

```
## Warning: package 'igraph' was built under R version 3.5.2
```

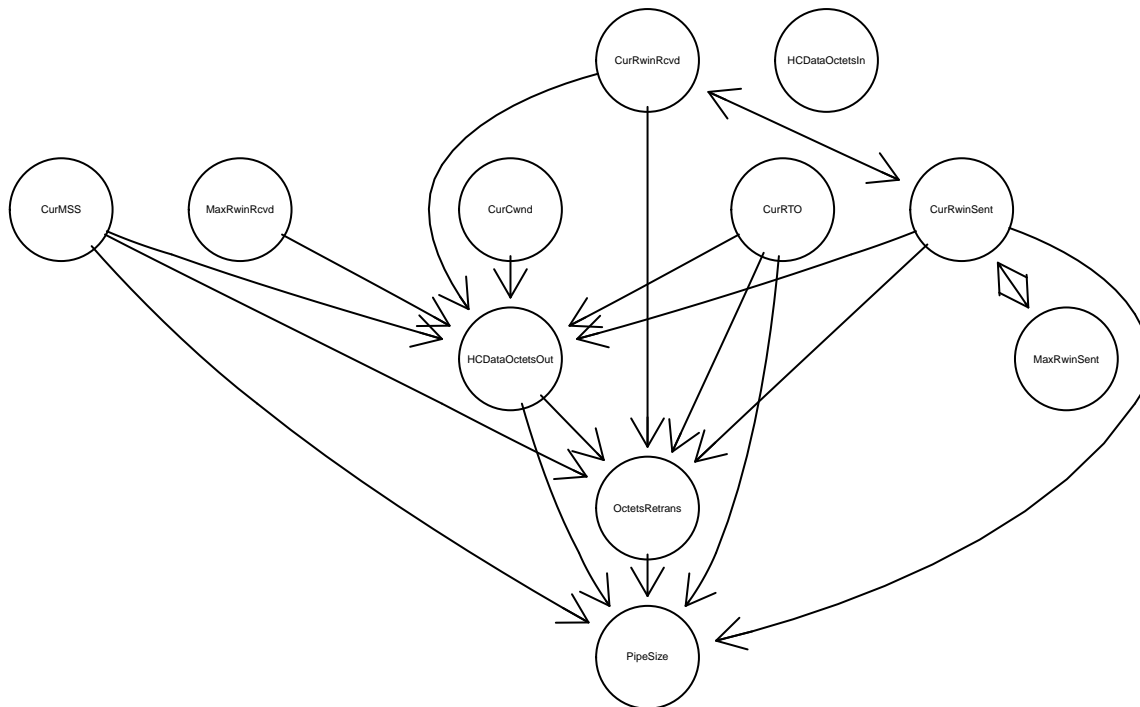
```
## Warning: package 'pcalg' was built under R version 3.5.2
```

```
## Warning: package 'dplyr' was built under R version 3.5.2
```

```
## [1] 1
```

```
## [1] "/Users/aaronkruchten/Desktop/PCA flows/002dcf6dedcceab25a54ac1e9c696b65e23711f38d02a1c76079af9f
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

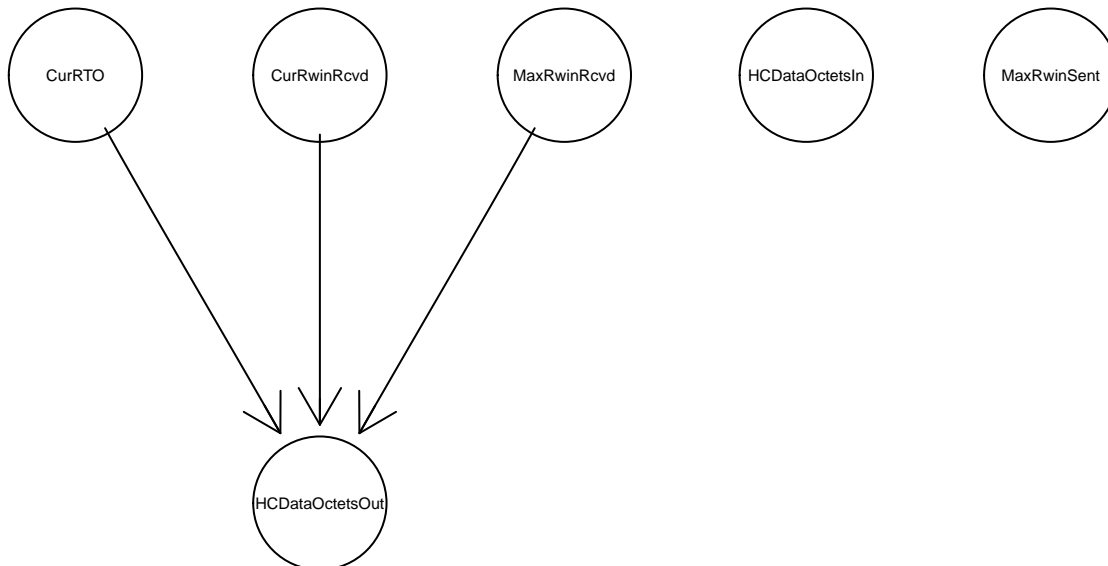
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] 2
```

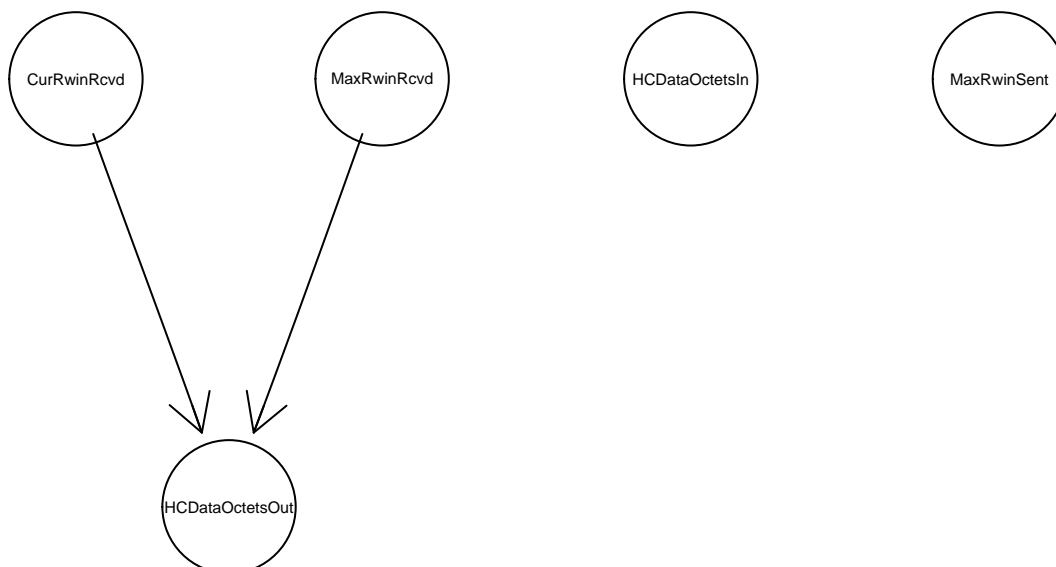
```
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0097c9303b7a1445247a408dcb30975bda01391db4920608d59b0143
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



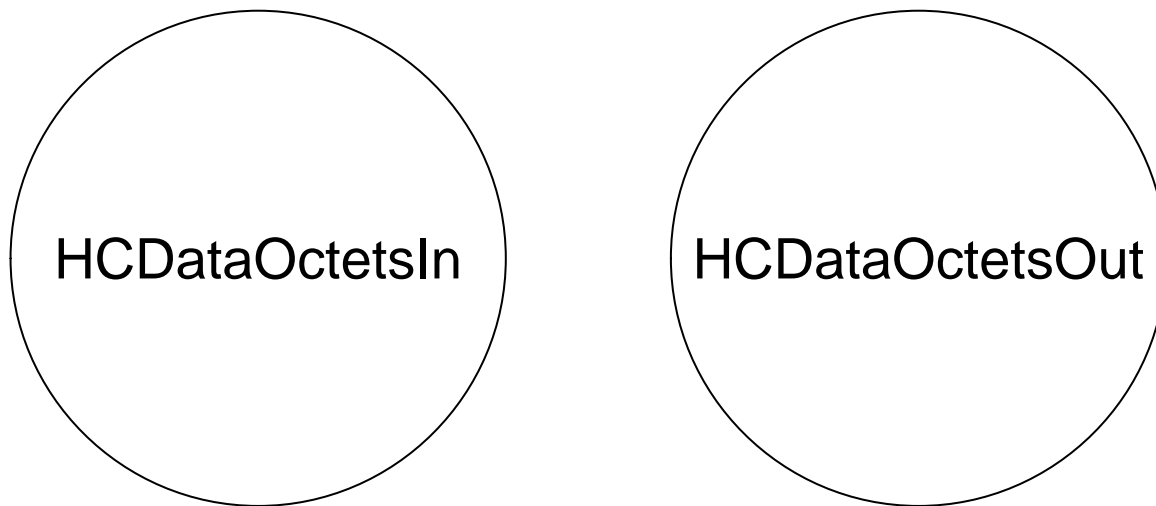
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 3
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0102775f160038391832798b38503698ad87433432de460cb0e98201"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



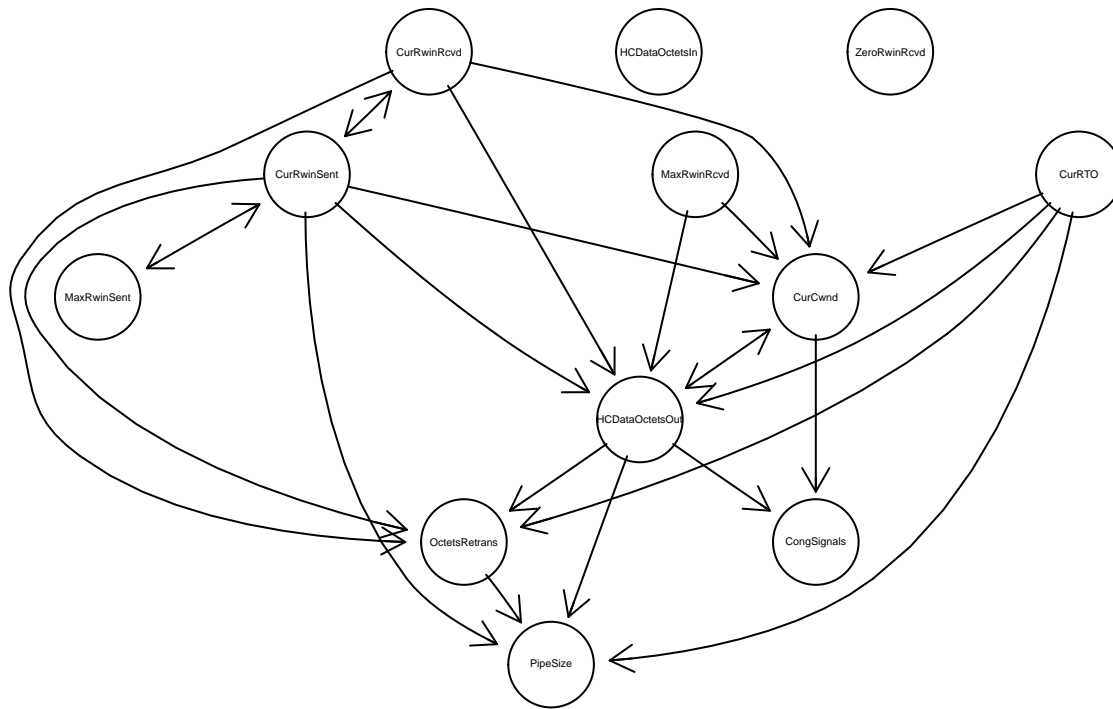
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 4
## [1] "/Users/aaronkruchten/Desktop/PCA flows/020d90028a0ead50555968ca59d48a2e966b02b17d1dea92240285c1"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 5
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0261a40b1e6389c26a09560ceddd40484c1567562352c51f86328217"
## [1] 6
## [1] "/Users/aaronkruchten/Desktop/PCA flows/02a152ab3d56b0241d701b7df7a2c7d6ed59e20325ae8473c4e71292"
## [1] 7
## [1] "/Users/aaronkruchten/Desktop/PCA flows/02aa0bc52b9348223df61908186b84b66af26b7c8049c76e2e55e065"
## [1] 8
## [1] "/Users/aaronkruchten/Desktop/PCA flows/03ff6513ab3f99710312f711e4437a219920407d2a3795aa79802641"
## [1] 9
## [1] "/Users/aaronkruchten/Desktop/PCA flows/04d3c5514b480a65036fc4447dd2de563b05737d79b2f1655f8db564"
## [1] 10
## [1] "/Users/aaronkruchten/Desktop/PCA flows/04e6ad43ef8e9ea46638a7804a42bfb694fe01220672b68ba2973024"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

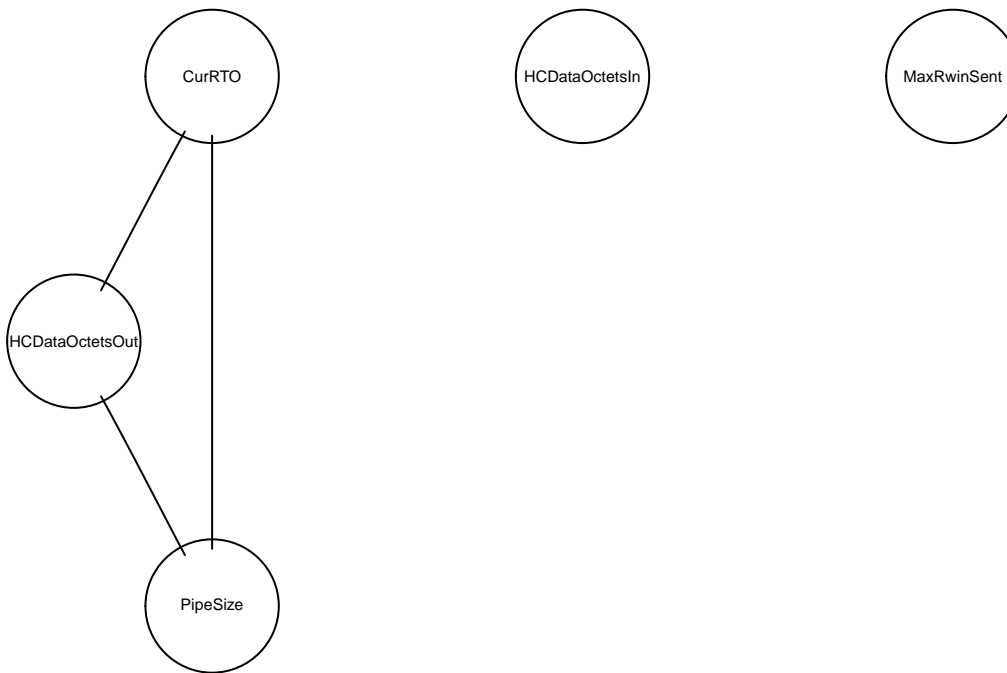


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 11
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0505e1886b87306c6fbd8698d3051d30d8a8fb2dc690591ba9db935b..."
## [1] 12
## [1] "/Users/aaronkruchten/Desktop/PCA flows/07f69b46d4bfa704480a4536b1f1ce4a1a398d7159c9ba914c248f10..."

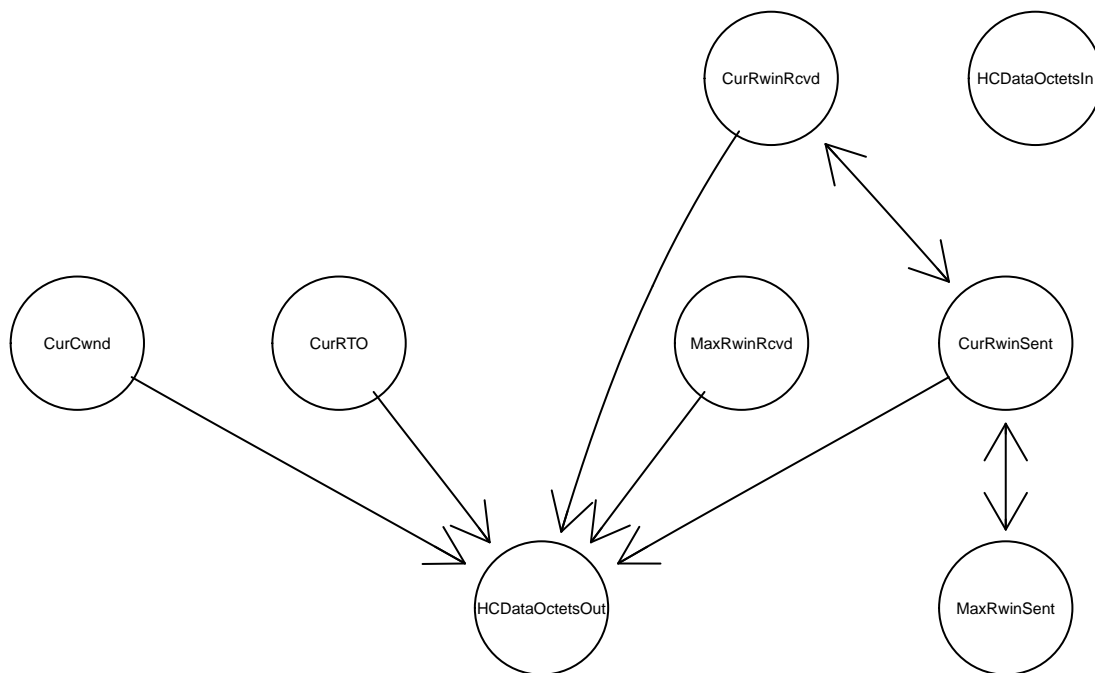
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



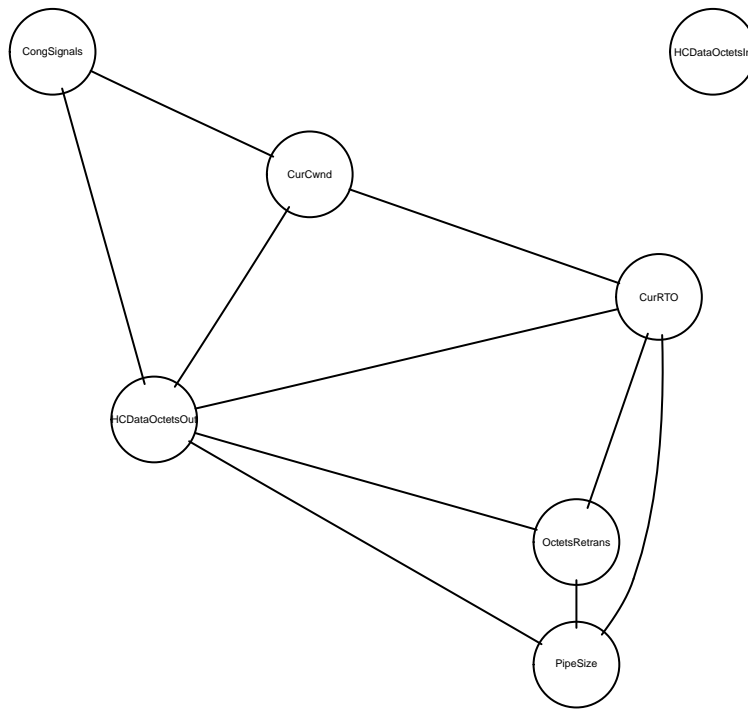
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 13
## [1] "/Users/aaronkruchten/Desktop/PCA flows/088bfe51140a68349cd4c3abb3024b6f37fed6f21eb7332ad60e4f20"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



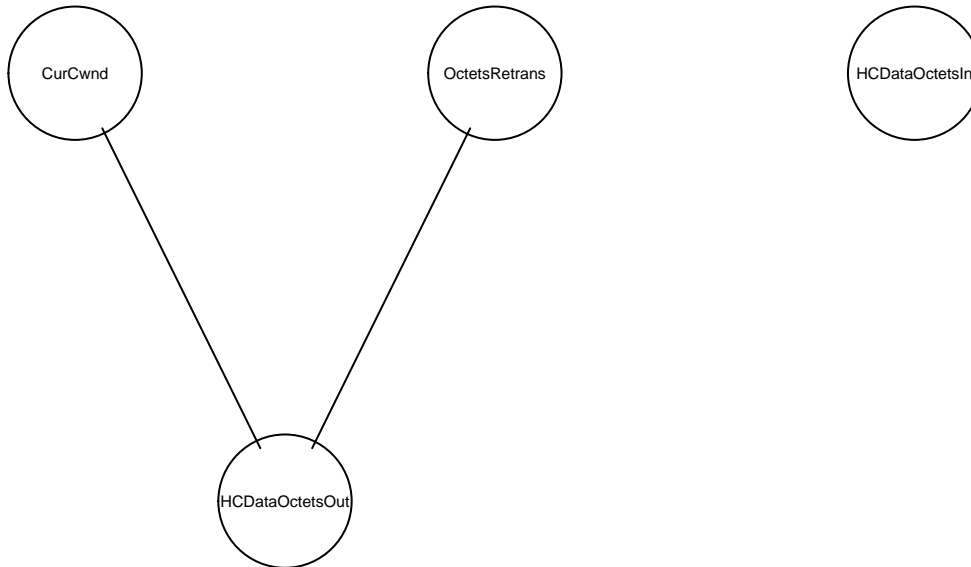
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 14
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0908fc9e6a35e477fa3a32f4fe1b5e9774c41a265ec3d6ba6c1f75c7"
## [1] 15
## [1] "/Users/aaronkruchten/Desktop/PCA flows/09c1f888eec38e405db4665d7d9e94eff08e1a08374c09f08d10c9c6"
## [1] 16
## [1] "/Users/aaronkruchten/Desktop/PCA flows/09d7d0cf6521576fab02fd1781c2fe2c259cf0f28b25ac4399070758"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 17
## [1] "/Users/aaronkruchten/Desktop/PCA flows/09f3a426472c02db97254a2bea1d2b3b6bb26ef21bca9b5d4307970b"
```

