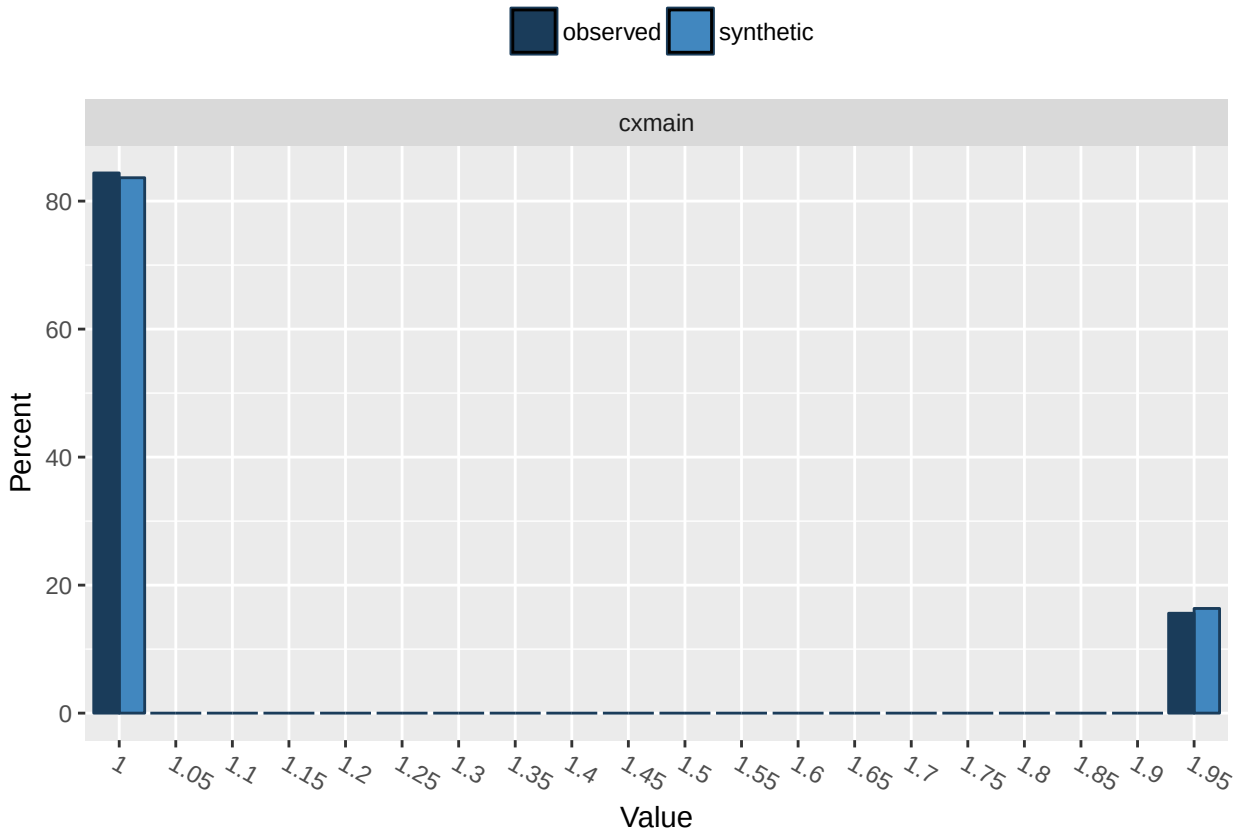

```
##
## Comparing percentages observed with synthetic
##
## $ladprox
##                  1 1.05 1.1 1.15 1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6
## observed  85.81560    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 87.09833    0   0    0   0    0   0    0   0    0   0    0   0
##           1.65 1.7 1.75 1.8 1.85 1.9     1.95
## observed     0   0    0   0    0   0 14.18440
## synthetic    0   0    0   0    0   0 12.90167
```



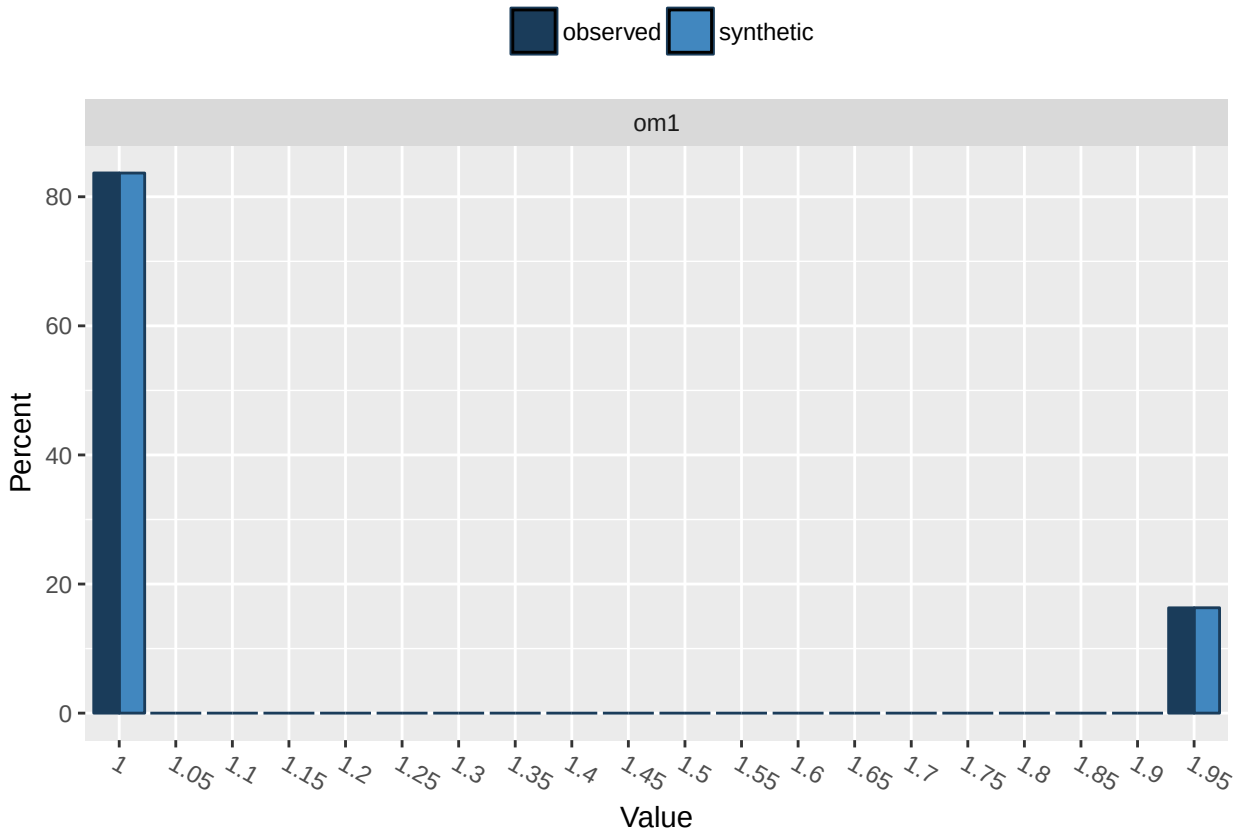

```
##
## Comparing percentages observed with synthetic
##
## $laddist
##                  1 1.05 1.1 1.15 1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6
## observed  79.43262    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 