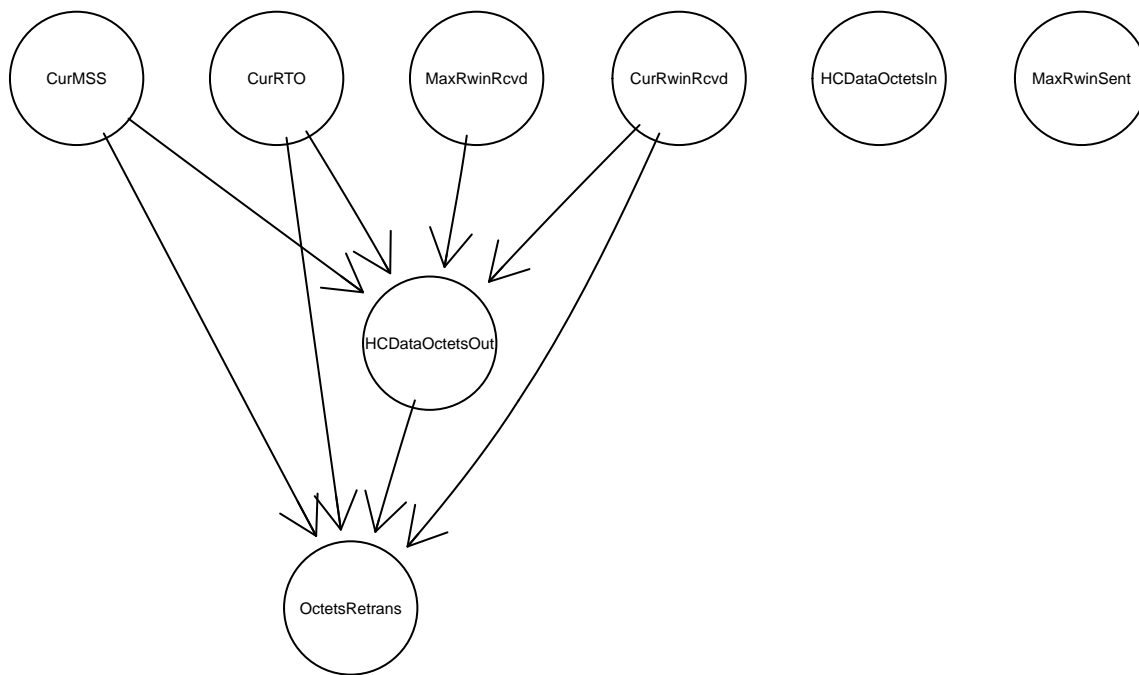
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
   labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] 18  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0ab0a4edd7caf0e89df9b6635b6279717cf15bfa4dcf62c9ca08e927"
```

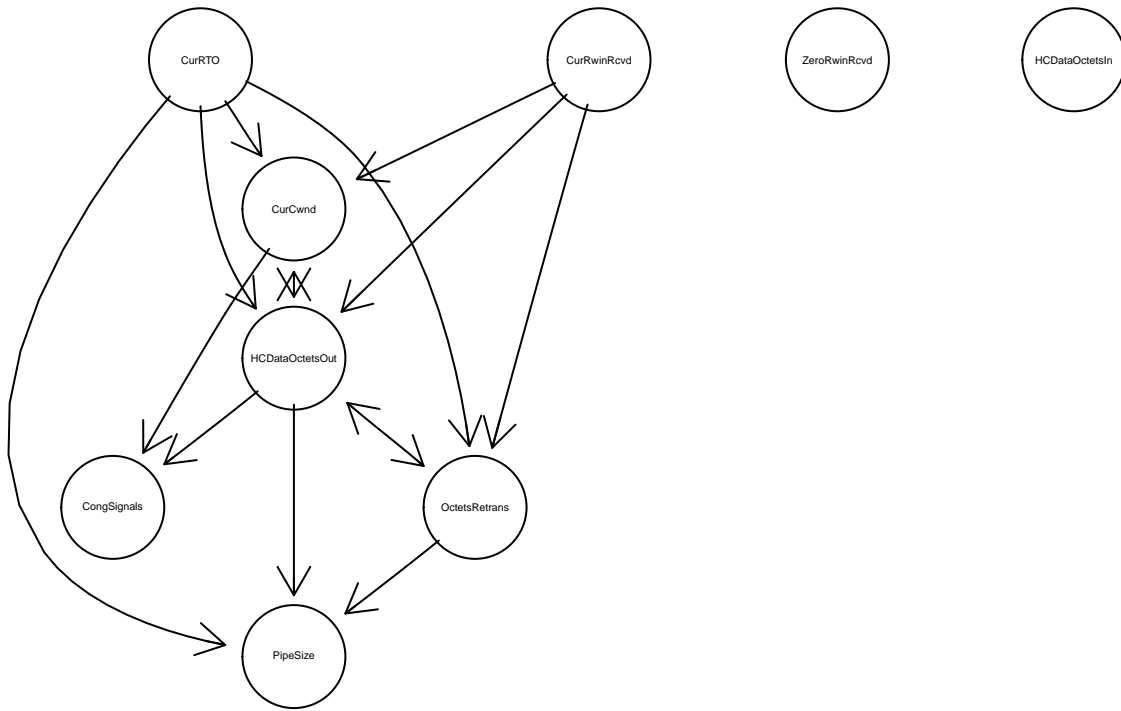


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 19
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0ae822ce5e9b386f085943bd7e00b7bbe041c378ca8ae309b3cc575b"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

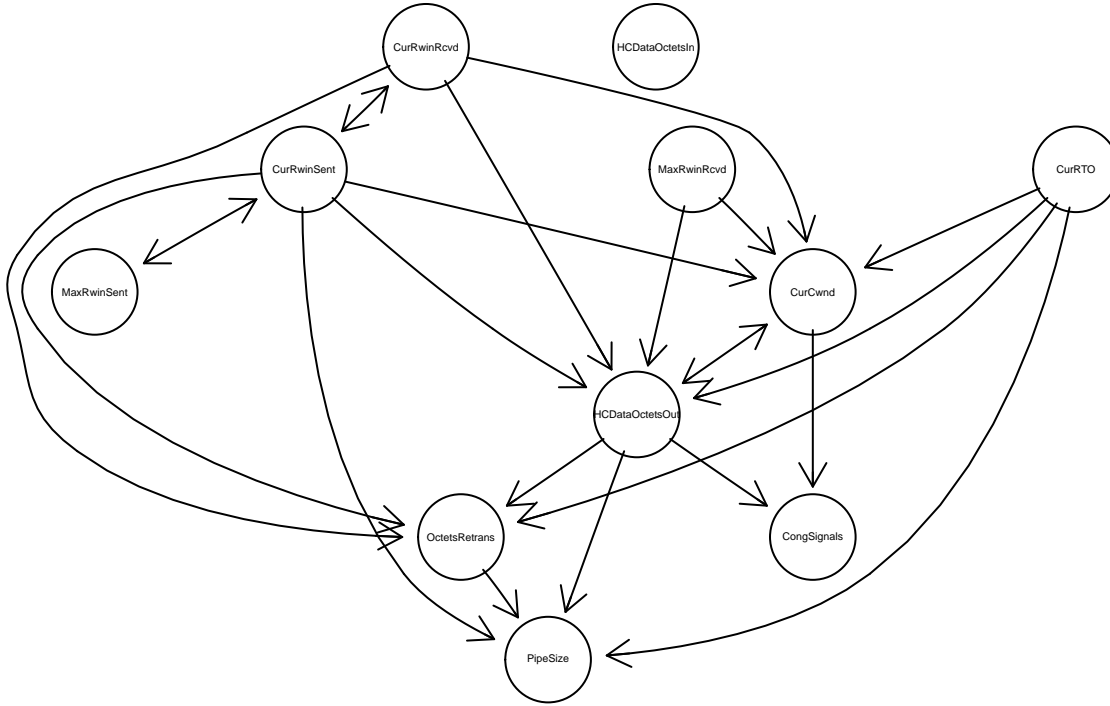


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 20
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0b033ba942d6ae92a2d5fdac9c913a3af2ece33225a97aa00262f707"
## [1] 21
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0bf1674e3d2cc31b10baa7c498dac6619404f60a32c9e77ed65c679a"

```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

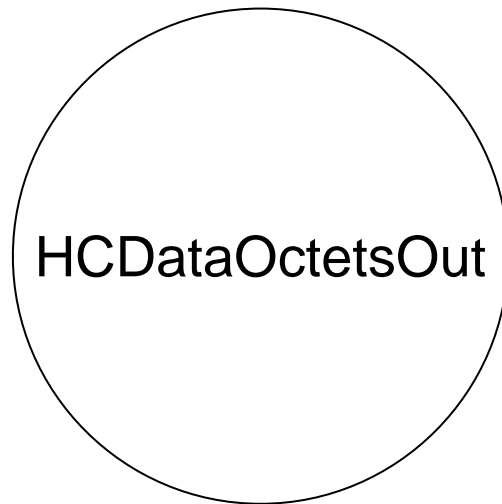
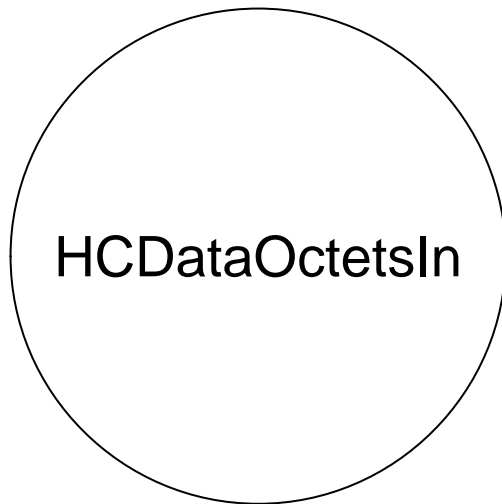


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 22
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0bf3bc3b40c6f1606803c524a1b45e427a940eff2598900f9d2291cf..."
## [1] 23
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0bfdae1c32c245c625ae51b1f85c1ee138b625ab527fb2f7416af701..."
## [1] 24
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0c312bd099521d139d8cafc561ba10b8cf151dc25c34880d8629cc9f..."
## [1] 25
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0cce3550aa1c49a37130a8903d39dbd1d2be3301a1b30fbacae62657..."

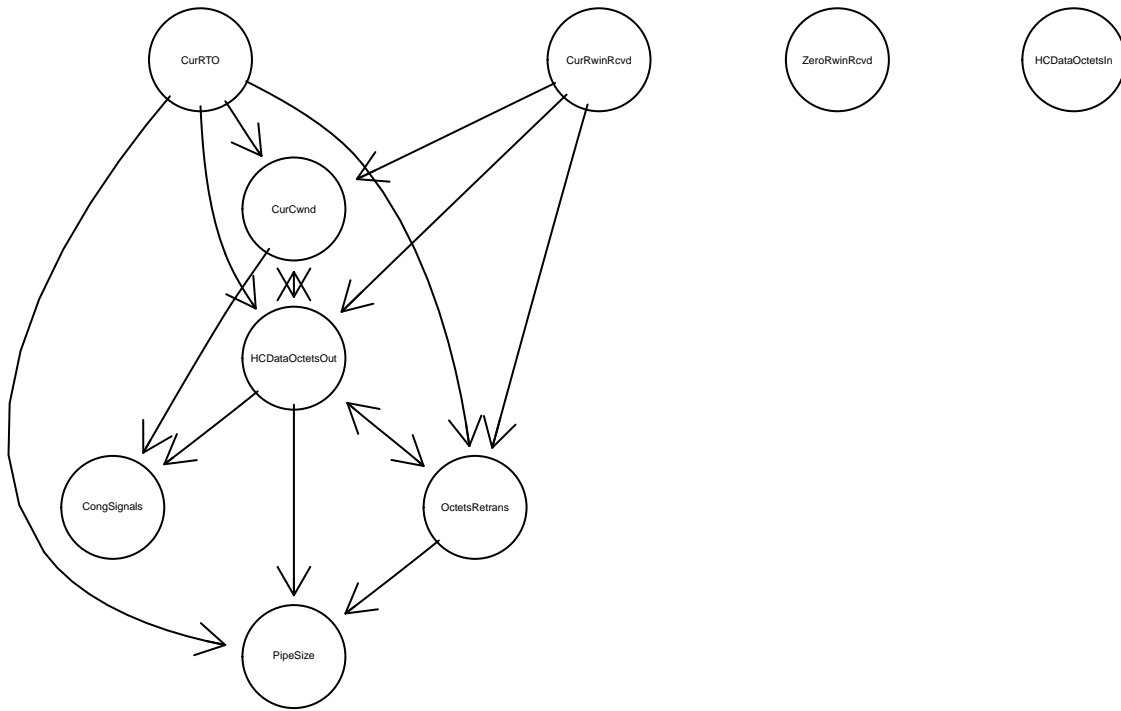
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 26
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0d69420f5ddf89f10c91b8c9b6b0dcf5637c90fd46d464f8caf91989"
## [1] 27
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0d8596a22a07b7fed8ea2fd5f45112ccad90ae7049488f330483d764"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

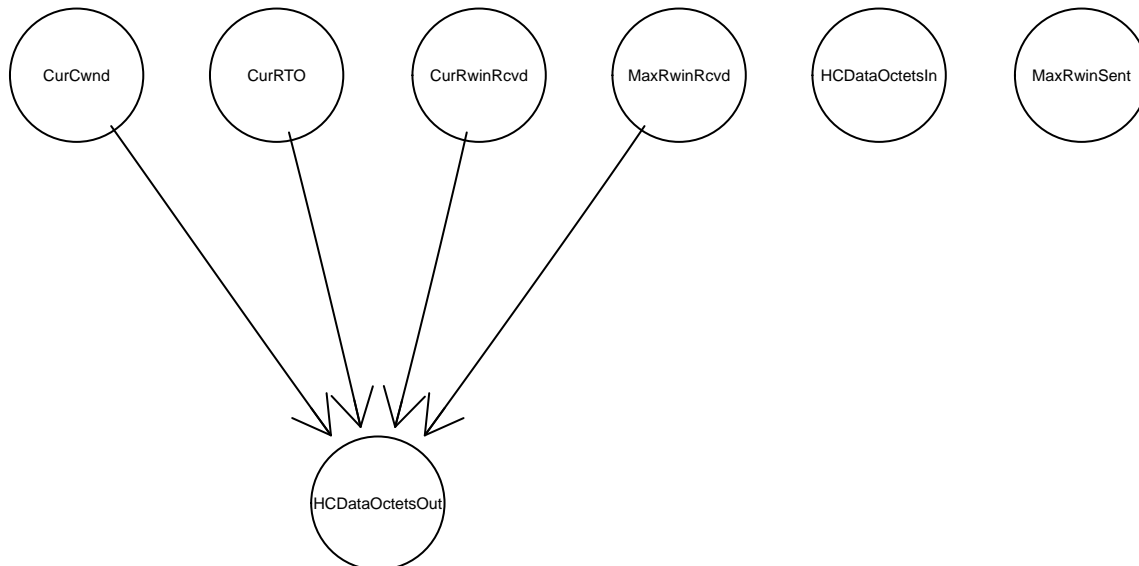


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 28
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0dff5d2e74dda099b27d423ce4c446f84bea5ebee62f9eec348a12fa"
## [1] 29
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0e75df859f22b47f6eadb48fbe6b926163008bd5879ed53623f68b07"

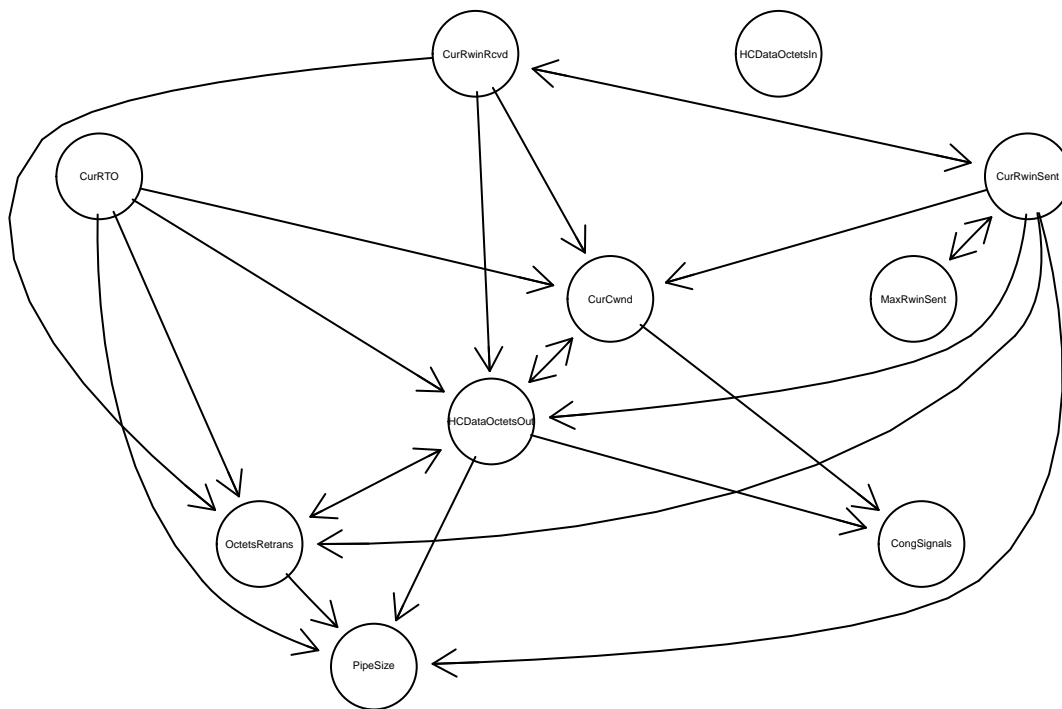
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



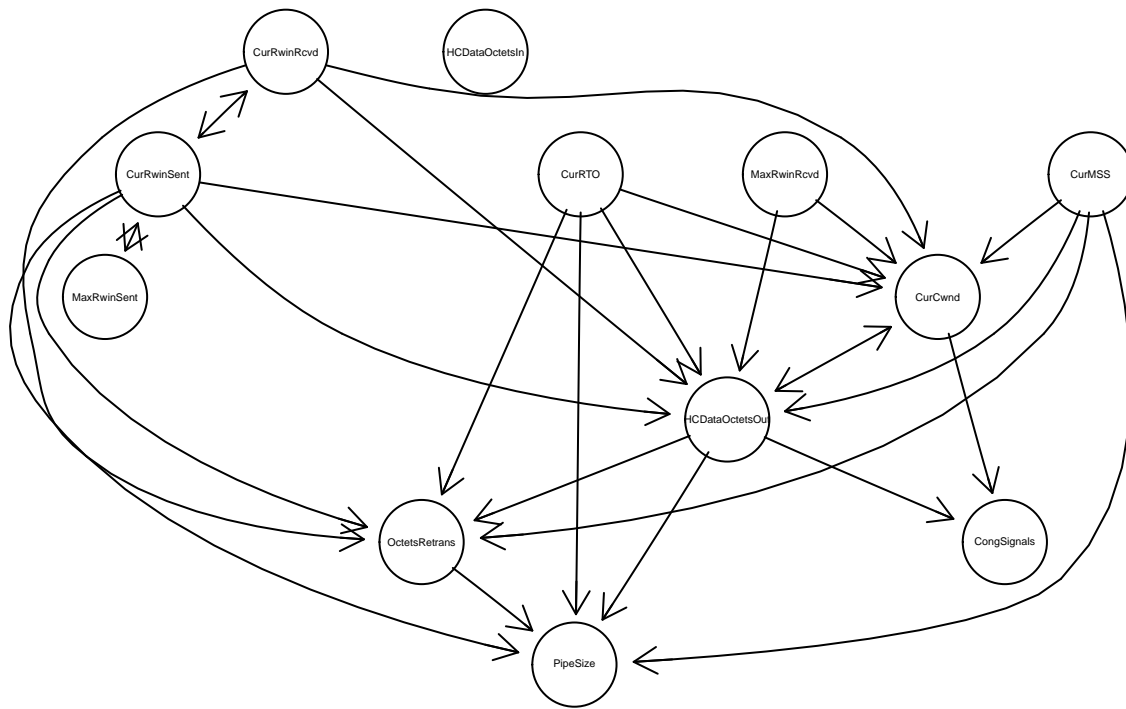
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 30
## [1] "/Users/aaronkruchten/Desktop/PCA flows/0f00d0c9cd8419af56f633b924da22e9abf89139a68259e9ec960c5d"
## [1] 31
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1143f9c5de3ba710d5ed5aa786869972dd1319942f6d9a6089ec090a"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 32
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1197571406c24033949ddce5d5a9f322975fb8243fffd4d478f6d4a2"
```

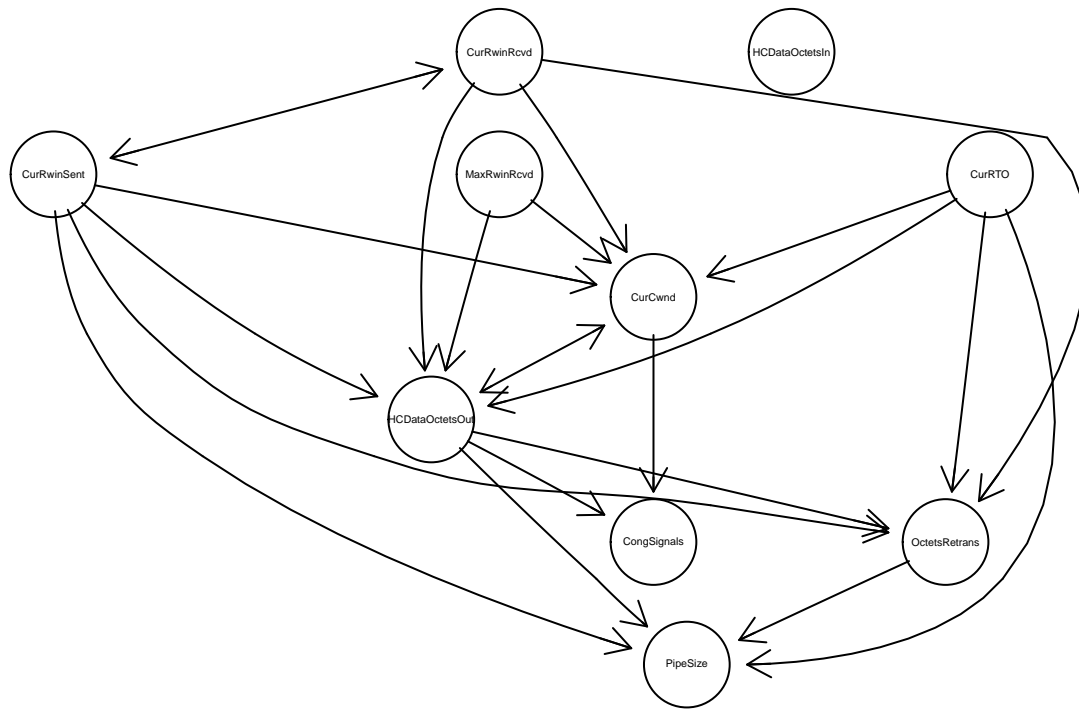
**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 33
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1291488a01ca14851f3e90b510c110d9c4cf5b96976529f5bc9386de"
```

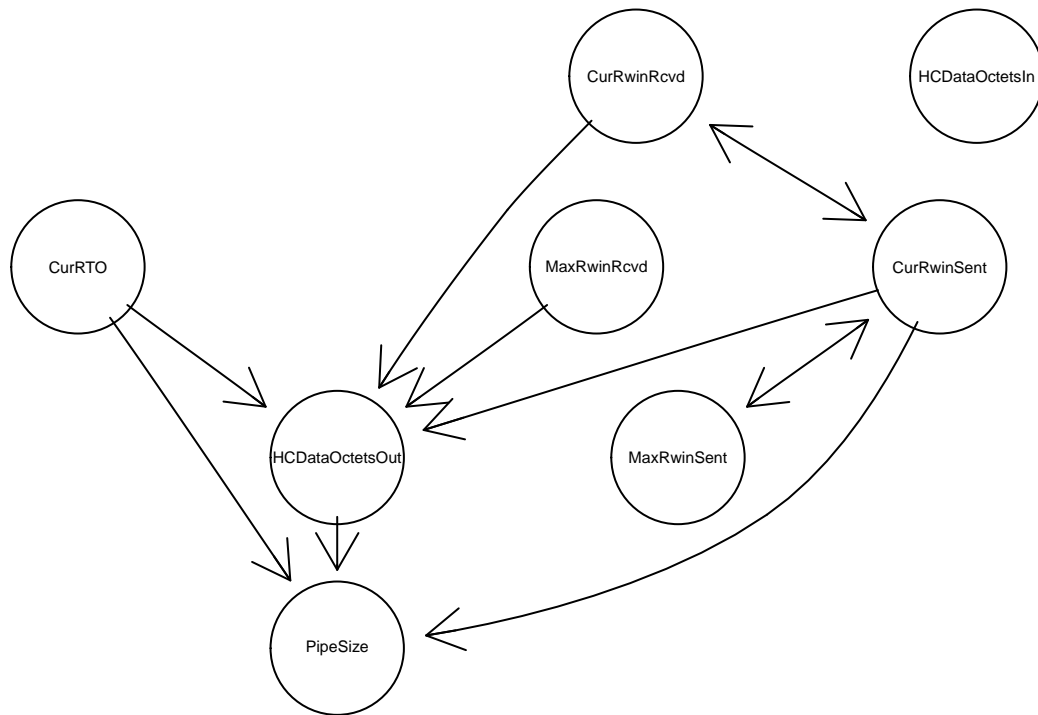


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



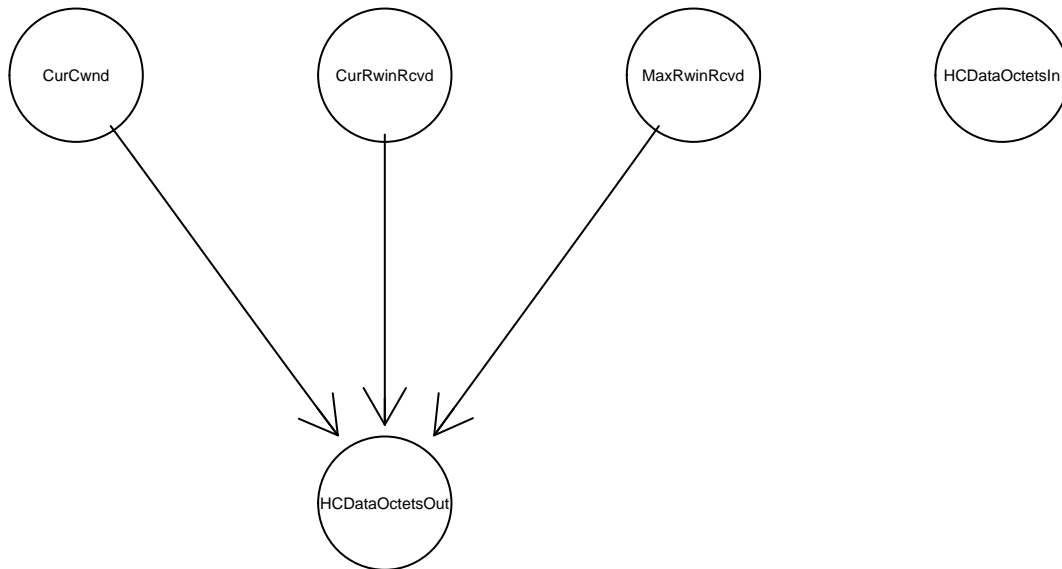
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 34
## [1] "/Users/aaronkruchten/Desktop/PCA flows/12cb4411dc2379b95e6cc4f3b5a243a7fc82e5bed3c28097c0775ddb"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