81.75167    0   0    0   0    0   0    0   0    0   0    0   0
##           1.65 1.7 1.75 1.8 1.85 1.9     1.95
## observed     0   0    0   0    0   0 20.56738
## synthetic    0   0    0   0    0   0 18.24833
```



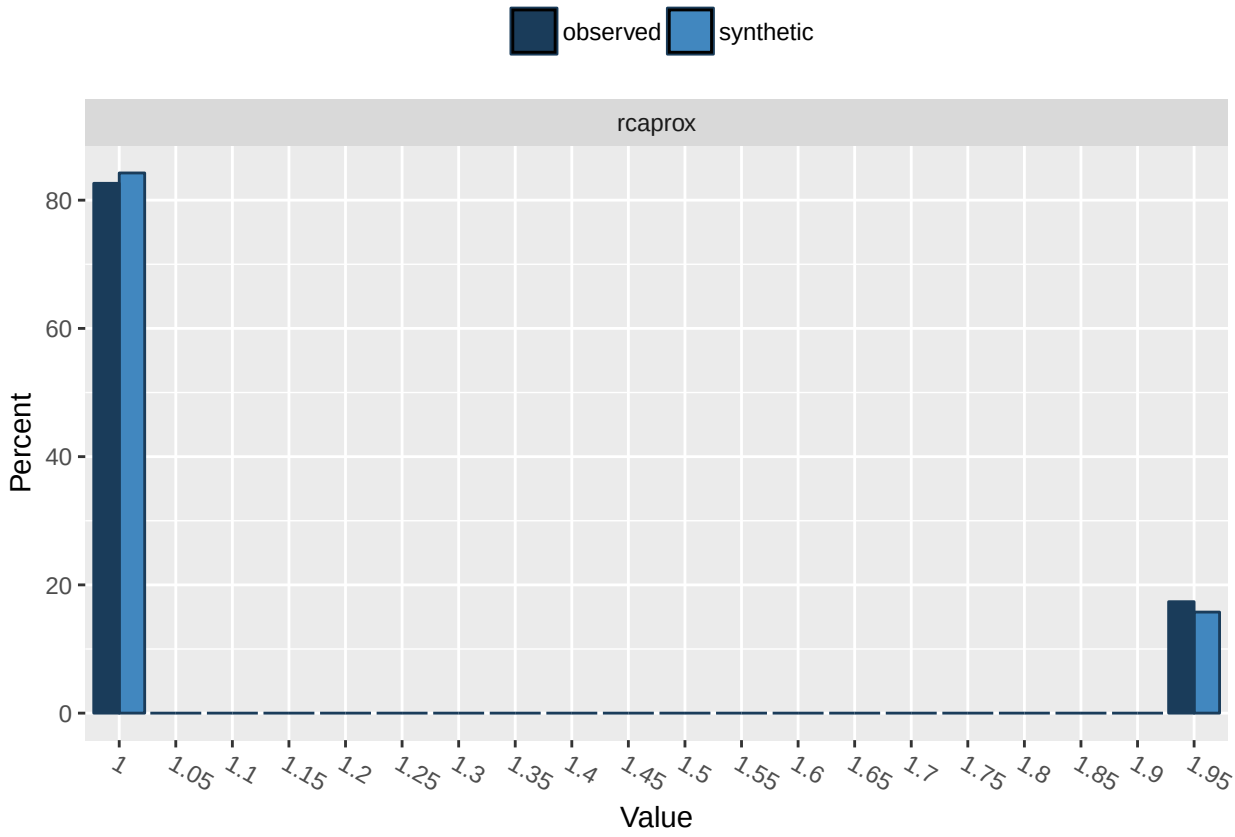

```
##
## Comparing percentages observed with synthetic
##
## $cxmain
##                  1 1.05 1.1 1.15 1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6
## observed  84.39716    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 83.64833    0   0    0   0    0   0    0   0    0   0    0   0
##           1.65 1.7 1.75 1.8 1.85 1.9     1.95
## observed     0   0    0   0    0   0 15.60284
## synthetic    0   0    0   0    0   0 16.35167
```



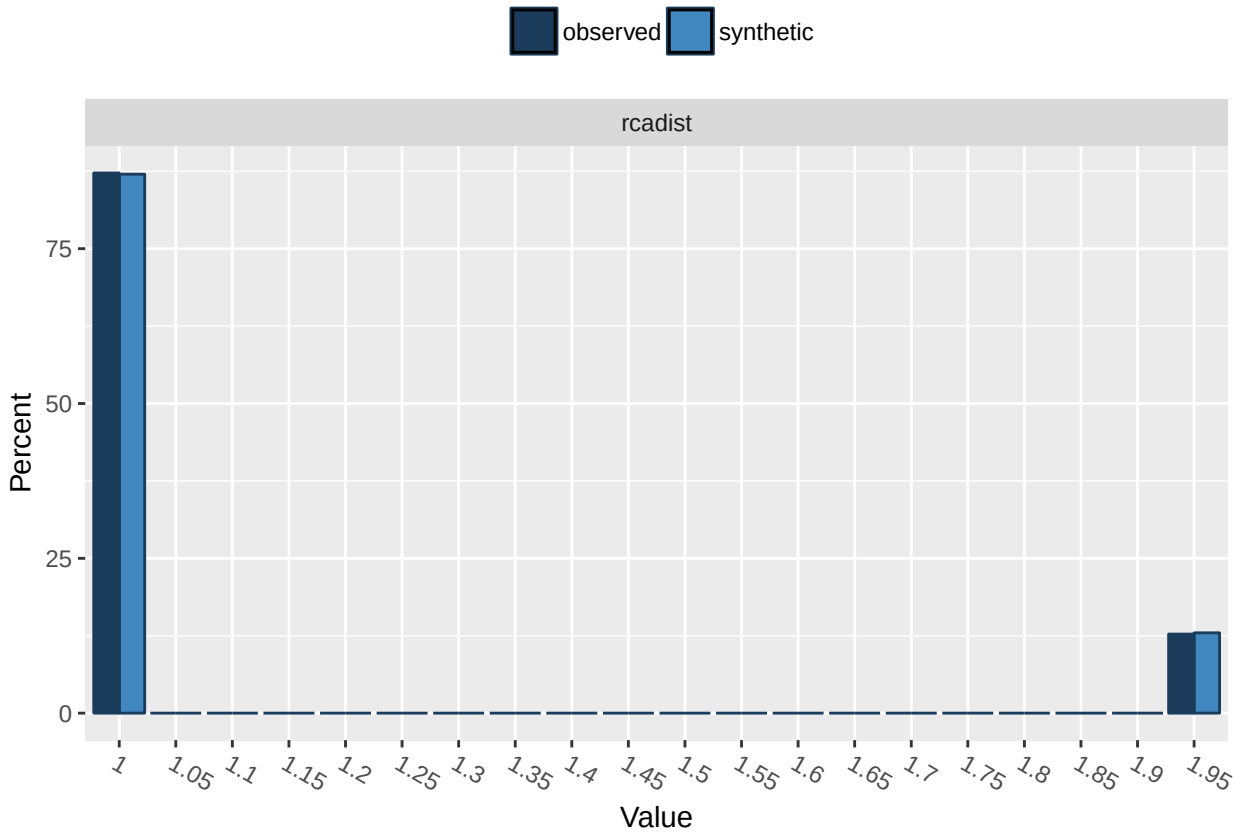