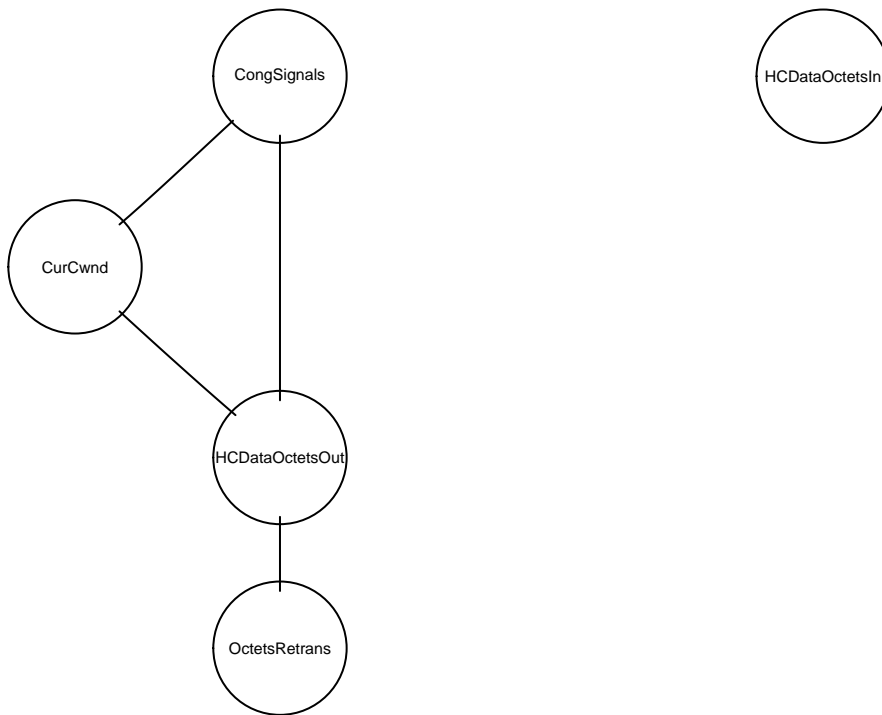
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 35
## [1] "/Users/aaronkruchten/Desktop/PCA flows/12e6f85b204cf30de5db841b5d0d0bac63bfe6c7c0a69f26693ffb50"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
   labels = colnames(usable_frame))
```



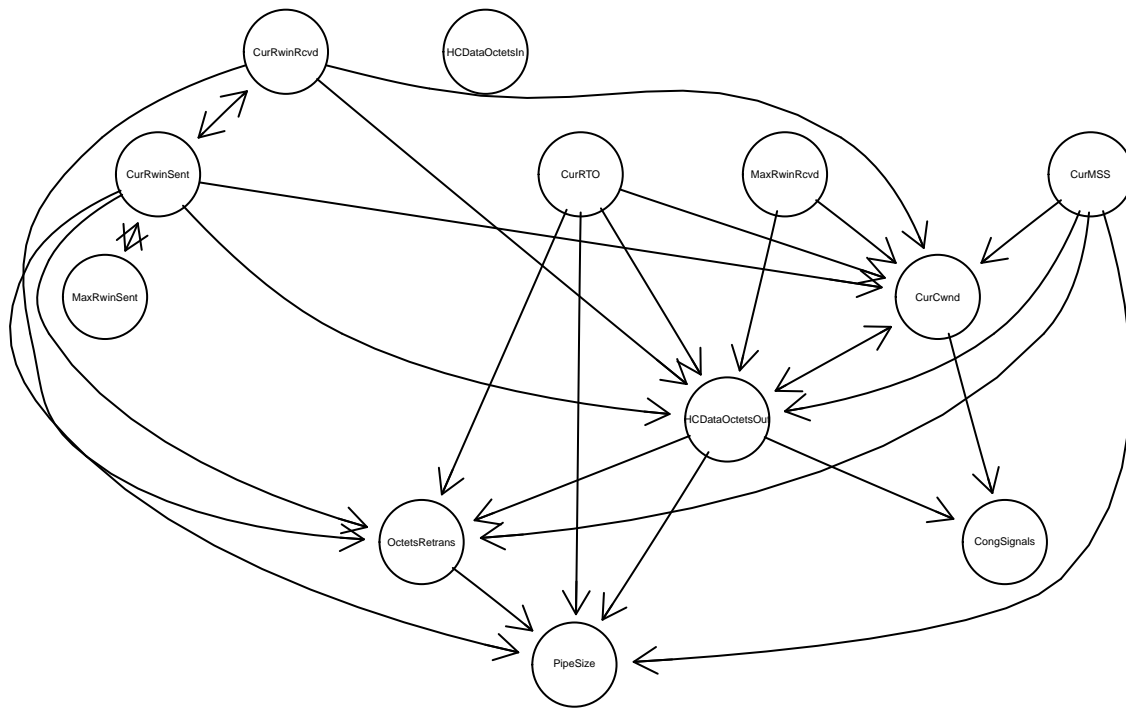
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] 36  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1404567bca57359d77a4792a2d64ad15d8e5f9d560ea351b4dd326af"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
   labels = colnames(usable_frame))
```



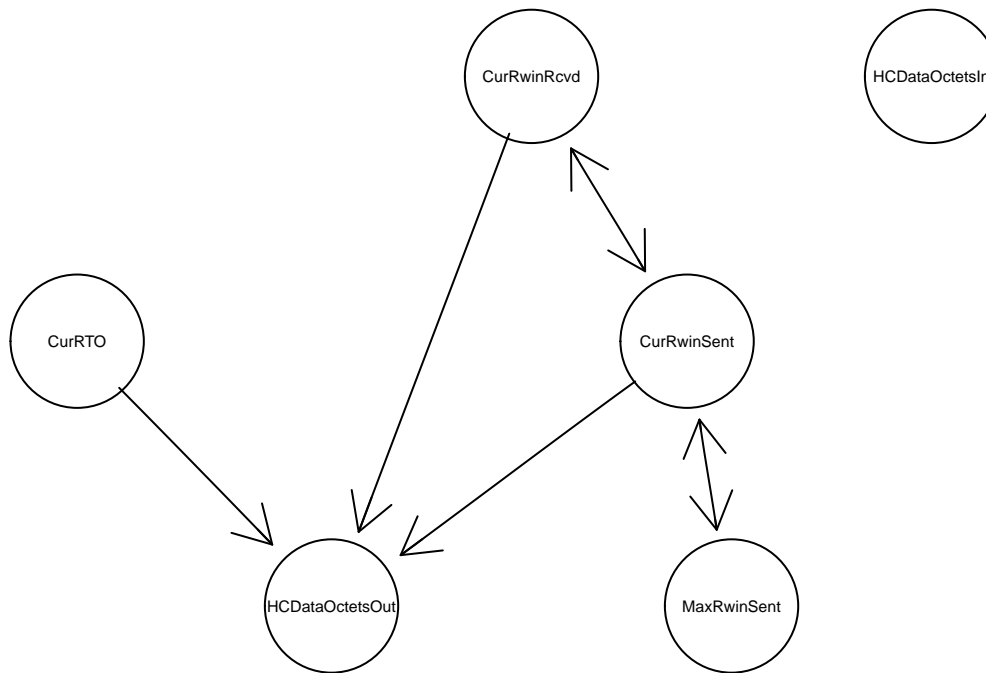
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] 37  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/16c54c4d2977125b5375a024be392899ac00a80a63c0d8eab0ed23d5"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
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## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 38
## [1] "/Users/aaronkruchten/Desktop/PCA flows/17621b3b36dac65a90a6ee6a22f4a9e0b14c7f410c84d4902c180518"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



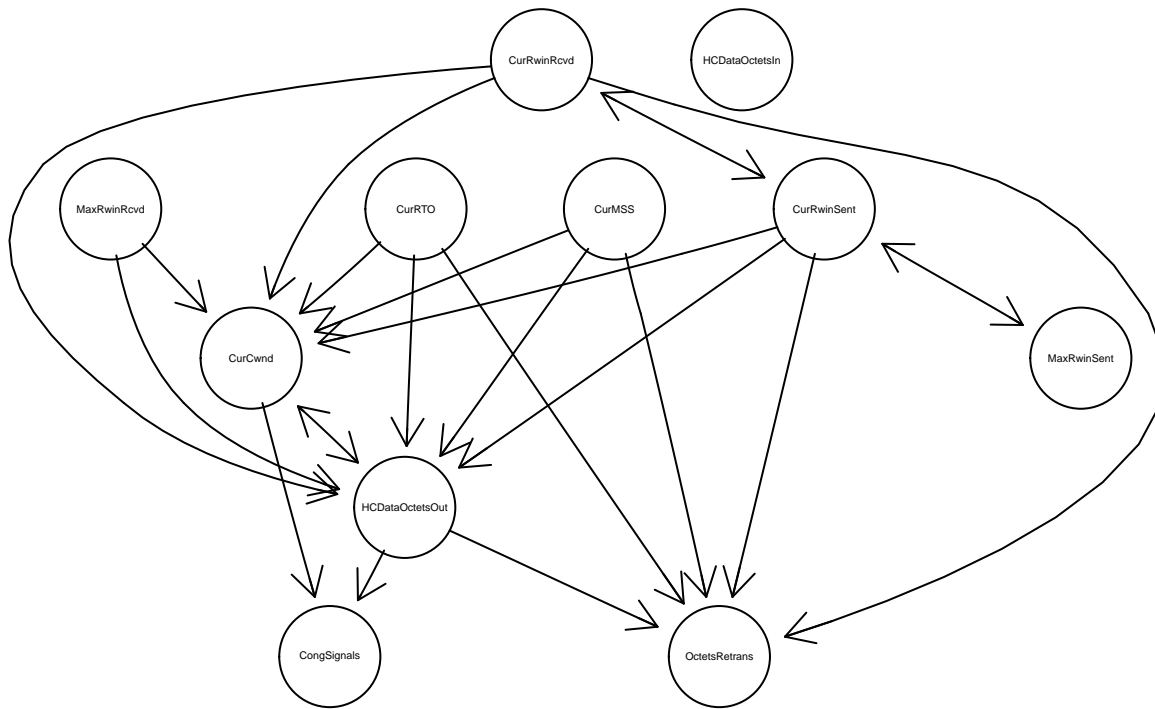
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 39
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1896d004bac9ffc5be7111383c452352a7ed6c20d441145f0a0327bf1"
## [1] 40
## [1] "/Users/aaronkruchten/Desktop/PCA flows/192c7ba3043e6f0a6e94fa078916ddd98b1260ad99855f8a6710096a"
## [1] 41
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1b23a8aa83736a168416ea3e96356bfb6f3b9e457ca207a2c8eff88a"
## [1] 42
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1b4b1189de032f79f83e09fe76edd77f274431f7e0efc6f265f63785"
## [1] 43
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1c48f0a231cdf03a31edc4284a117da7811122d50da1d3a52c8ce03a"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 44
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1d74f4c6d2bdbbc80a4ce725ad3da0e8cd6f0c4f59f17143c363c78a7"
## [1] 45
## [1] "/Users/aaronkruchten/Desktop/PCA flows/1f84e276c0cf4e257220c6ecb44dfffd295002f10b9dc975fe6a52c12"
## [1] 46
## [1] "/Users/aaronkruchten/Desktop/PCA flows/21bb0d1f4fd2924c4dd7a924321e0408435938fd04a31c69a8d86464"
```

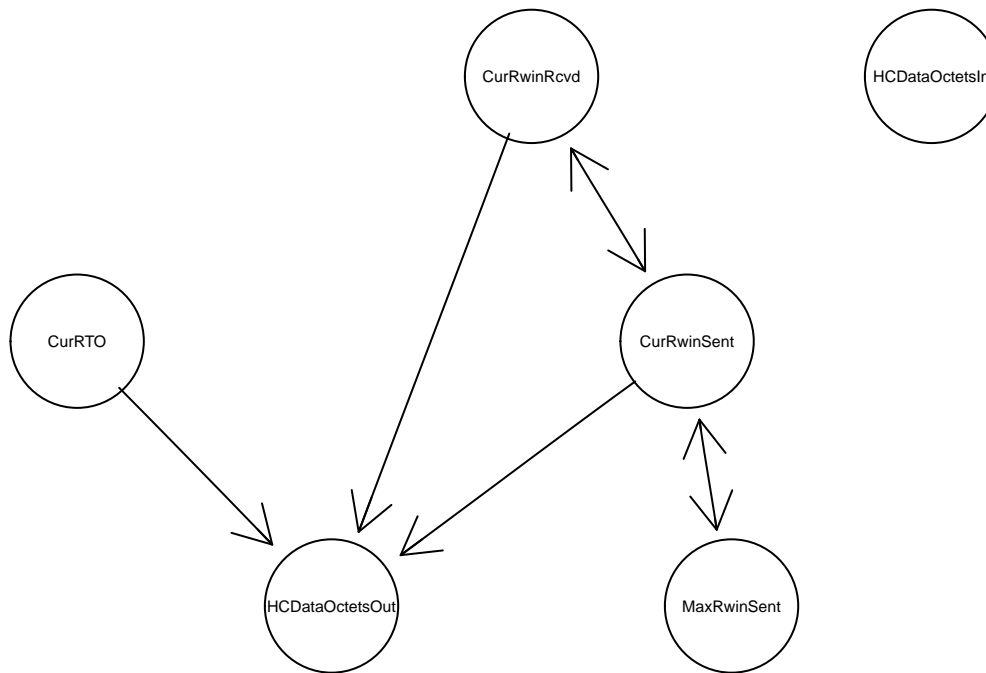
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 47
## [1] "/Users/aaronkruchten/Desktop/PCA flows/21dd1020135d02a7f5ea2d8d90c2f7e167cbd0ac2905097b88200b89"
```

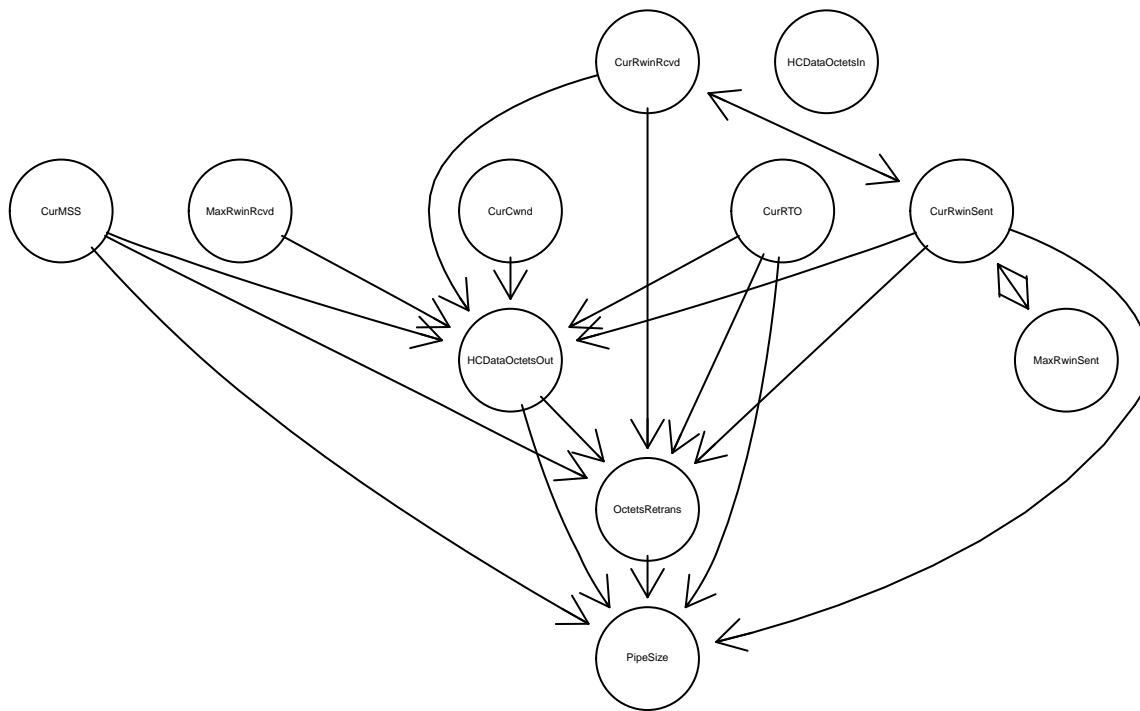


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



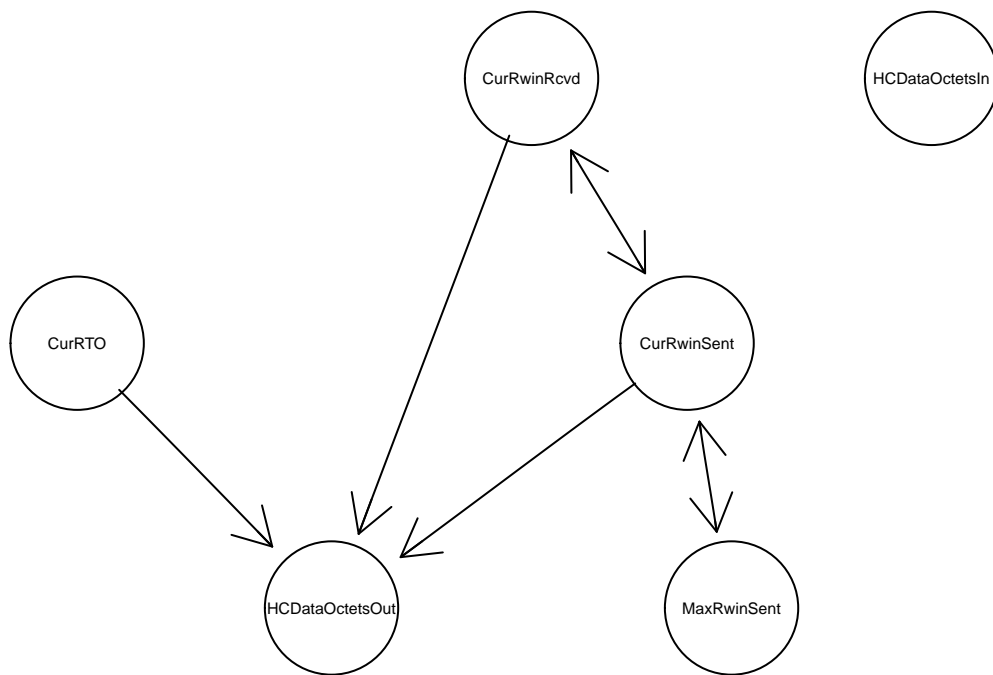
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 48
## [1] "/Users/aaronkruchten/Desktop/PCA flows/223edce6fcc1b6efdfc2178a0e78c72e2f0a8de93ba167b3b149373a"
## [1] 49
## [1] "/Users/aaronkruchten/Desktop/PCA flows/223fbed1089a827a25c890aeab2ad712bfbd7d7a02471c67b62f2997"
## [1] 50
## [1] "/Users/aaronkruchten/Desktop/PCA flows/236b06ebf97ac327df529b82097494791e6b3618b34f6651792f736b"
## [1] 51
## [1] "/Users/aaronkruchten/Desktop/PCA flows/23f8e76b628dd5007d0e5baf6781ab3504c4673a4aa93856cbfcc99e"
## [1] 52
## [1] "/Users/aaronkruchten/Desktop/PCA flows/24138bfc509080b4c46c95c863283b628024c79f7b76490e304af0ec"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



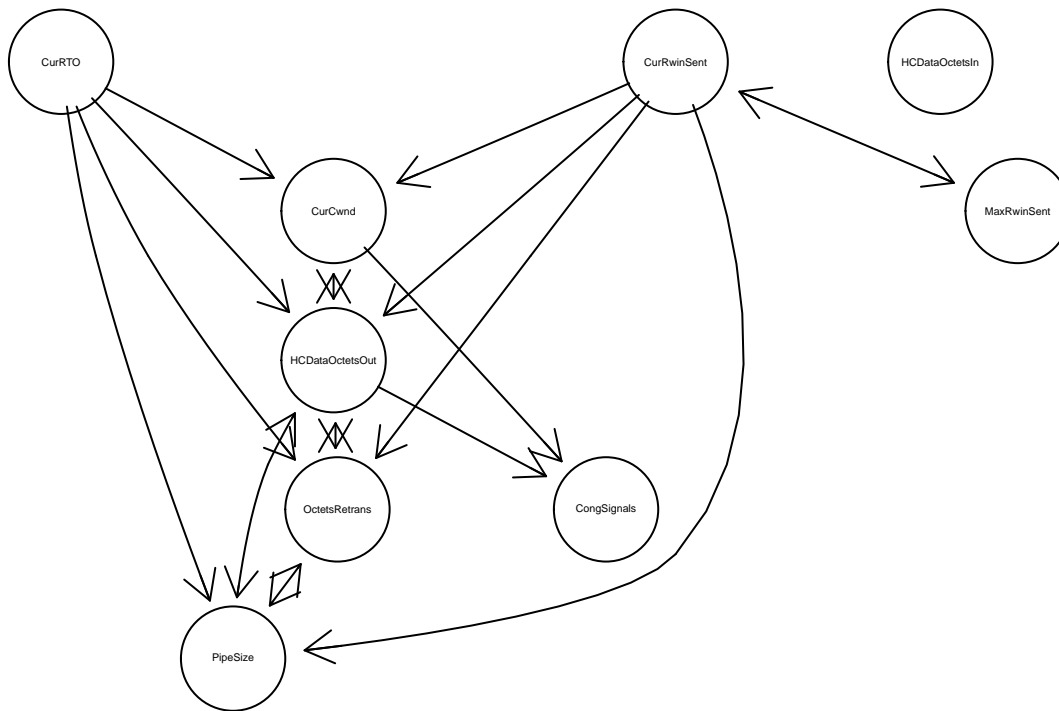
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 53
## [1] "/Users/aaronkruchten/Desktop/PCA flows/241bc7752d619473ec54e2d40723231242a80fe011470ecb1a5ebde2"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



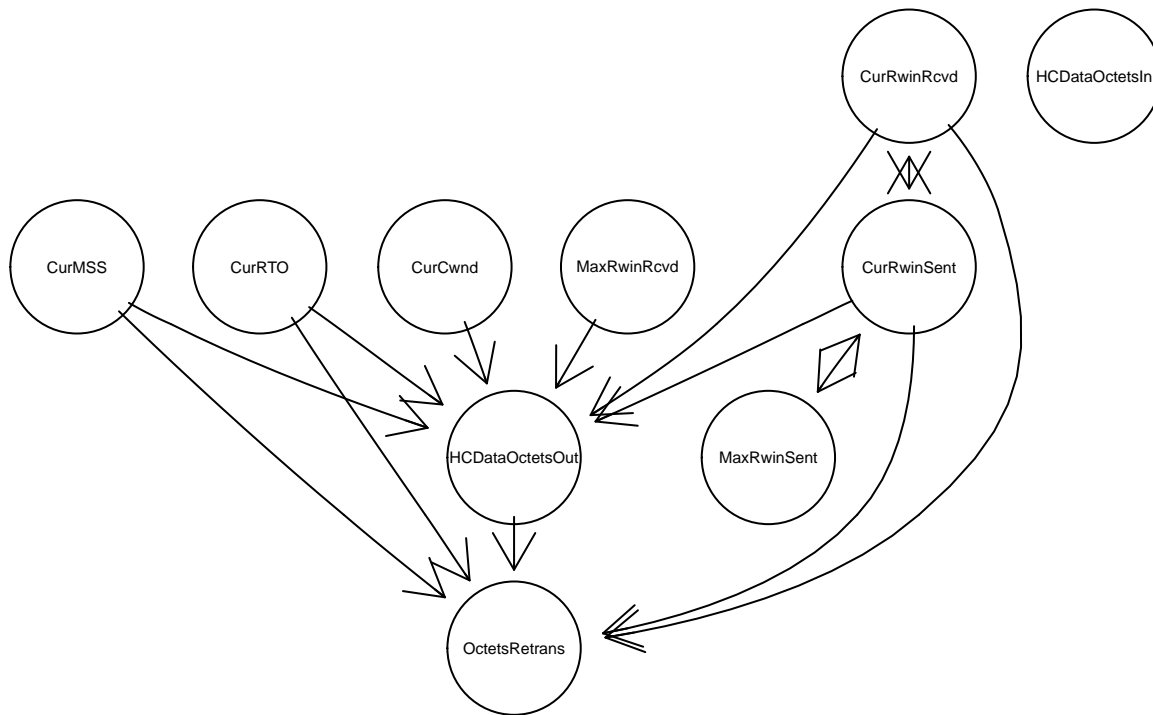
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 54
## [1] "/Users/aaronkruchten/Desktop/PCA flows/24b50ff287674bac477f198ce3b32edfa56ce500fbea17869d56b250"
## [1] 55
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2529542993364507b32ade90292761af174d39f2e0d754fc160d1e64"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



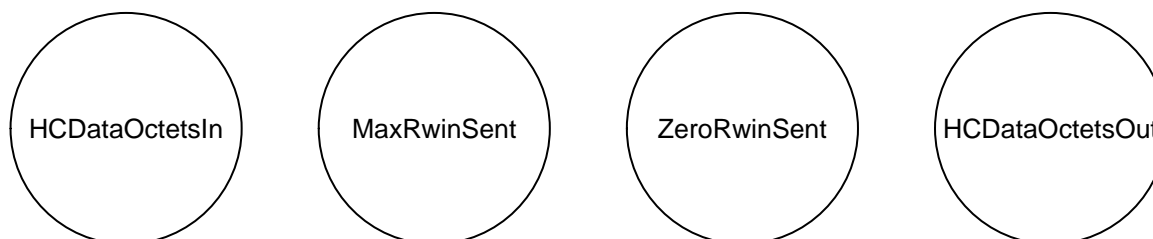
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 56
## [1] "/Users/aaronkruchten/Desktop/PCA flows/256ebf7ffe0d74606787b7883de870b6ad97f3d945270ef5c0302067"
## [1] 57
## [1] "/Users/aaronkruchten/Desktop/PCA flows/26126024af87225bb25bf244c7d506bd9dae74910ed372fcdba3d10d"
## [1] 58
## [1] "/Users/aaronkruchten/Desktop/PCA flows/283440cd6542d4ded2f16a55b4a8e02da24809432a106532b11721d7"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 59
## [1] "/Users/aaronkruchten/Desktop/PCA flows/286a0315e7c4855849a59e6be620209f3d5d3d3d4f28e8e2d9c08c38"
```

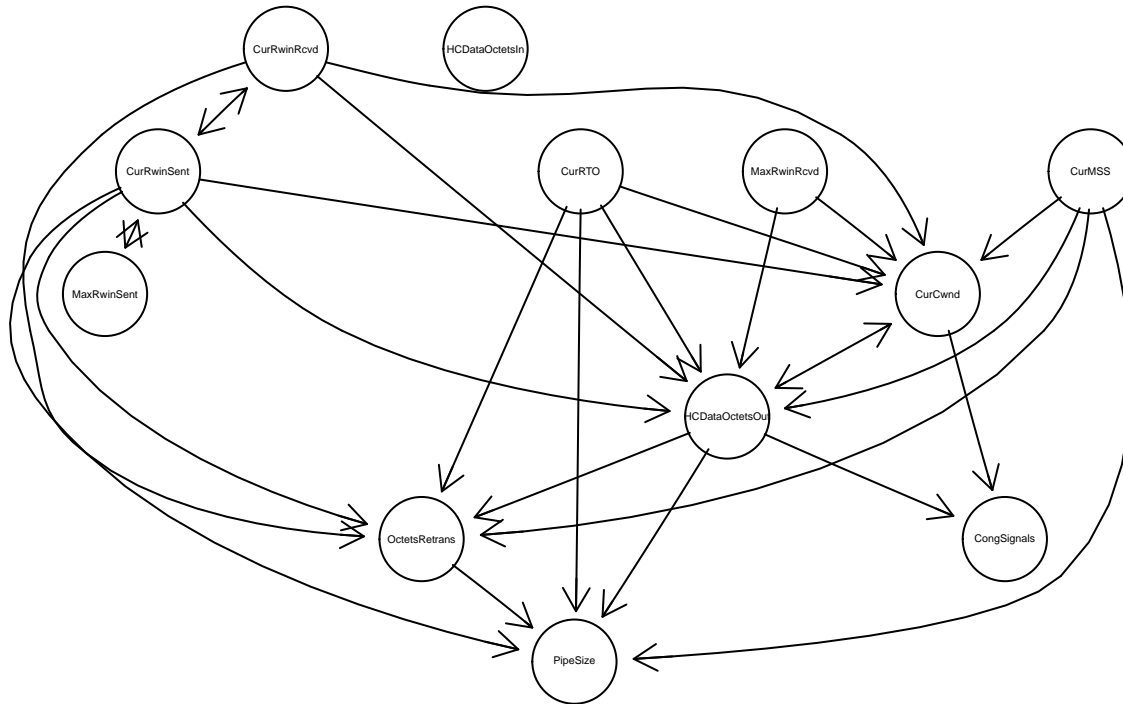
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 60
## [1] "/Users/aaronkruchten/Desktop/PCA flows/28af82053cfdee220647da7cd831eea11ce82d7eee9d0cd9b6431145"
## [1] 61
## [1] "/Users/aaronkruchten/Desktop/PCA flows/28b031f7bf34178c5b82b8190f2298a45b12a62fa0da6649d427b052"
```

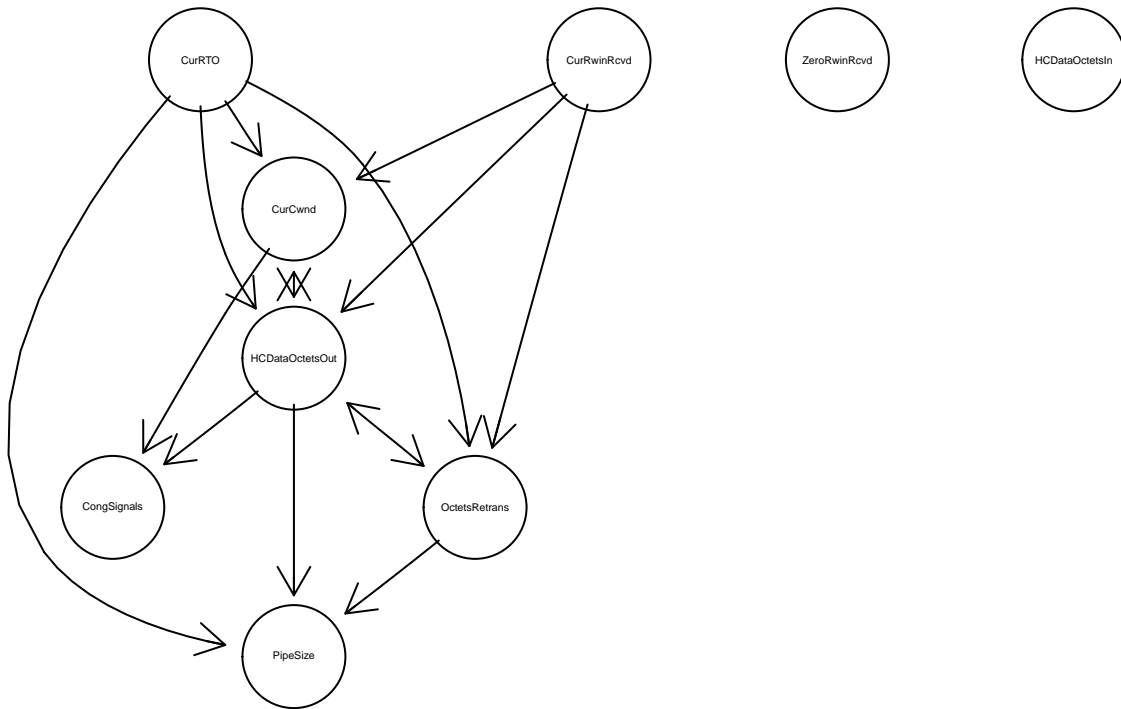
**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 62
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2a479c7e0f233ab0f7b2c62eecebab4a91677de78d54579e73108203"
```

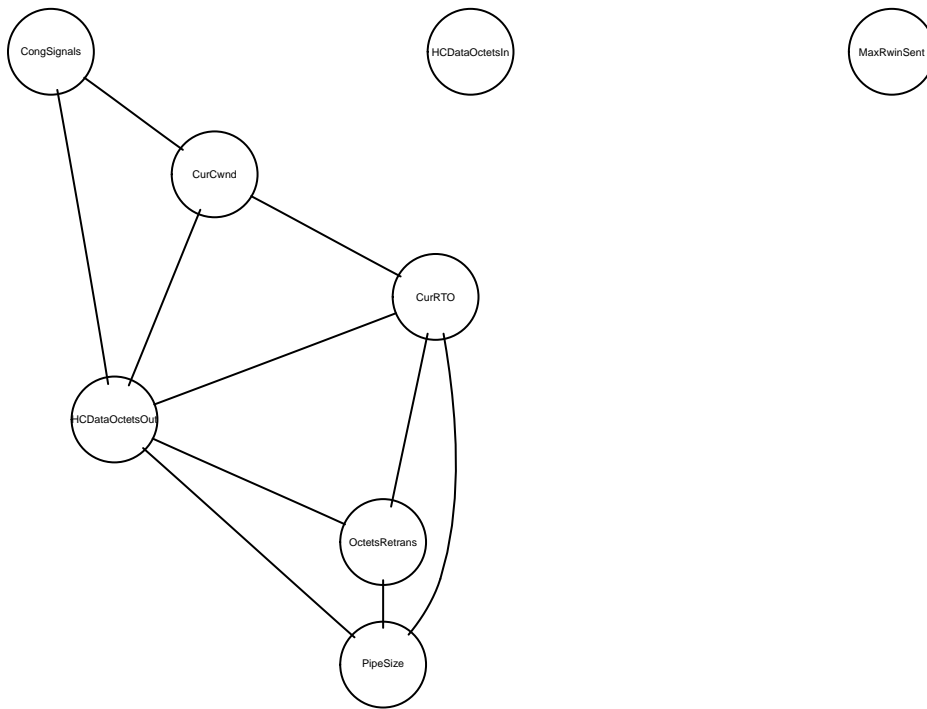
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 63
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2aad9bdb174b0a6389da35023a88336428693dde05edbc951dc37e4c"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 64
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2af15ce502c19396d52b249287de49a1d082e70010a4575dc4cbdde8"
```

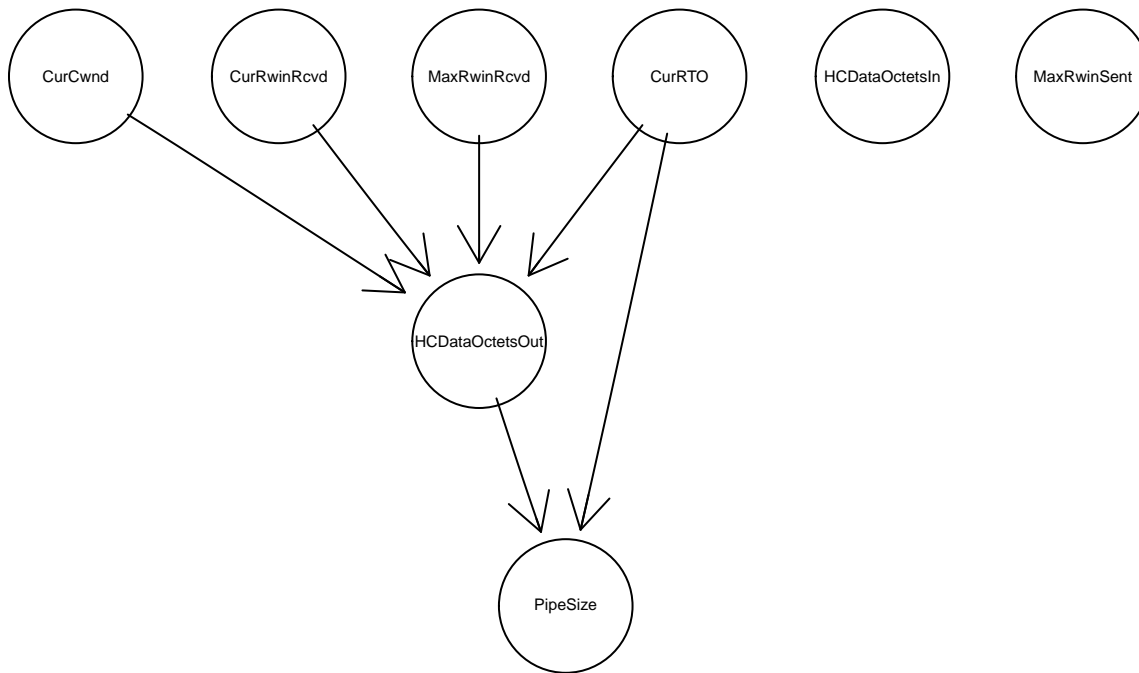
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 65
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2b8d7d0d7b389eae839b7f3e06db03a314be5245e1a6bcb8165de7677"
## [1] 66
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2da901732cc756ac1c9d230f72b333d37bab54bf8cae73256f0dded8"
## [1] 67
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2dd70e6057090243b96a2d1f716e93f0fe71e360d9c122192a2dc975"
## [1] 68
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2f2d838e936cf73629c776e2c83ba5d933965055be7b08aa11a11f8a"
```

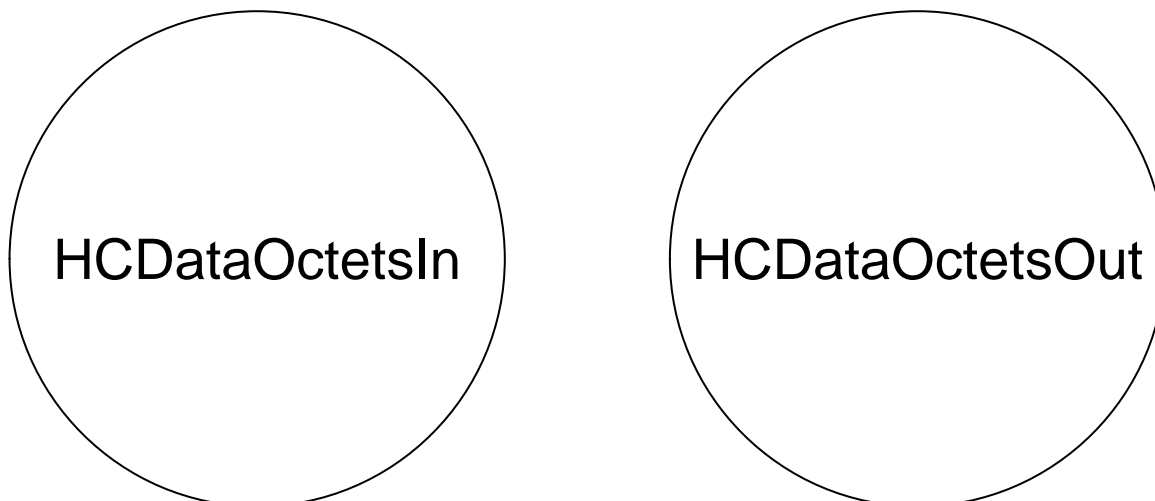


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



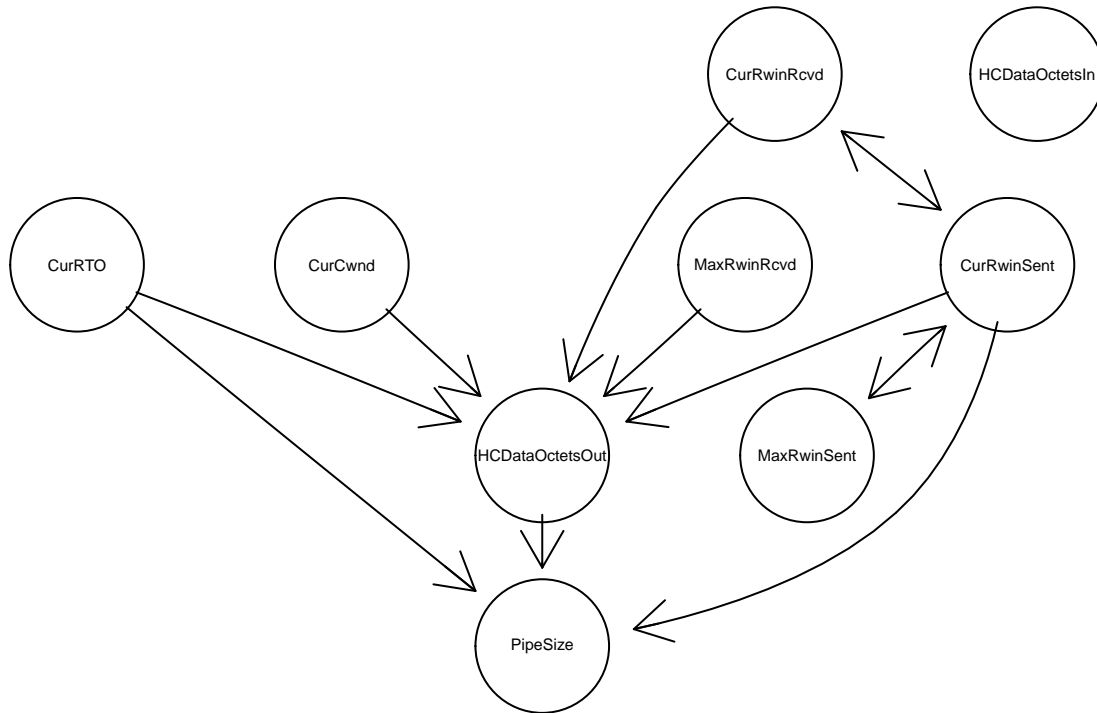
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 69
## [1] "/Users/aaronkruchten/Desktop/PCA flows/2f59d1300330970c29fa683492125b36d32593dfdc3d5a05c1b40e39"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



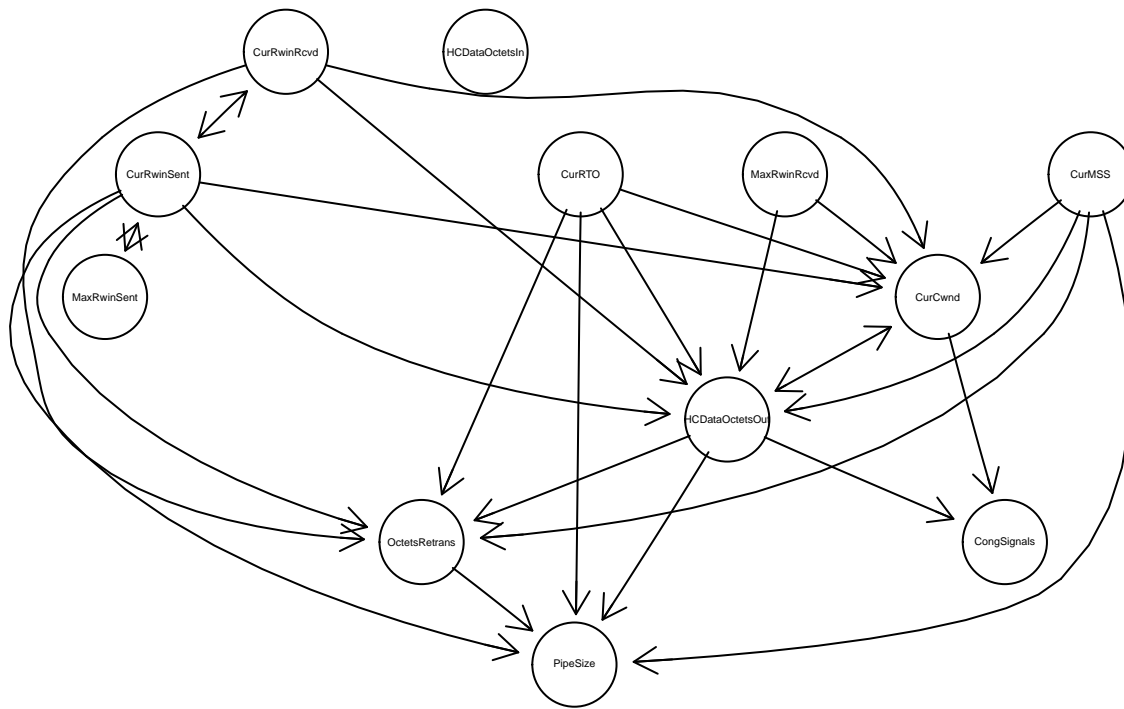
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 70
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3045967c94931ce24f7a772dd264aa2e9c8c579c11f92be07d592def"
## [1] 71
## [1] "/Users/aaronkruchten/Desktop/PCA flows/30af9768af59542bb7ac3439fddcf561f761e9d69137d35c11430417"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



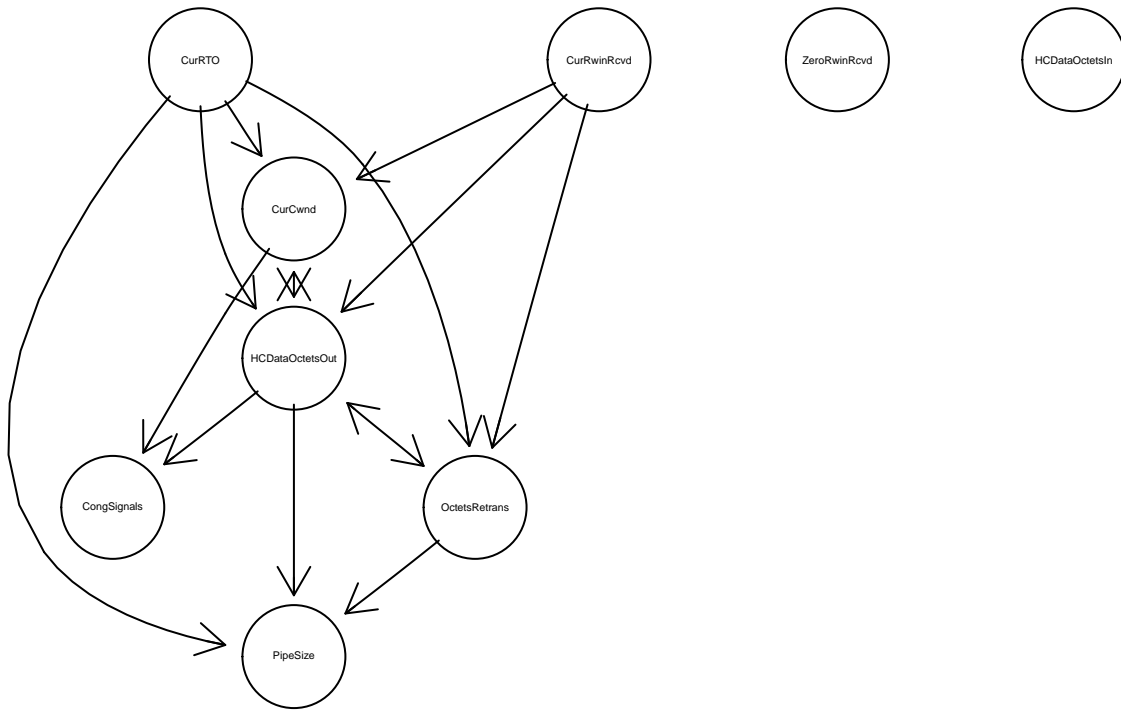
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 72
## [1] "/Users/aaronkruchten/Desktop/PCA flows/319a18670afdb0b7cd4223e5ac98e4711b3040c221f929120c48eda"
## [1] 73
## [1] "/Users/aaronkruchten/Desktop/PCA flows/324e56c5be80b27342619545416e7b04caf8d5f827fbc560437888e3"
## [1] 74
## [1] "/Users/aaronkruchten/Desktop/PCA flows/333f2dc421769ba65058922345fbc04d54d0a202af35bbc15e356e71"
## [1] 75
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3488503e176221a97e92d4e26ddfad518a991579ca4acfa7b32608c5"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 76
## [1] "/Users/aaronkruchten/Desktop/PCA flows/34aae4d0f0a5d575c6d4da9ccc543135553f82f5e31a0f2e3fa622d9"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

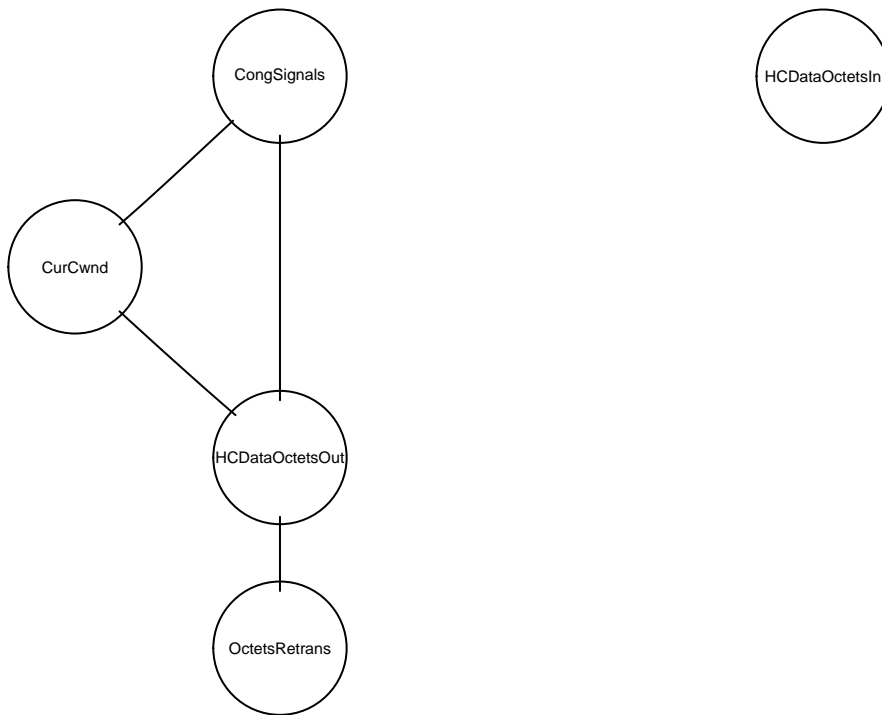


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 77
## [1] "/Users/aaronkruchten/Desktop/PCA flows/35244bcbbc5b193976400ddb2d16f826c50871495d69f09d1e1deb95"
## [1] 78
## [1] "/Users/aaronkruchten/Desktop/PCA flows/354780f66e2a3a8ecc0cd309aaab9aae978c53b8774020a3f37801af"
## [1] 79
## [1] "/Users/aaronkruchten/Desktop/PCA flows/35fad9b058461413f97a9f67956d69d6b1a9f29008ce158e9adab787"

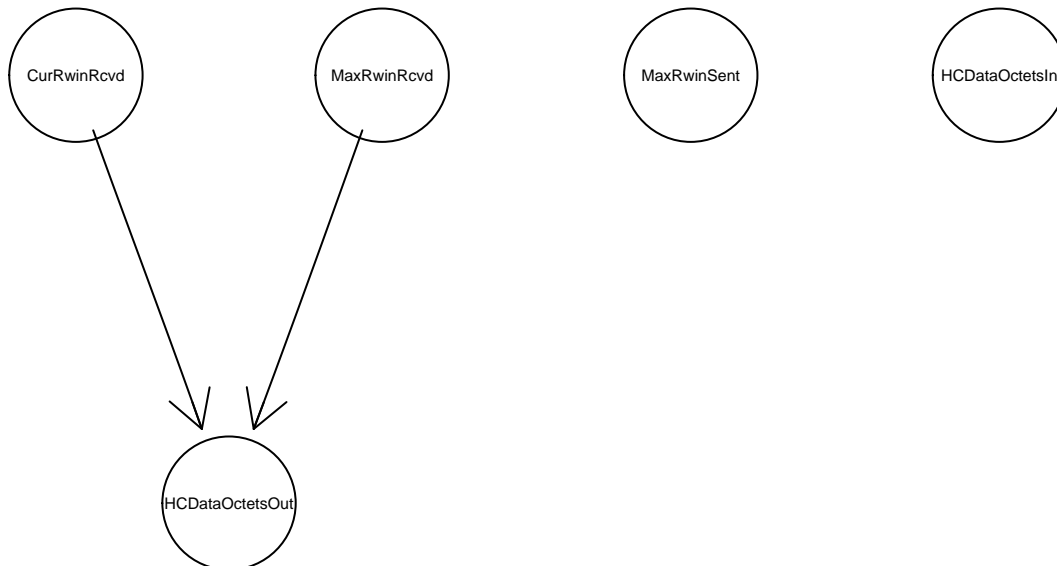
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
   labels = colnames(usable_frame))
```