```
##
## Comparing percentages observed with synthetic
##
## $om1
##                   1 1.05 1.1 1.15 1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6
## observed  83.68794    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 83.67500    0   0    0   0    0   0    0   0    0   0    0   0
##           1.65 1.7 1.75 1.8 1.85 1.9     1.95
## observed     0   0    0   0    0   0 16.31206
## synthetic    0   0    0   0    0   0 16.32500
```




```
##
## Comparing percentages observed with synthetic
##
## $rcaprox
##                  1 1.05 1.1 1.15 1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6
## observed  82.62411    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 84.24333    0   0    0   0    0   0    0   0    0   0    0   0
##           1.65 1.7 1.75 1.8 1.85 1.9     1.95
## observed     0   0    0   0    0   0 17.37589
## synthetic    0   0    0   0    0   0 15.75667
```




```
##
## Comparing percentages observed with synthetic
##
## $rcadist
##                   1 1.05 1.1 1.15 1.2 1.25 1.3 1.35 1.4 1.45 1.5 1.55 1.6
## observed  87.23404    0   0    0   0    0   0    0   0    0   0    0   0
## synthetic 87.03500    0   0    0   0    0   0    0   0    0   0    0   0
##           1.65 1.7 1.75 1.8 1.85 1.9     1.95
## observed     0   0    0   0    0   0 12.76596
## synthetic    0   0    0   0    0   0 12.96500
```


observed
synthetic
rcadist
Percent
75
50
25
0
1
1.05
1.1
1.15
1.2
1.25
1.3
1.35
1.4
1.45
1.5
1.55
1.6
1.65
1.7
1.75
1.8
1.85
1.9
1.95
Value