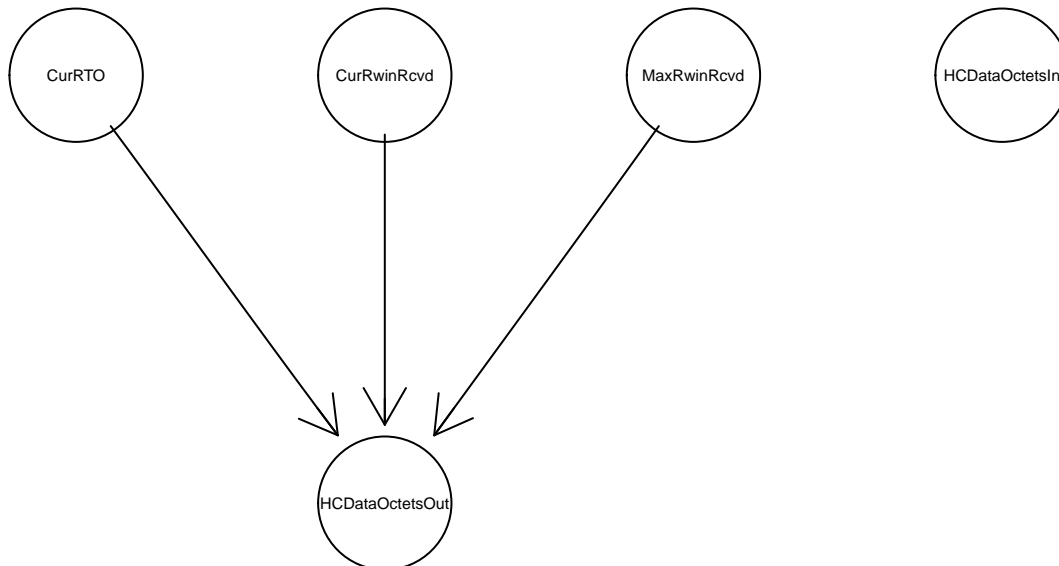
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] 80  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/363aa8f111665a302d1b1de5ba2b428fd9645701b906460b03e764eb"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



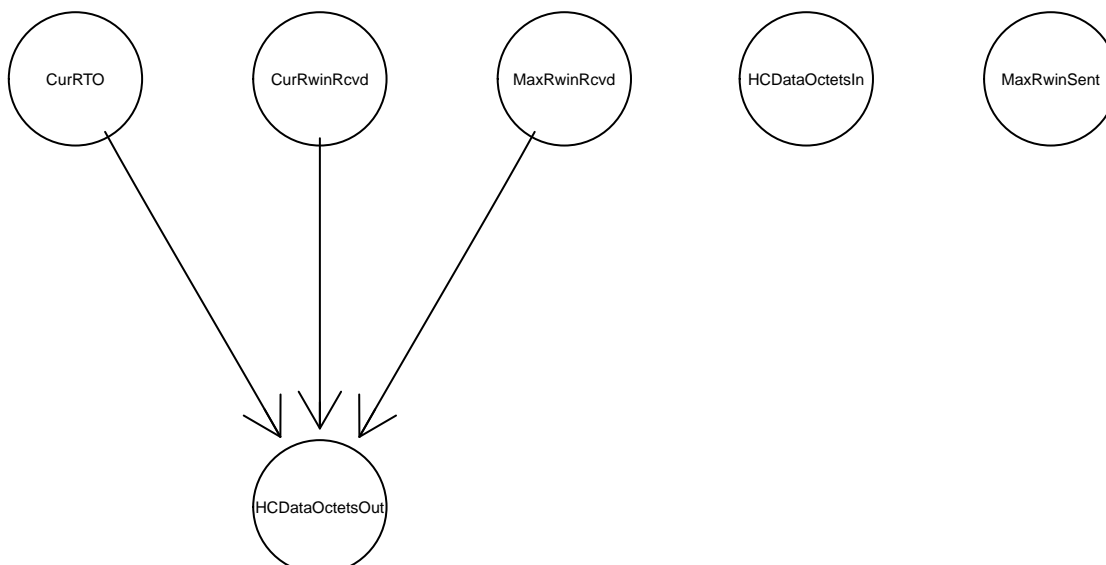
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 81
## [1] "/Users/aaronkruchten/Desktop/PCA flows/36d0d94e3a14d23c439ce0f880853b427148afb996f5225cce6c70bd"
## [1] 82
## [1] "/Users/aaronkruchten/Desktop/PCA flows/378ac0be34b0cef7558fc0ee47d6340b8080a26c717d13d51c74422d"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



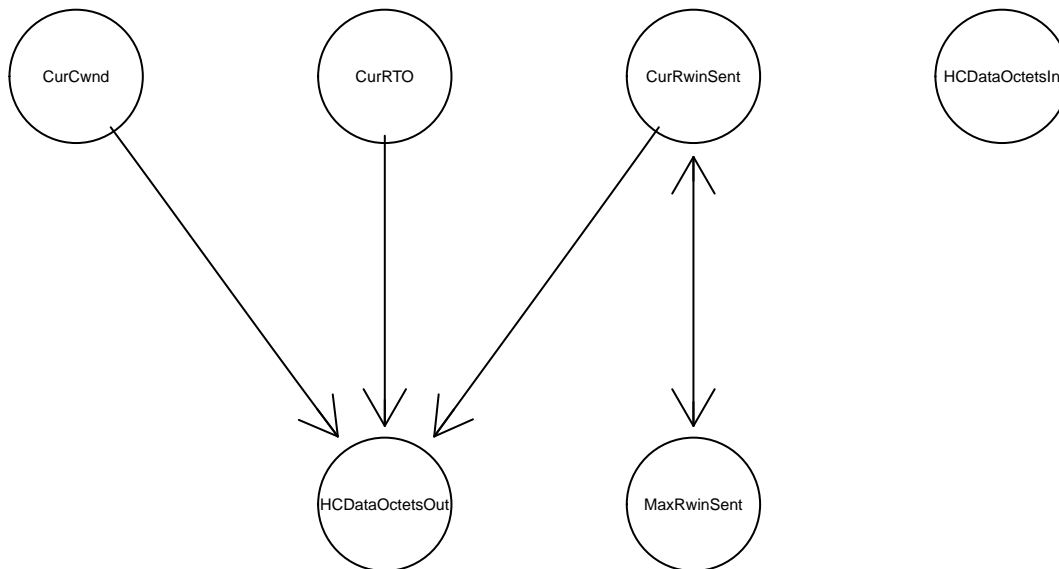
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 83
## [1] "/Users/aaronkruchten/Desktop/PCA flows/38032f4b598fa73ae6f192714e12ee7858e7b2b8f45b7d964a0c9856"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 84
## [1] "/Users/aaronkruchten/Desktop/PCA flows/392d32dfbc8bb0a625d2cf8f0621cafa3514204517f1f239f1bbe7c0"
```

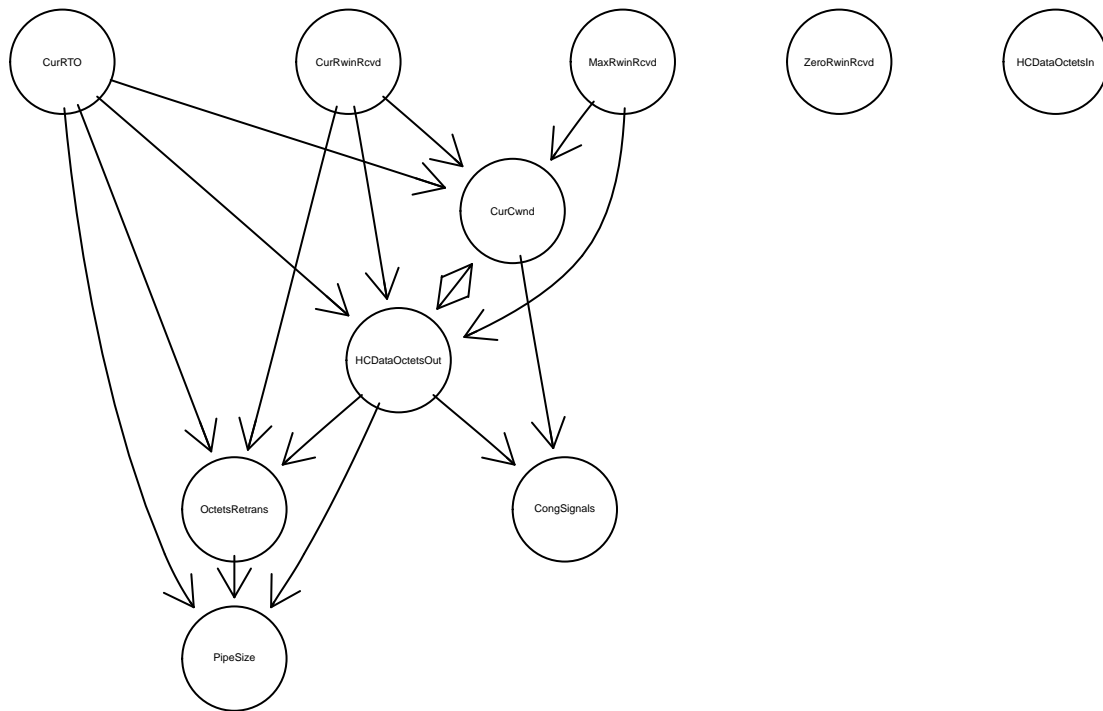
**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 85
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3962db33080baee9f4e2209196f7a37caed2f4c522762a60e6ec1bd0"
```

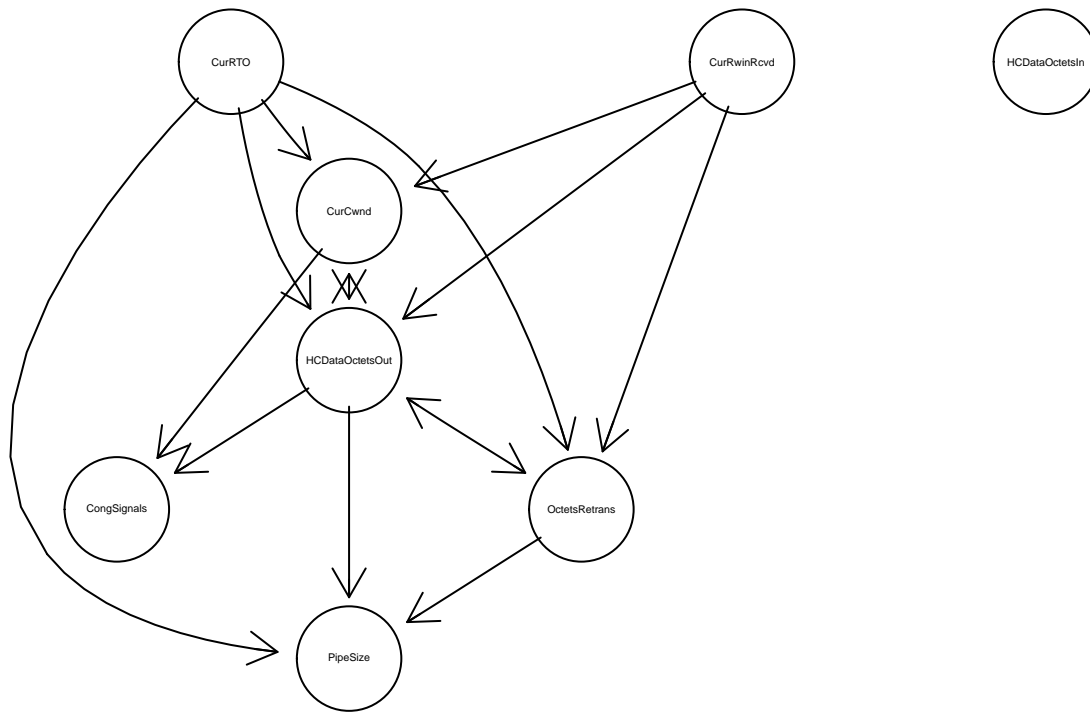


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



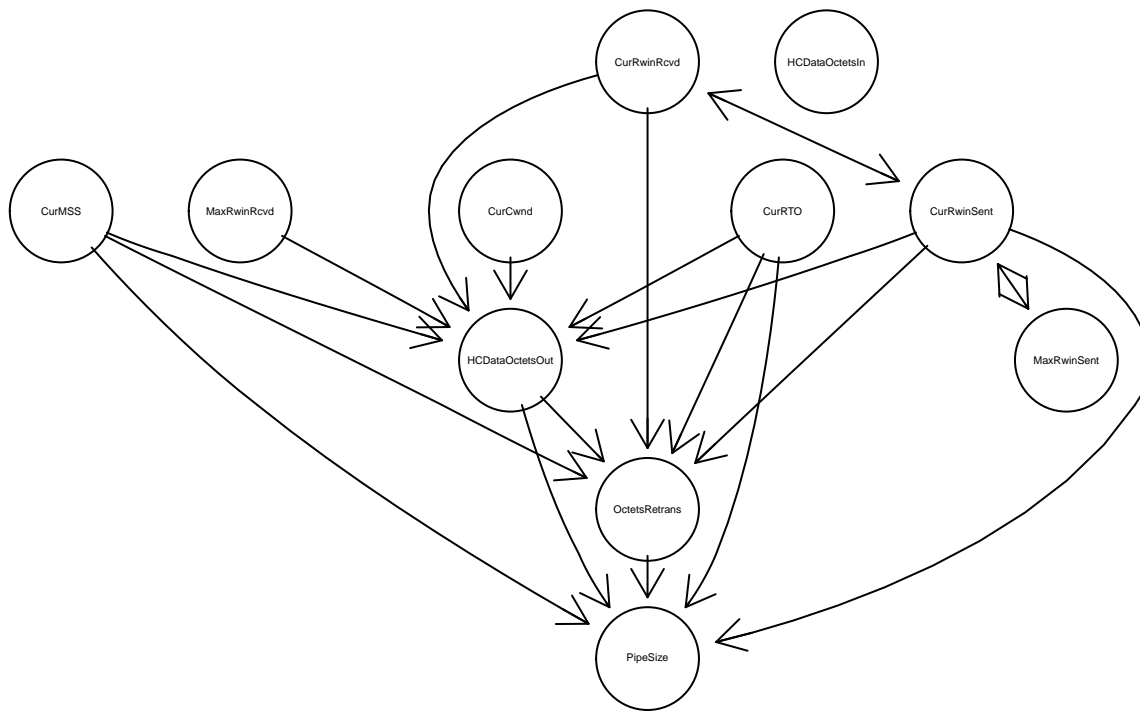
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 86
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3a415194f08259643b1bbd75fc086d03fbafc10267d74efc72a9ae09"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



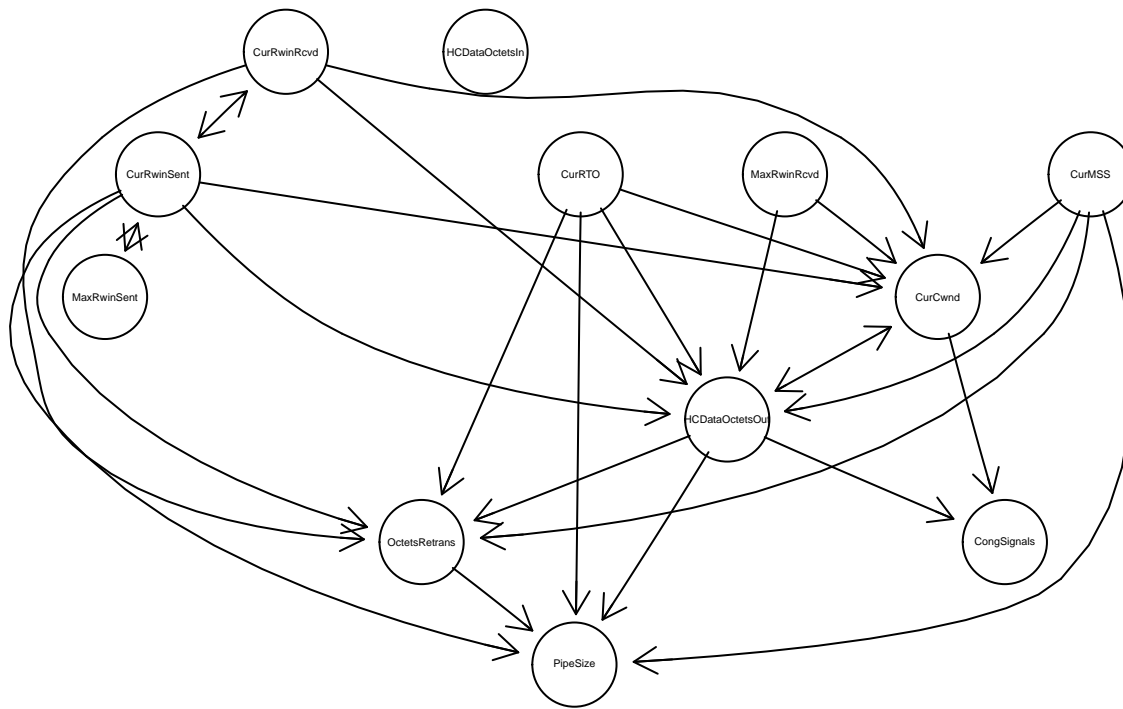
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 87
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3a63adbbf20bc4e31124b17246d2758b18afdbf92f5091261eac3590"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



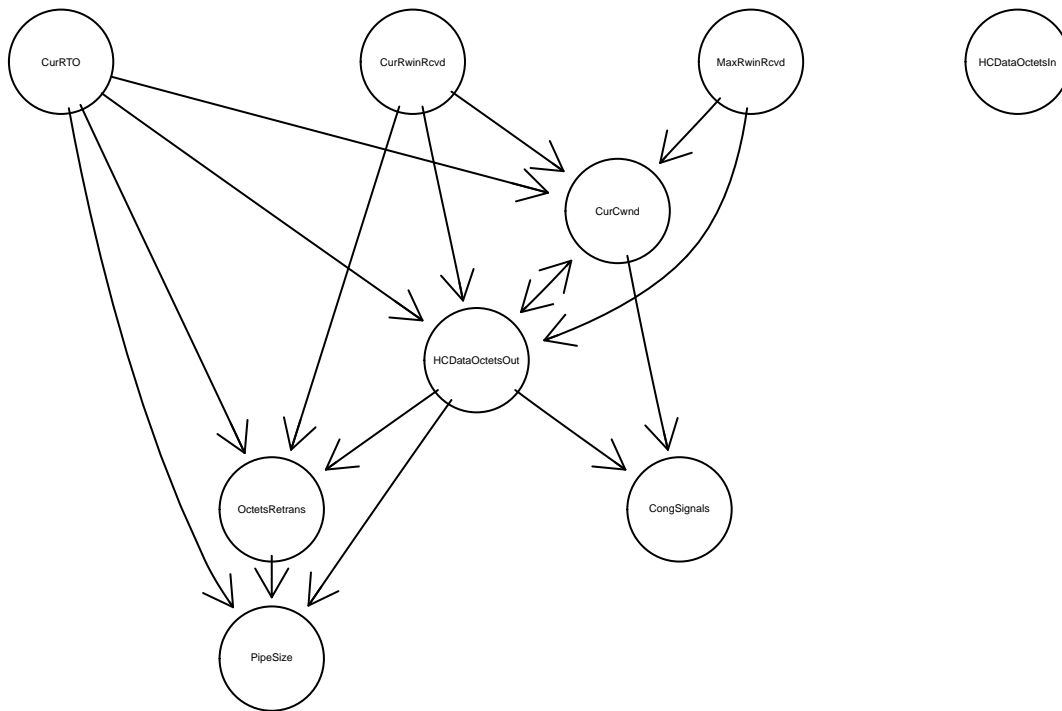
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 88
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3ae80dd26019117a2032bf097c54a64b834014acb0b8b241fe510de9"
## [1] 89
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3b7cdd25af8f9665636f54351e89367448a95dc7d3e97914081a8b3c"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



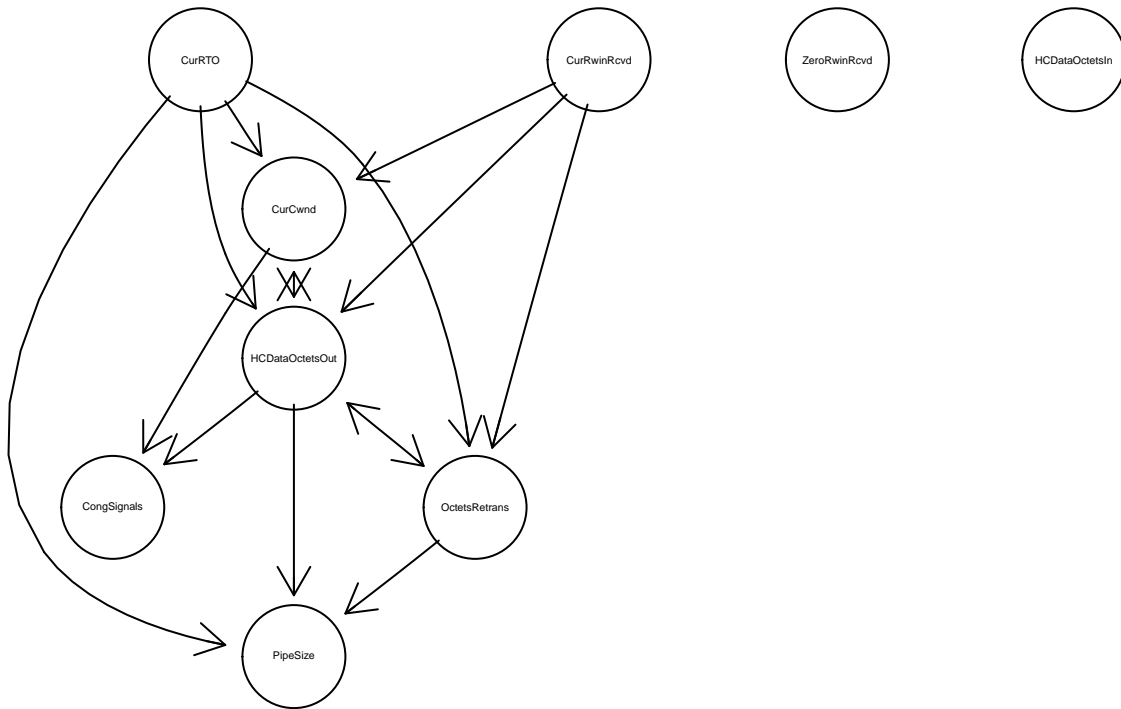
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 90
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3bf021602efb2916719cd739b0816109ea2a7c53f679e1df40ac5d44"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 91
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3d7d13a3874d4829c5acfb682986b5110023f28bea0ec5661ea12606"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

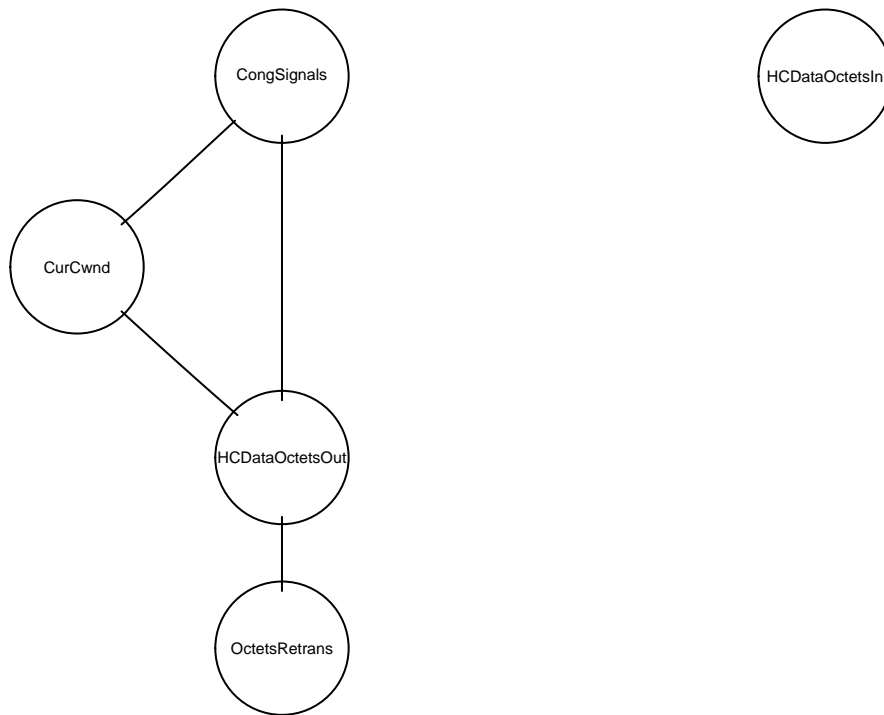


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 92
## [1] "/Users/aaronkruchten/Desktop/PCA flows/3ef7080020975369843b2df4ab95eb069e35edd14ac2ab5a2e76c692"

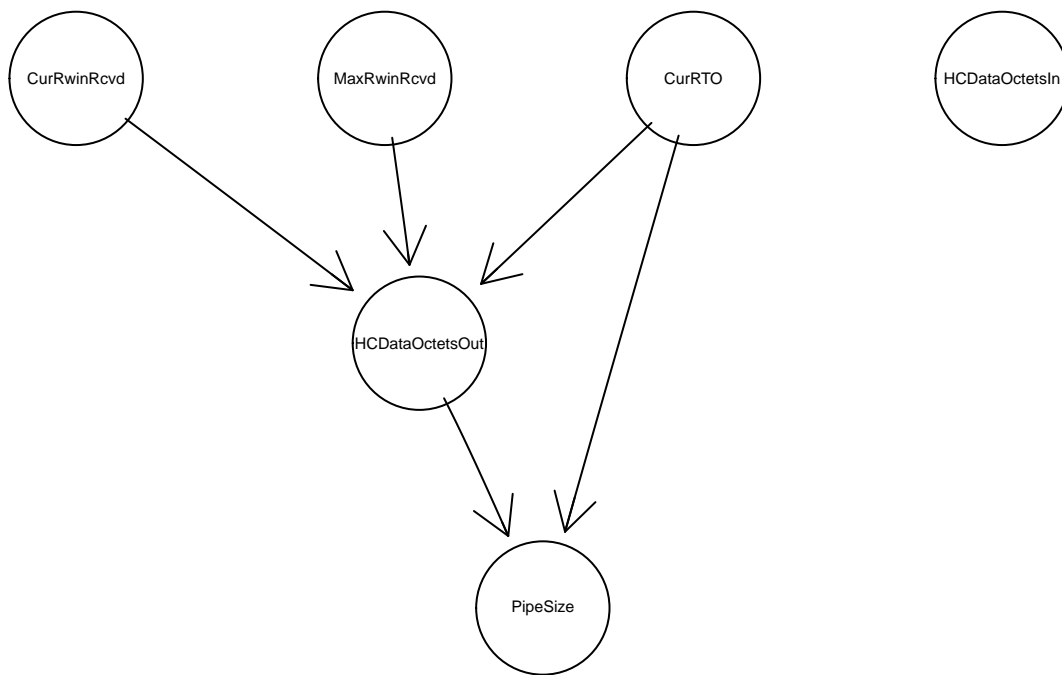
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 93
## [1] "/Users/aaronkruchten/Desktop/PCA flows/407b5779ba95e4dc80f1bb46f8a04aa1476f6fac97c54f2cf73c7c86"
## [1] 94
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4140a55ebf44e2b9c581f4e226251242ce796afa55378b0334c69af5"
```

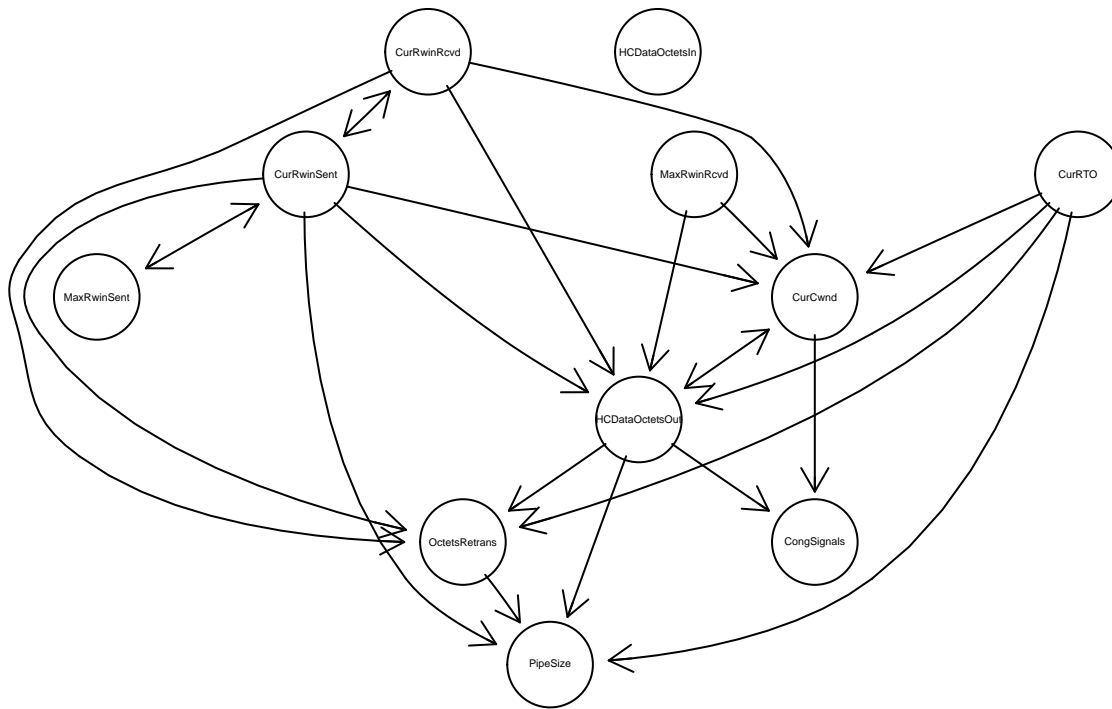
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 95
## [1] "/Users/aaronkruchten/Desktop/PCA flows/417c1ae1dc55a0853bccdd5f50025b9f1262d11f5763218f45a166232"
```

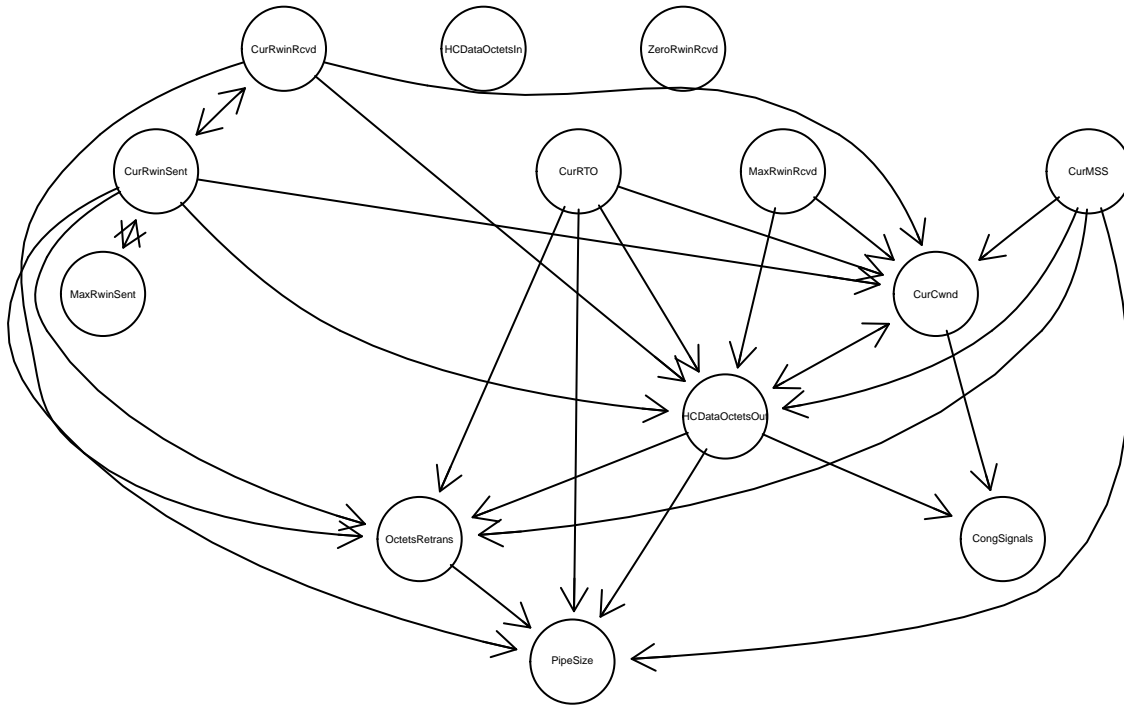


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



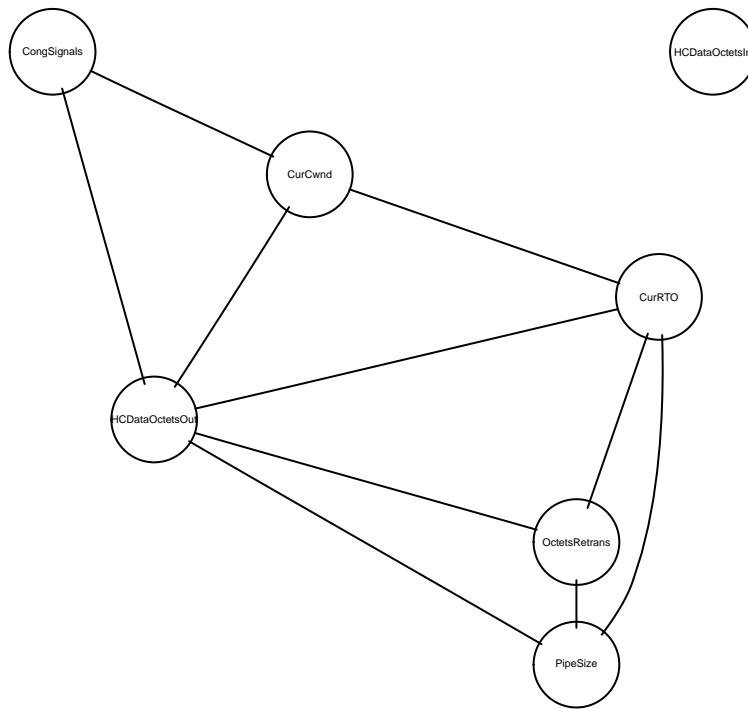
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 96
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4232273d7c7df7116a997fce91e7470866c1ce794fe16943a07ce0d9"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



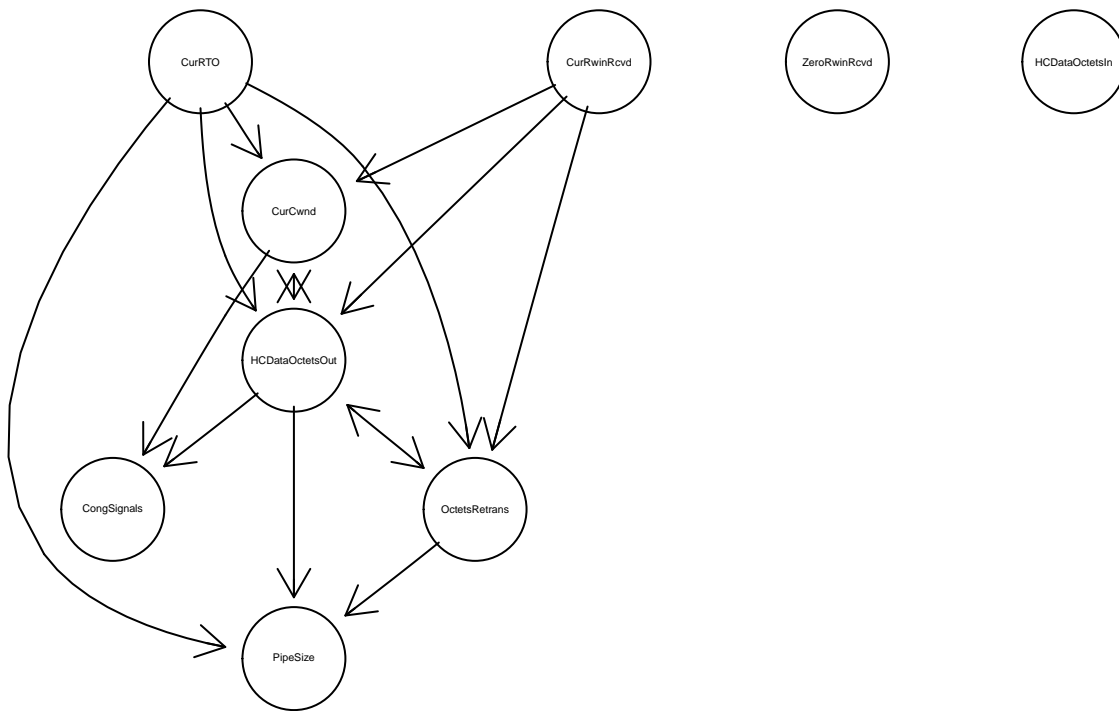
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 97
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4310e5595dd5de9bdc85eb46e6b4321a2f31fe44207676e5b83bda4b"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 98
## [1] "/Users/aaronkruchten/Desktop/PCA flows/440cdca33c0bd3eb3c4f201f015cfda654ae686bb814620e4bf6cc1a"
## [1] 99
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4602ed362d3a7091b06788ce8ebc0361c4c08882c9a24bd52249c09b"
## [1] 100
## [1] "/Users/aaronkruchten/Desktop/PCA flows/47224386d47034319957cdfce8a6d16bba2477d06fac34fe99fcec9d"
## [1] 101
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4733696bd35ff30d68d81f8097c897f16c331026683ad51a33c988f6"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

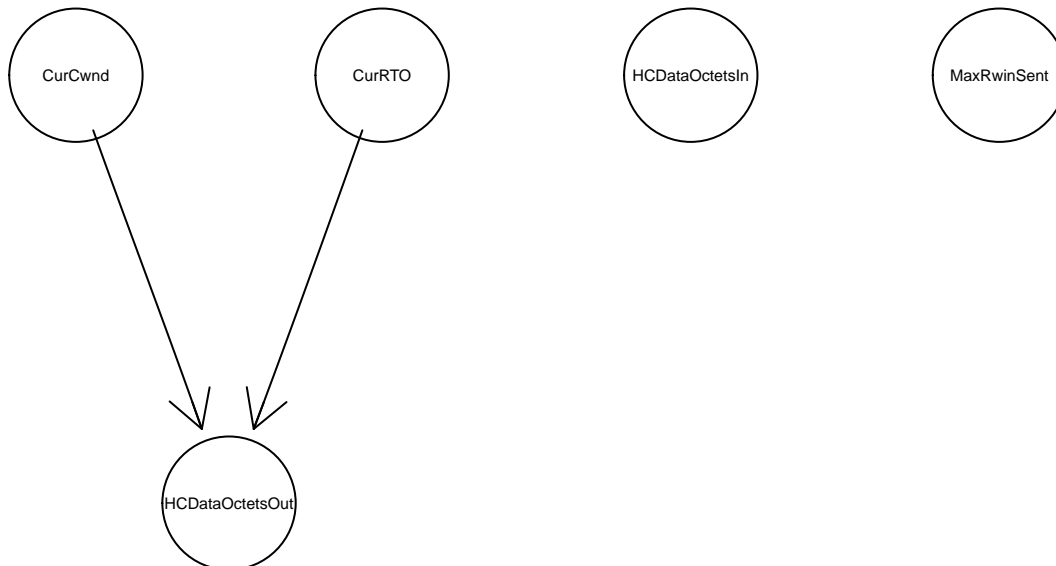


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 102
## [1] "/Users/aaronkruchten/Desktop/PCA flows/486a4e865f573ce02d0b80fc2815e1c81a5bf9fd3c2d795c3aafe632"
## [1] 103
## [1] "/Users/aaronkruchten/Desktop/PCA flows/488b90efc55ca01c771bba1bd1c5d7e352a8151e0c7f286987a879ad"

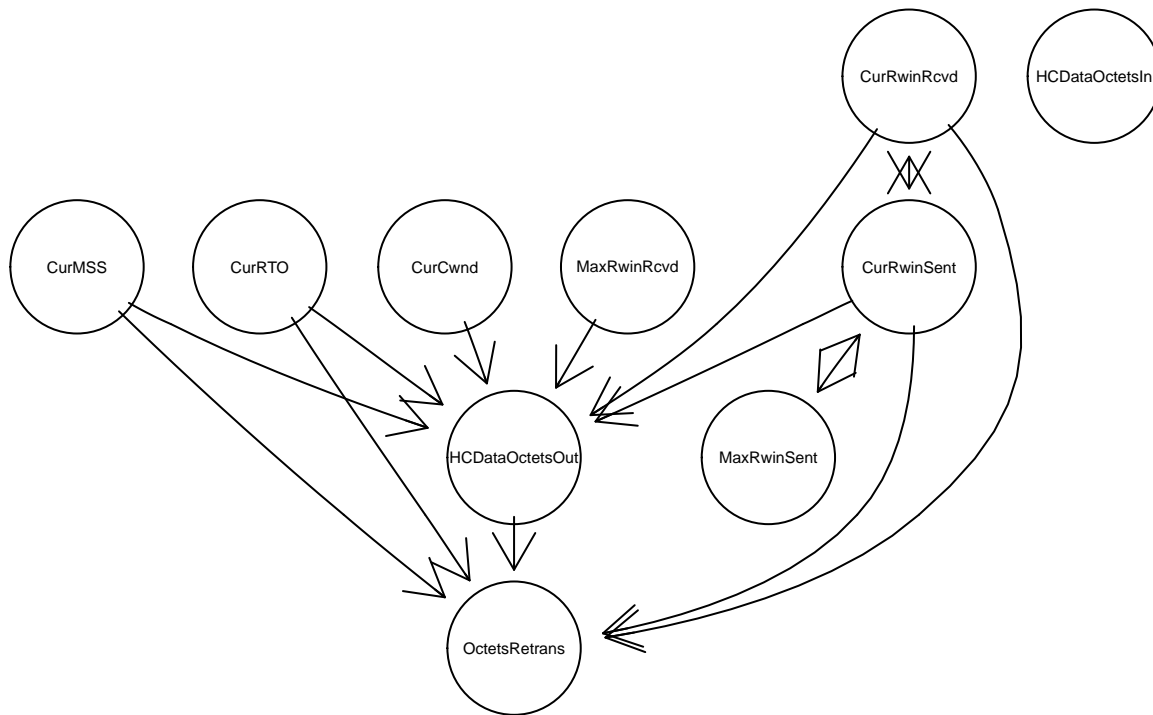
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



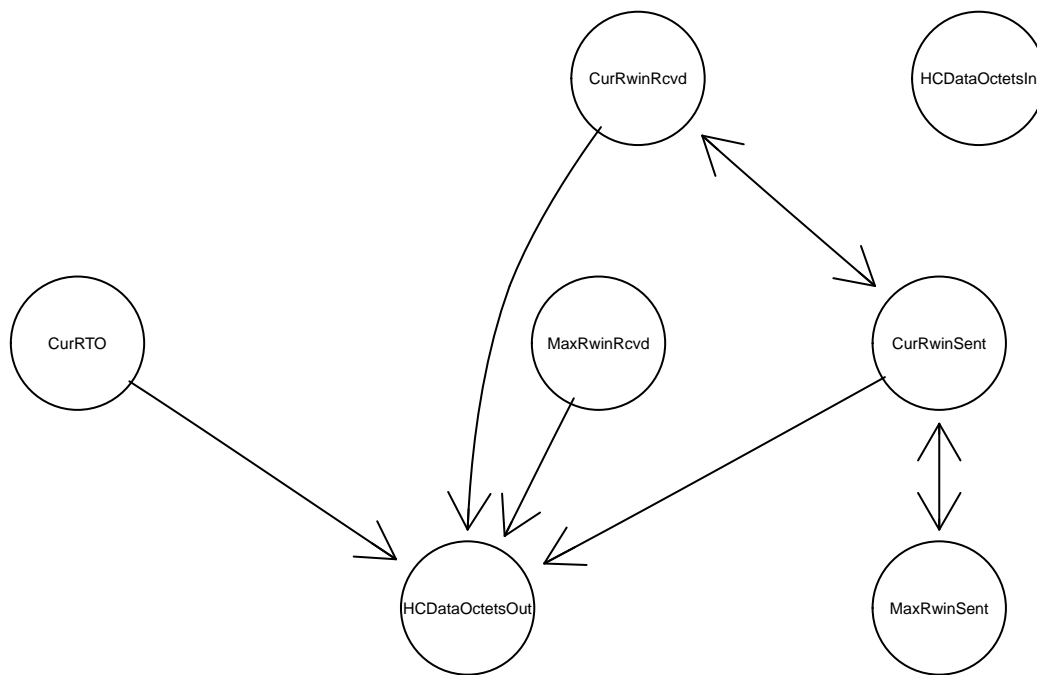
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 104
## [1] "/Users/aaronkruchten/Desktop/PCA flows/490ab0b7978297cc6888694e9449e96f2ac8ce2d87fddfe7ed29bdac"
## [1] 105
## [1] "/Users/aaronkruchten/Desktop/PCA flows/491e2ac5d575aef872205d66dfcd896c22a440e9f30144eef860dcb3"
## [1] 106
## [1] "/Users/aaronkruchten/Desktop/PCA flows/496351a630d25bc0eec8ae2d594f6d052e5028efd3e543d056981048"
## [1] 107
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4989a3973a626bb107336d7927d353efa621f98b8c163ad69f3ad9fc"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



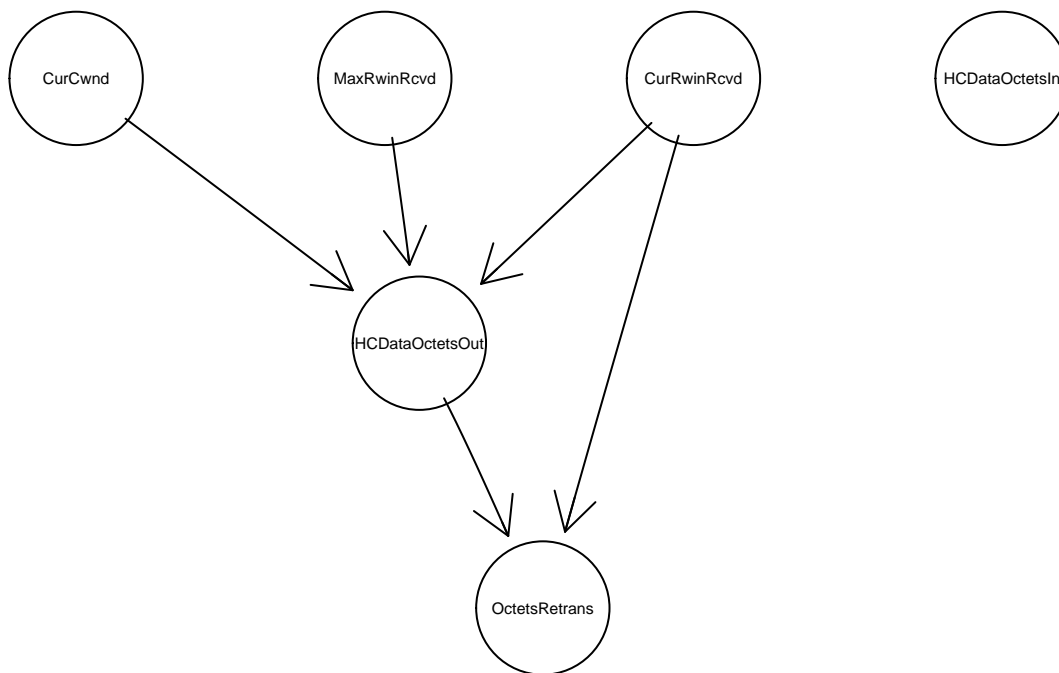
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 108
## [1] "/Users/aaronkruchten/Desktop/PCA flows/49a1f3499130db0d426f167669a6c3e11c71f0a747a85e248dc139a1"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



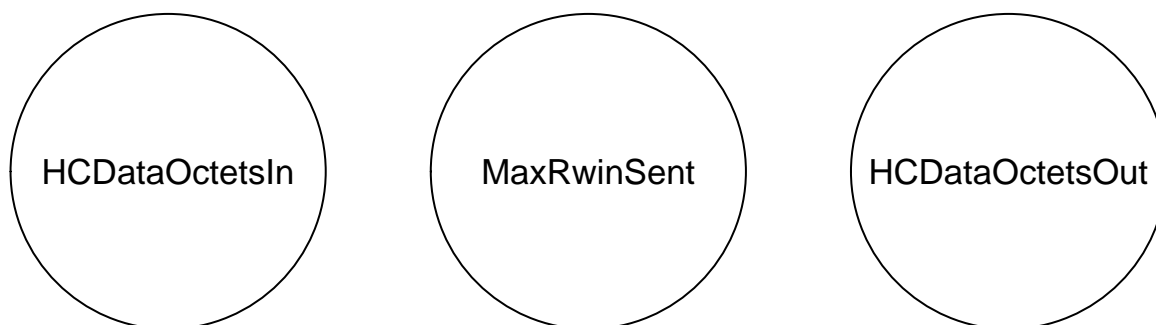
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 109
## [1] "/Users/aaronkruchten/Desktop/PCA flows/49d7d3dcdcfe0bb6f2f8aa04acd15bb33093c09c3e08c647383f11fb"
## [1] 110
## [1] "/Users/aaronkruchten/Desktop/PCA flows/49f5021f6d1f14315db3e50ccfec9b93d583d7f011e33eed7184913d"
## [1] 111
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4a9634ea626becf398bf00cf13dc504f60176216fb32685758bb1409"
## [1] 112
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4b0c9d469095742442c3ebb4edd767c79acb65a00b40f6cfc4d6f78f"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 113
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4b878ea8cad2534bb0b45fe35a33439d3558d25de21be635361ca124"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```

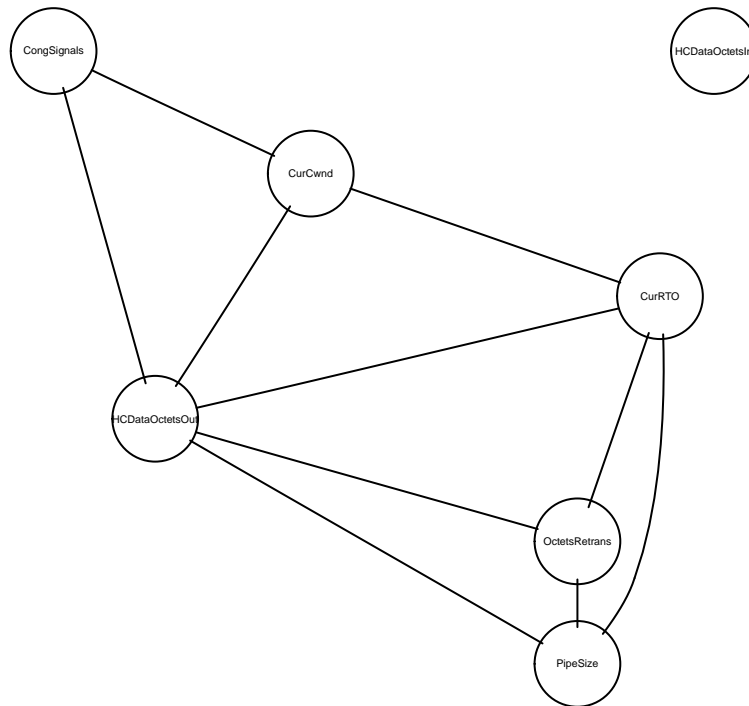


```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```



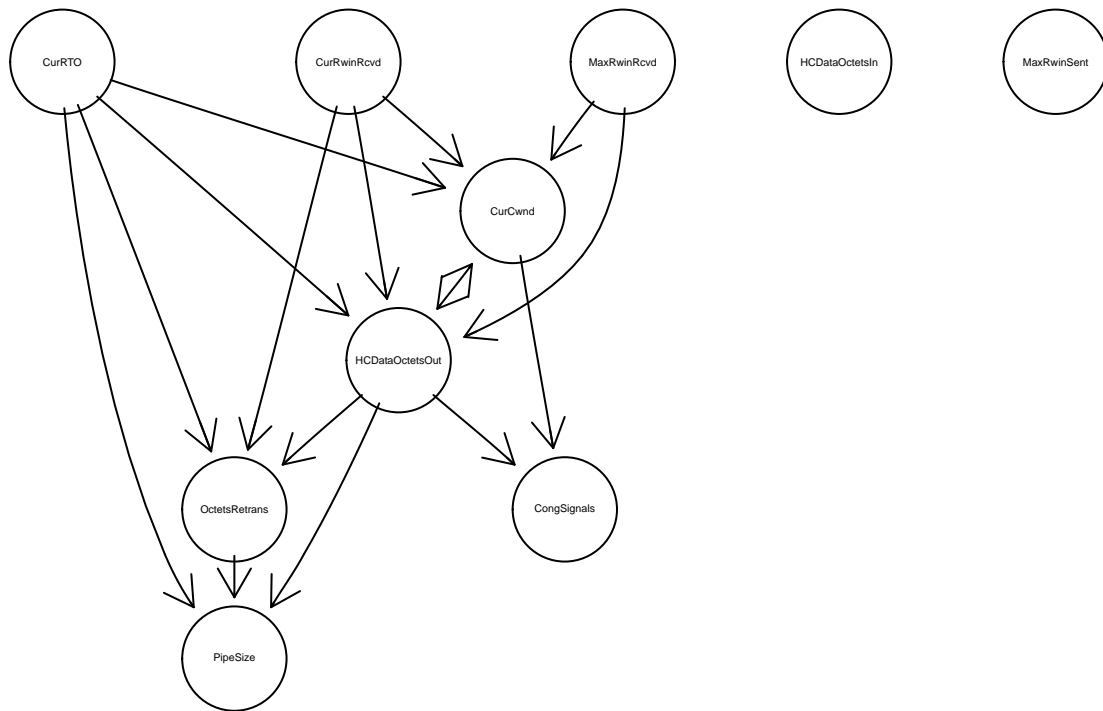
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 114
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4d155aca4e3d688fca560bcf1d164f90ad67534d36c2569fb8fb0c53"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



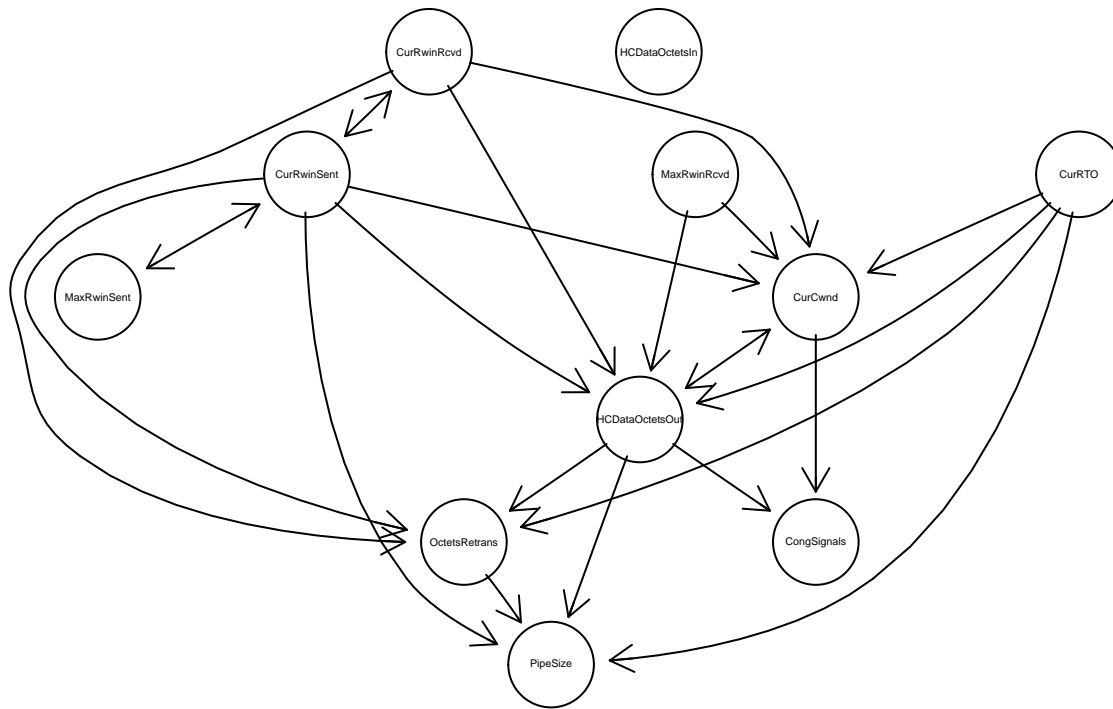
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 115
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4daa2baaff7c753569c9beee8f479cea760db34c68a6c71e7ff5207f"
## [1] 116
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4de38a174d4a974eb7e03094ff84a84446576246cbb176e96a27d329"
## [1] 117
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4f6c9d6dd516a30c0199fc7300a3aad5040f00abf8e12866fed6e4c3"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



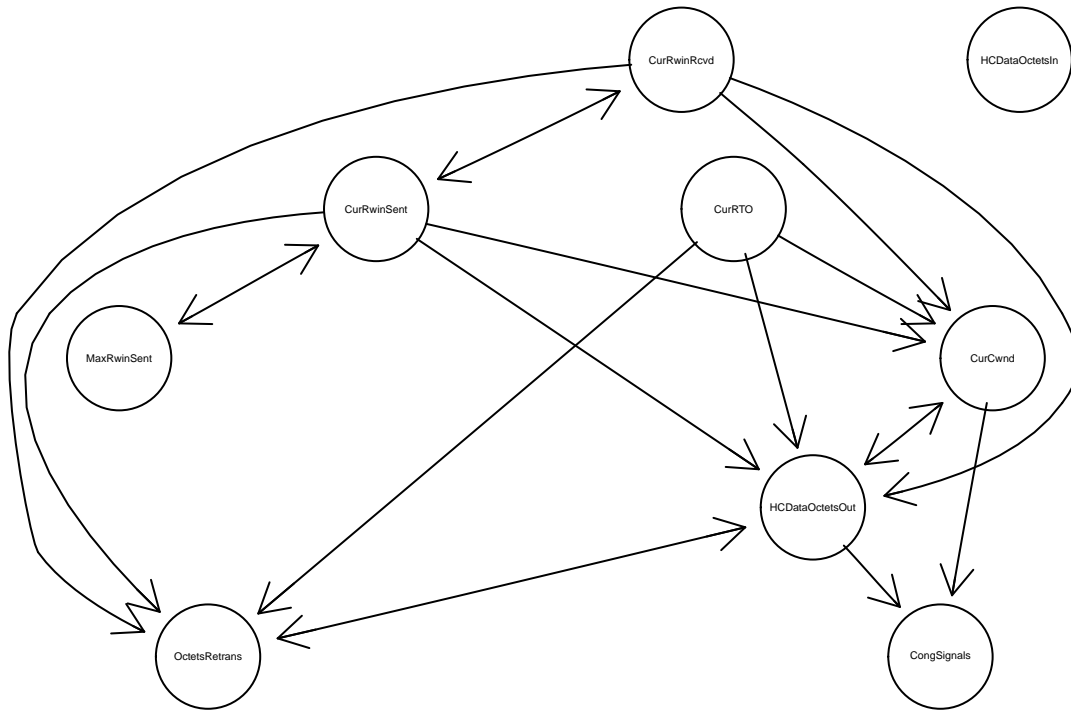
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 118
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4fd7ad74e06e391936a255d8d0368a0d7e134b7b8d7253d88fd64907"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



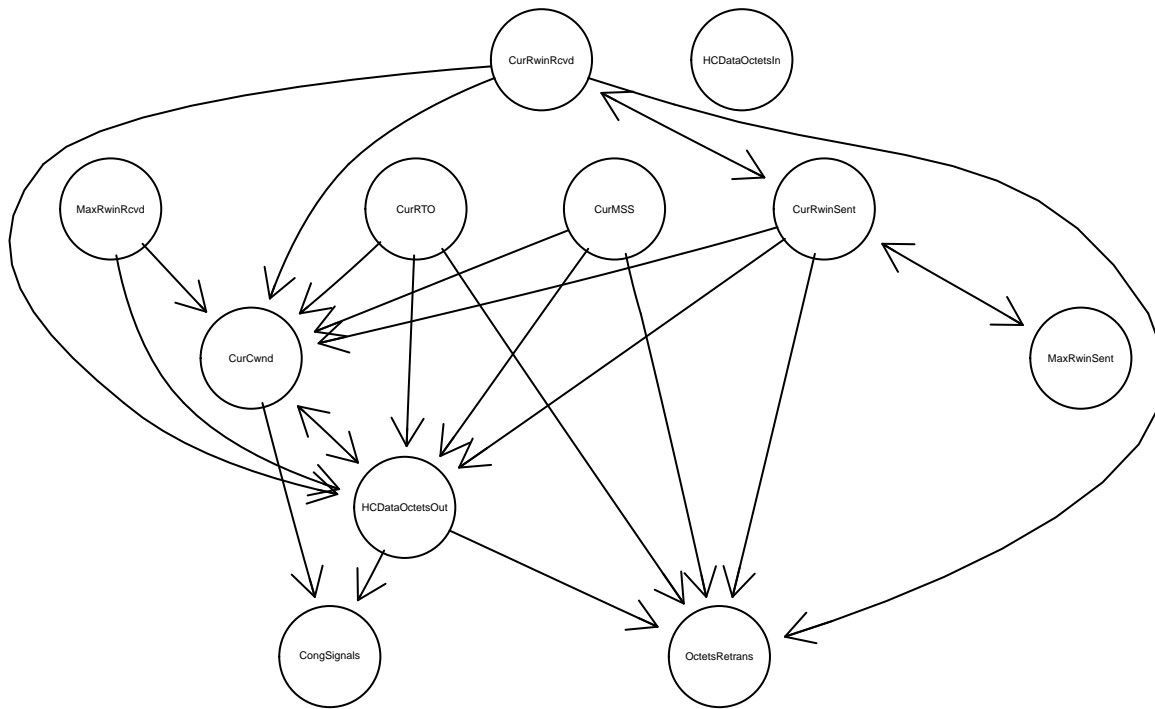
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 119
## [1] "/Users/aaronkruchten/Desktop/PCA flows/4fe451e70fd1f80342951e26edd34f2cf44204ba15f885ee863b597f"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



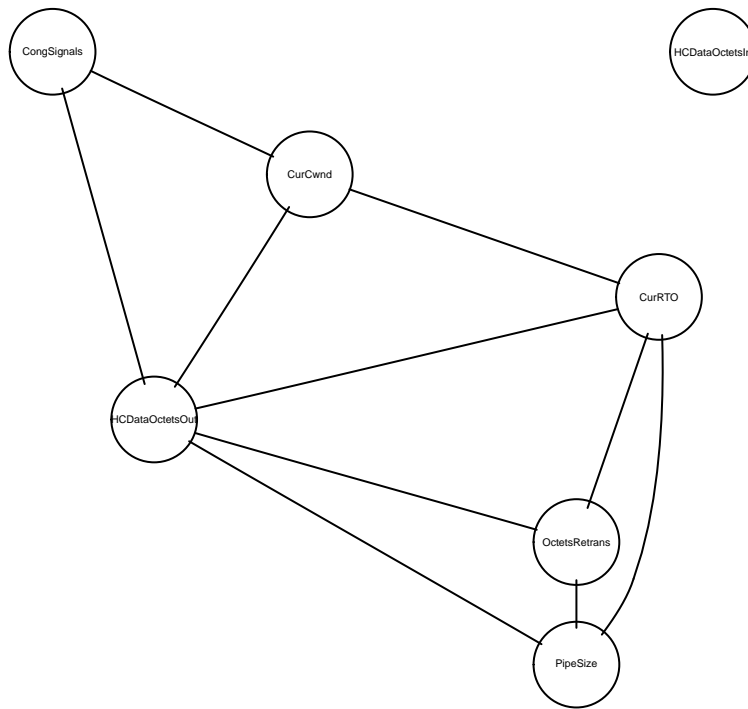
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 120
## [1] "/Users/aaronkruchten/Desktop/PCA flows/502802da7ea2bcff96ce94a5316b14a069bd27d95a2c25e6c99ceae3"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



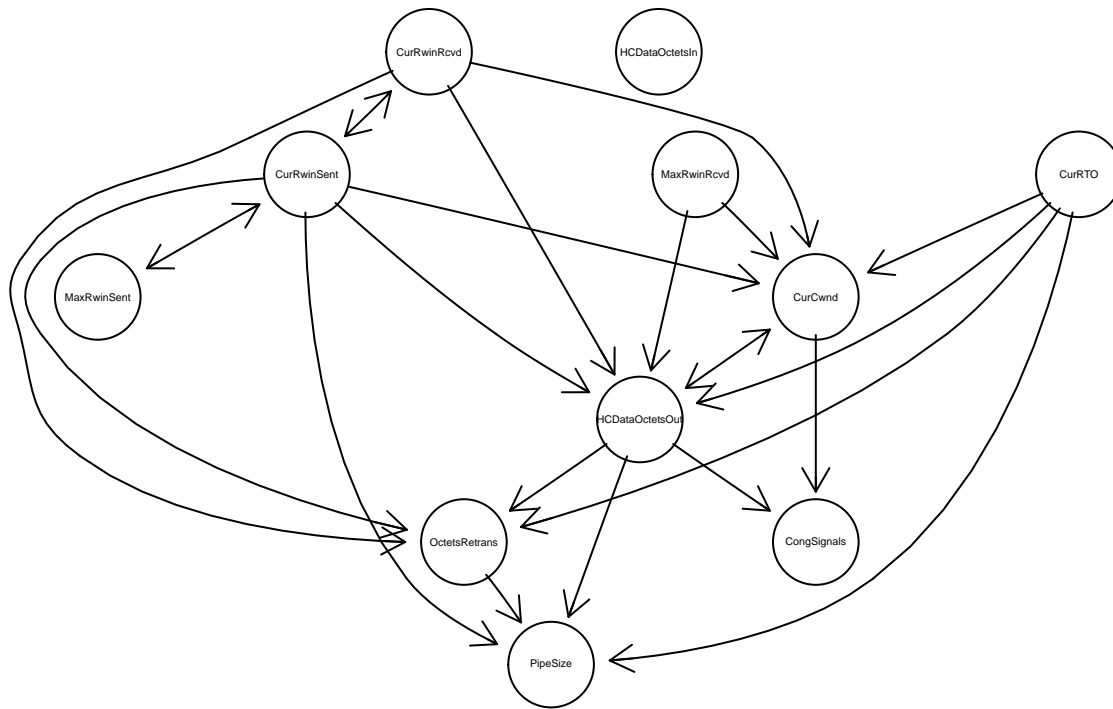
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 121
## [1] "/Users/aaronkruchten/Desktop/PCA flows/5070af402d452073ccec6abeeb254911141910851cf3fd755e262c02"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



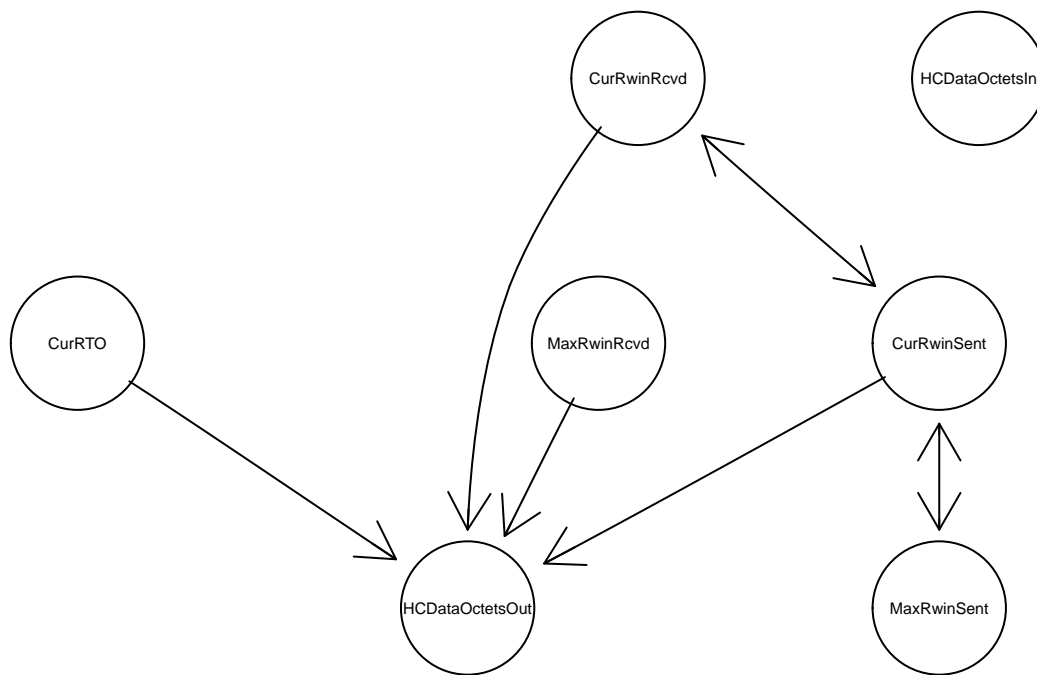
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 122
## [1] "/Users/aaronkruchten/Desktop/PCA flows/5131d303ea19ef78f36bce659a4a1d12433152bd4e12bc9a43e34930"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



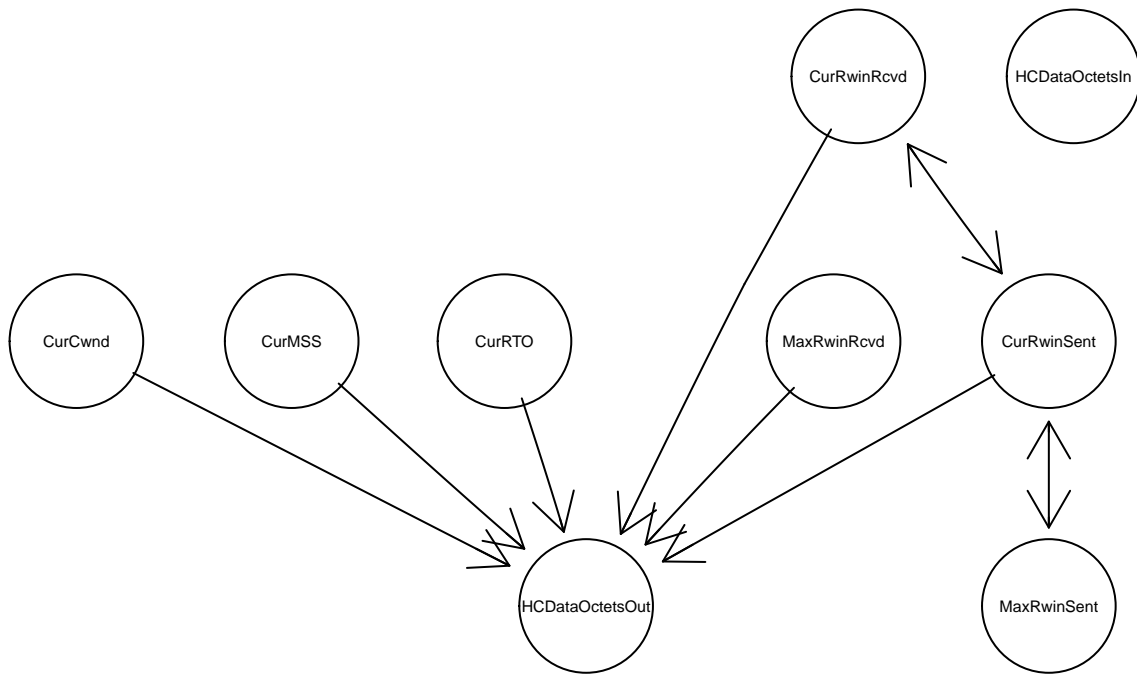
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 123
## [1] "/Users/aaronkruchten/Desktop/PCA flows/514641c698436f21edbc751d7dd6f690f13e177e8184655266dc787c"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 124
## [1] "/Users/aaronkruchten/Desktop/PCA flows/53600cbd7aa23957e23c50fe42c5151c9c75acda077d04ca1ac3b13b"
```


**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

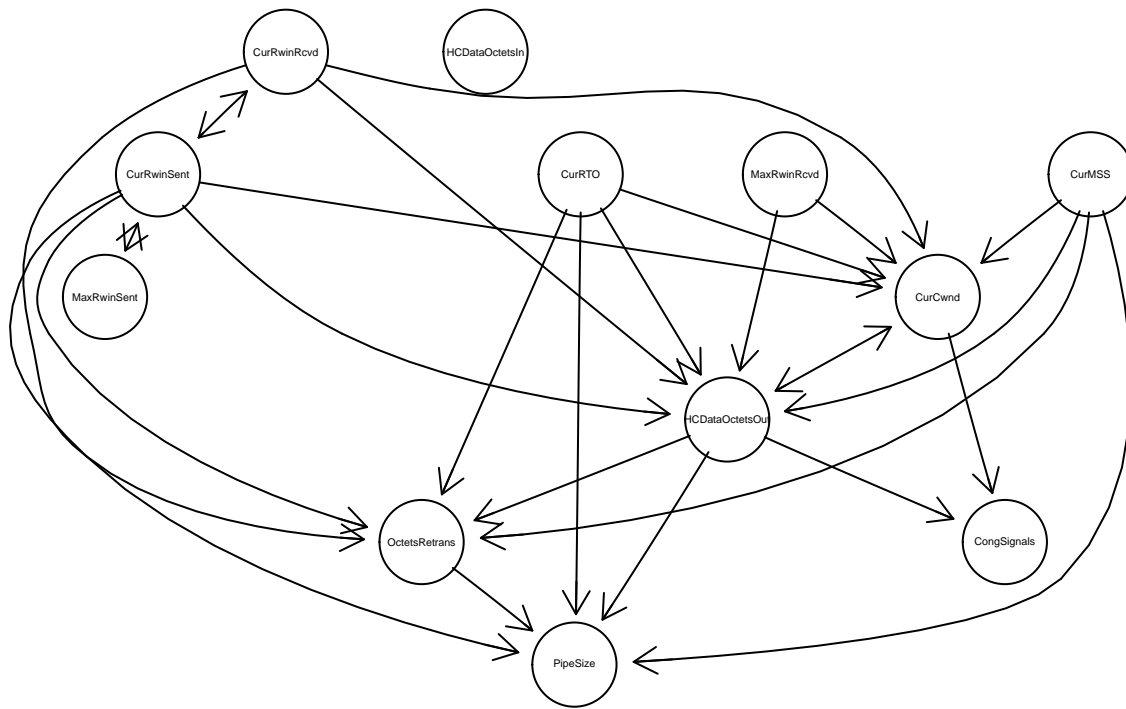


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 125
## [1] "/Users/aaronkruchten/Desktop/PCA flows/53ba43c6e8d536f21abb5cdfc76fe9edf175feac8d8d57d244a19f92"
## [1] 126
## [1] "/Users/aaronkruchten/Desktop/PCA flows/5405120345accfdfed34871df577152c96033e8e22686d773d92d421"
## [1] 127
## [1] "/Users/aaronkruchten/Desktop/PCA flows/544750ef4d53873776988dccc9e998853711d7529288a89c74fce165"
## [1] 128
## [1] "/Users/aaronkruchten/Desktop/PCA flows/54c4e9fc7d88e40f29dbff8756a12a001894266bb9cc34fa38f87181"

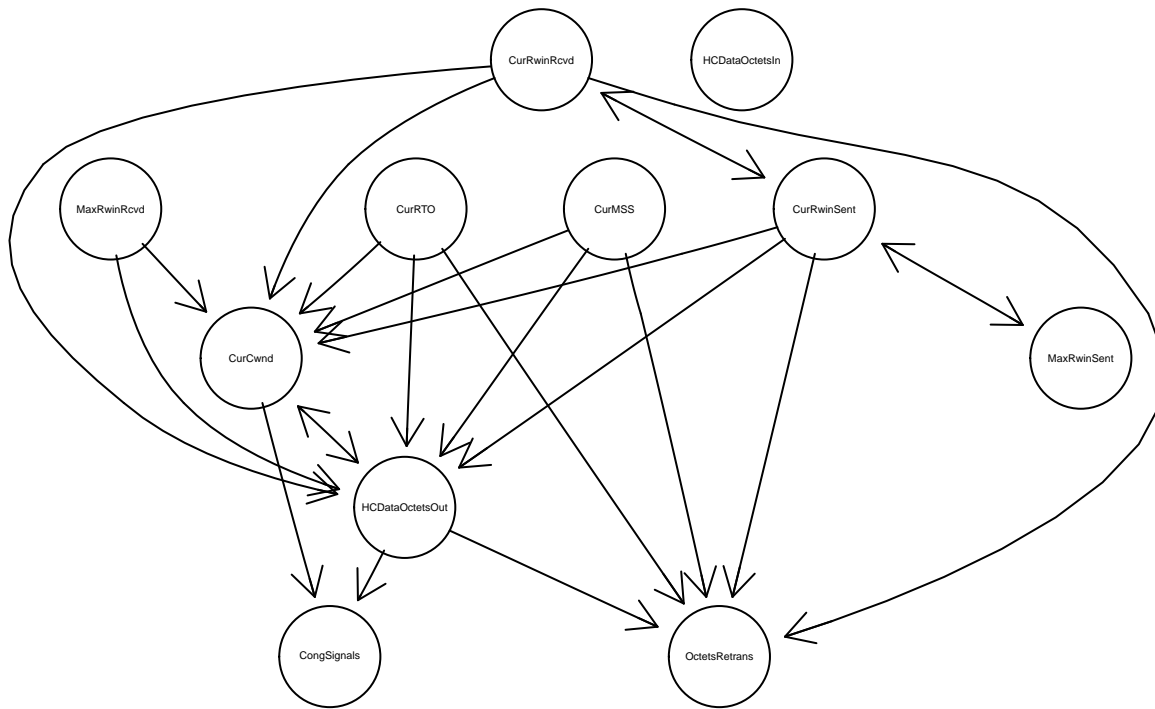
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 129
## [1] "/Users/aaronkruchten/Desktop/PCA flows/557e860c11bc513f82ab545cb8ac87d36d64b1e78476a682aee6d7c3"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



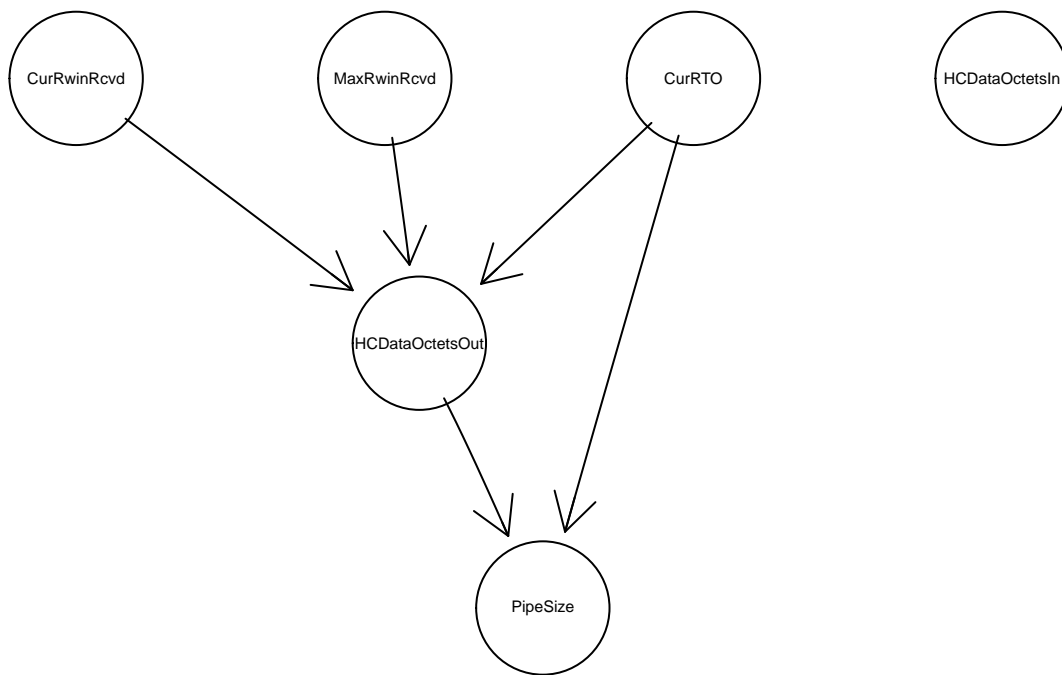
```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 130
## [1] "/Users/aaronkruchten/Desktop/PCA flows/55bfda2a19dcc9844ccfa631cc173a7e296b3f69923179c7bd642107a"

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 131
## [1] "/Users/aaronkruchten/Desktop/PCA flows/563ead749c1e574a2a20828bfcee60db8dbda3b479aff2685c83e5e6"

```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 132
## [1] "/Users/aaronkruchten/Desktop/PCA flows/566ab6617bcef667a10fdd4ec052e3f1f22da693b5ca7dd92579ab84"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 133
## [1] "/Users/aaronkruchten/Desktop/PCA flows/5685501db4e52c6fa1b94196acad62f156d91c72bc9c9142a27e9a3c"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```

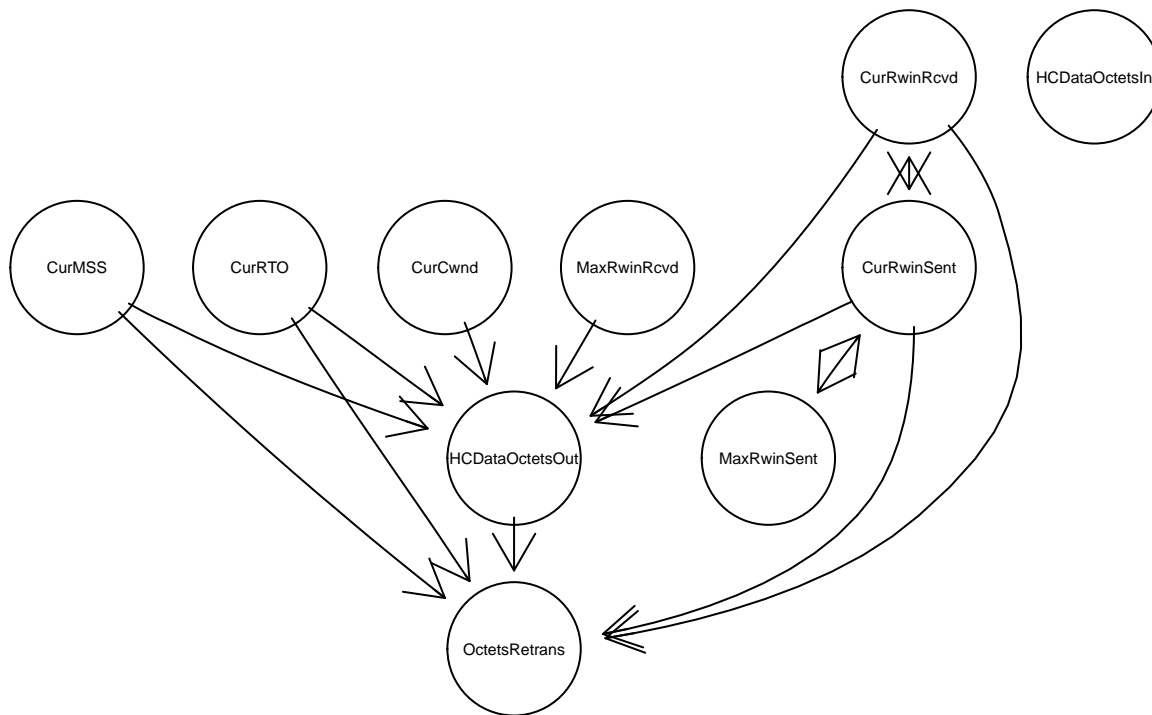


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 134
## [1] "/Users/aaronkruchten/Desktop/PCA flows/5930a620bb9d61bde9d45d5ecceafaf5661576f670b973c6081a8d1c
## [1] 135
## [1] "/Users/aaronkruchten/Desktop/PCA flows/59cdea23a3708366783b0310bac4a1dc4dfdbcd6deb53c12fa687713
## [1] 136
## [1] "/Users/aaronkruchten/Desktop/PCA flows/5a97e7d423d7c253888cb0858ed135574923c2b895458eb131052ff1

```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

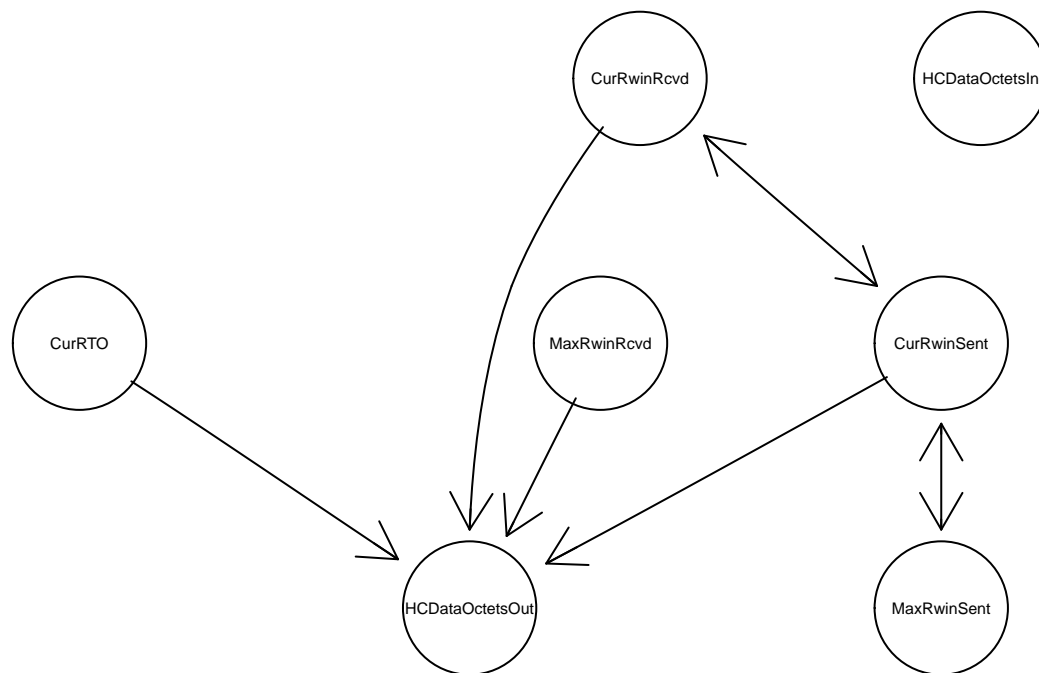


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 137
## [1] "/Users/aaronkruchten/Desktop/PCA flows/5c0a60b90e21bc18a7a87bcf7ffe0774cb6e2739aec0d3385cee79d7

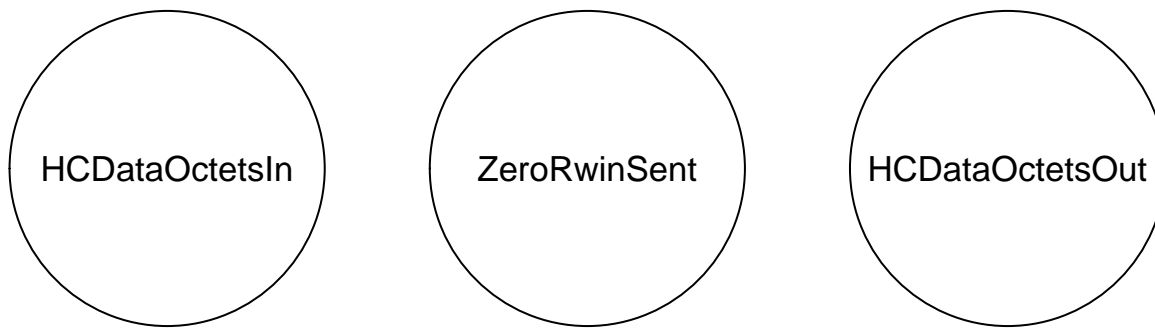
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 138
## [1] "/Users/aaronkruchten/Desktop/PCA flows/60658eb443daffb286ab11797445357c86ebda1d53b700446e86850b"
```

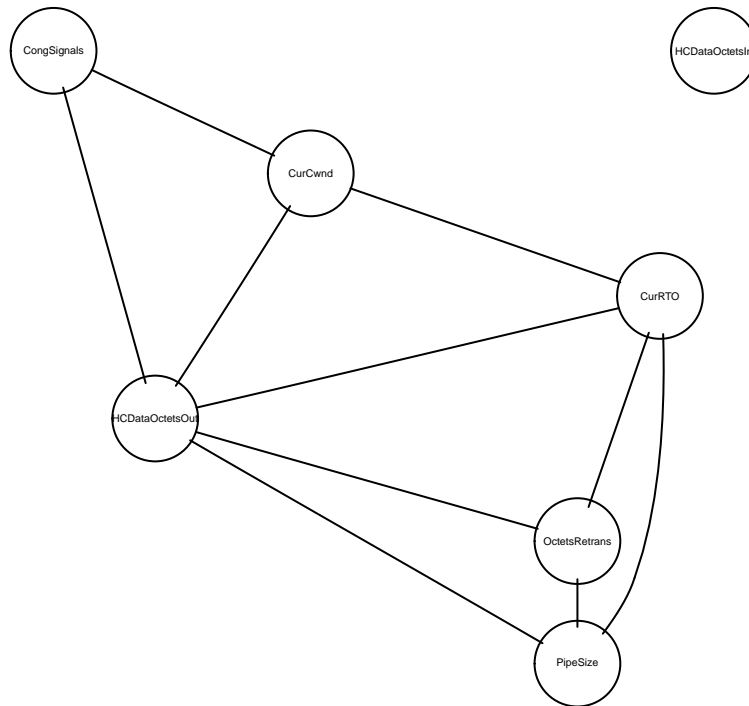
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 139
## [1] "/Users/aaronkruchten/Desktop/PCA flows/610e23394551911379d1fbf4bab8b5e3170586d2072c068f5ab4f92a
## [1] 140
## [1] "/Users/aaronkruchten/Desktop/PCA flows/63265684146974bcd055d0c161701b704dd46eadd4c71532a62d7f9a
```

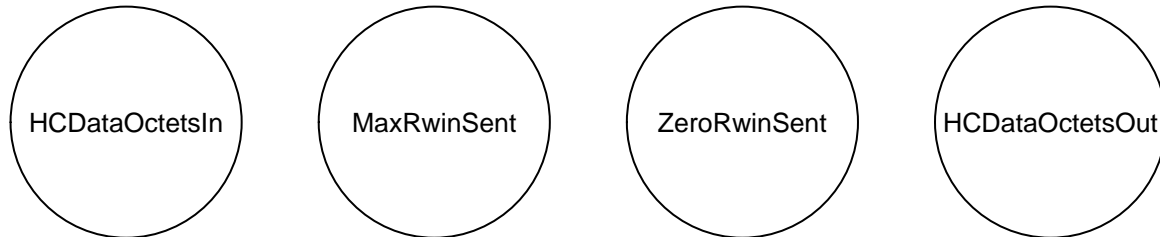
**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 141
## [1] "/Users/aaronkruchten/Desktop/PCA flows/63e69e6ae52bd5585cc83cd90aea2a4d2b9530697ff96832e02f609a
```

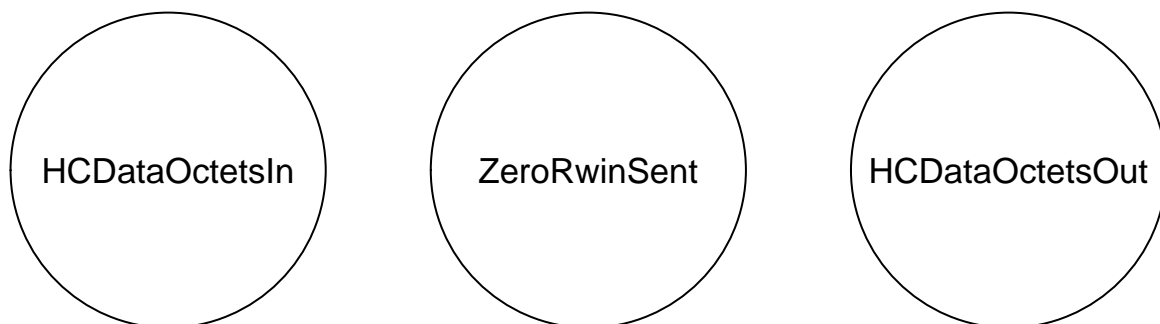


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



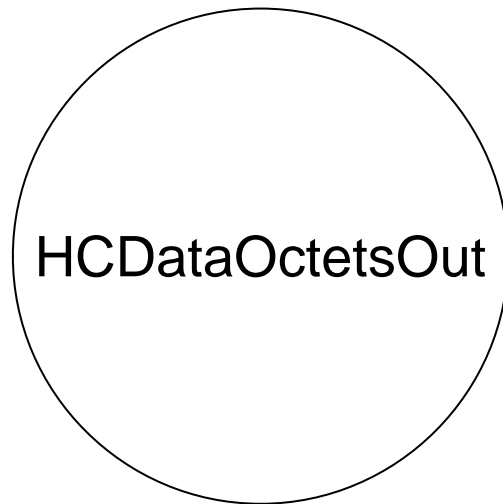
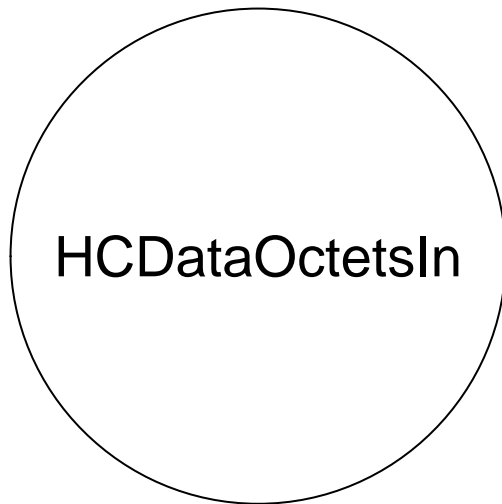
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 142
## [1] "/Users/aaronkruchten/Desktop/PCA flows/681ca26e7d02a7fe2489deda0d7291c3b3c098bb7fb2e2b6a0955f80"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



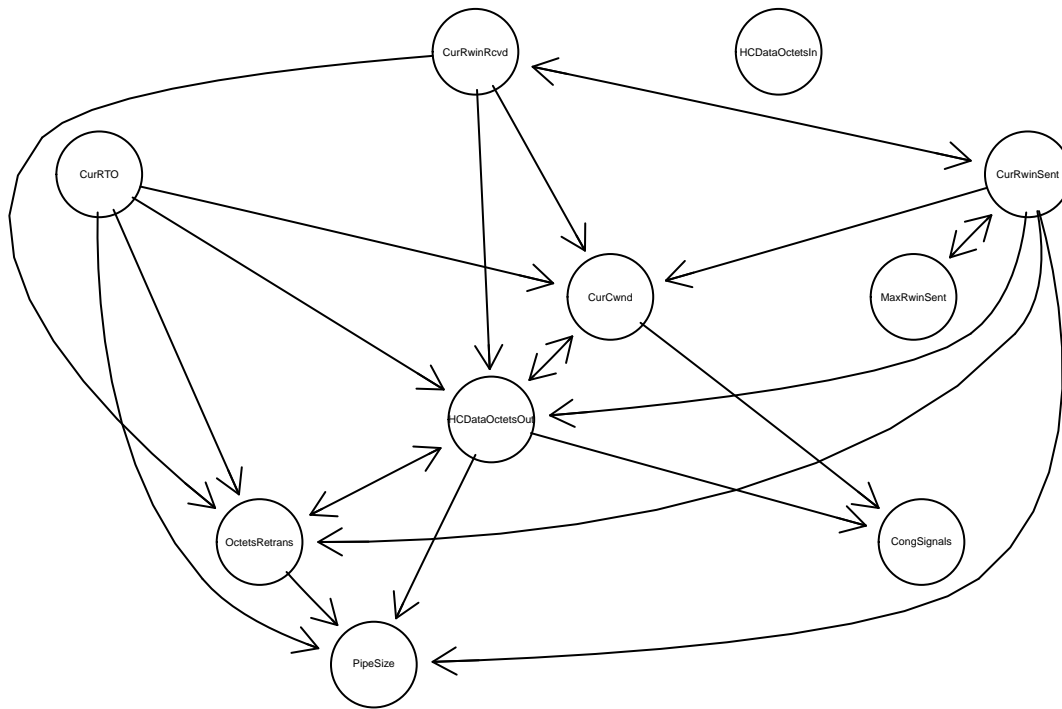
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 143
## [1] "/Users/aaronkruchten/Desktop/PCA flows/6882f55b53156572f72434c78f98025077e1872ae3241f7a80fe26a1"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
   labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] 144  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/6974ae48dd6b3fb1625dfb8a7dac4fc9075f2a73654d1cdb598966b9"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

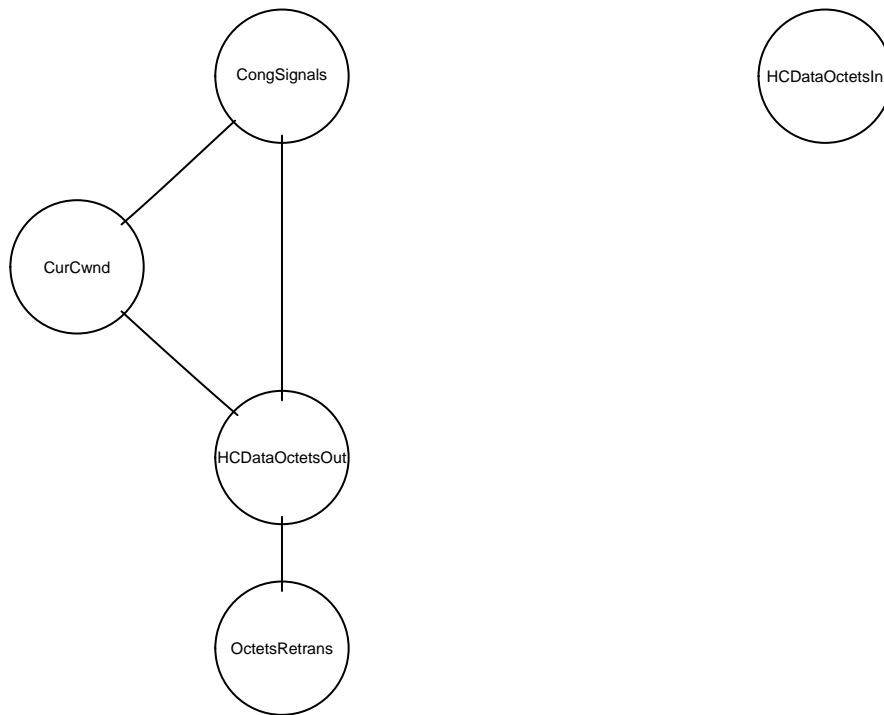


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 145
## [1] "/Users/aaronkruchten/Desktop/PCA flows/69bf042ddf8213a0348abd5ac2f7dd26add4d0324d3724a10fac6f4e"
## [1] 146
## [1] "/Users/aaronkruchten/Desktop/PCA flows/6a738610bd6aa32ac05f8f7ced0927eeec49787d237f0cfcd4c9d083"

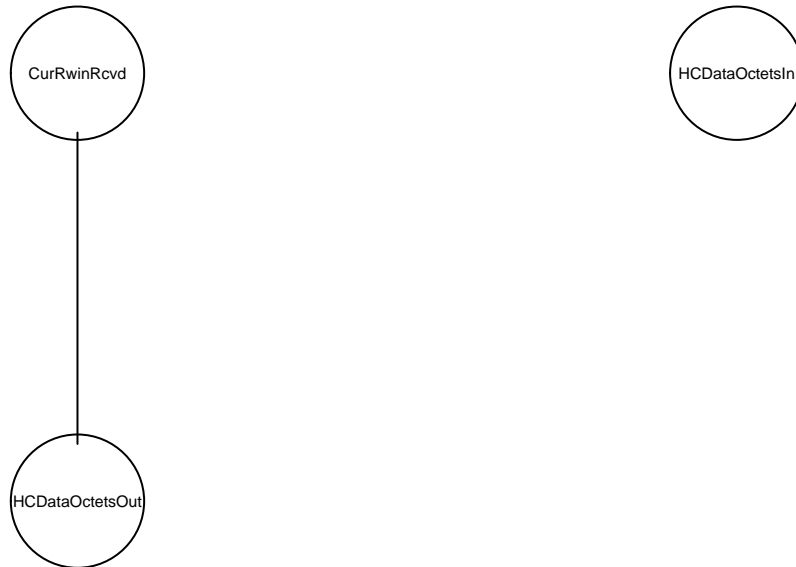
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



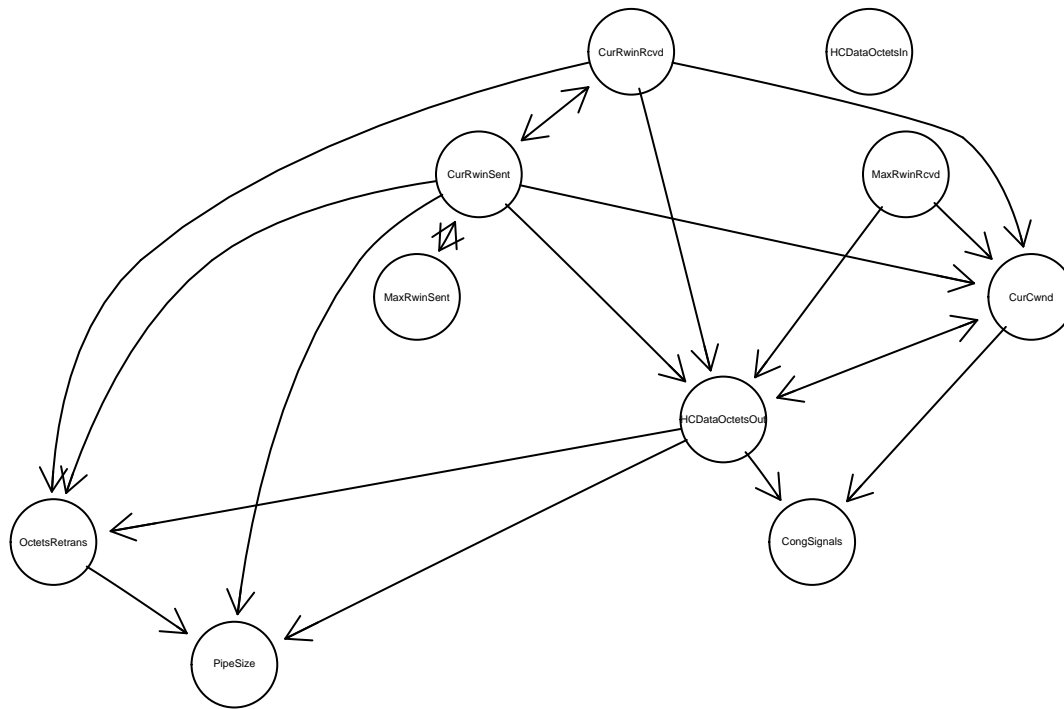
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 147
## [1] "/Users/aaronkruchten/Desktop/PCA flows/6bcd3efbed23a03f2363ec9b2a4b9951677183a18dc3cc0f689d26ee"
## [1] 148
## [1] "/Users/aaronkruchten/Desktop/PCA flows/6c09ceea9ed325d0a318ae31d702f638b1e4b7e4b4cef1e038415ccc"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
   labels = colnames(usable_frame))
```



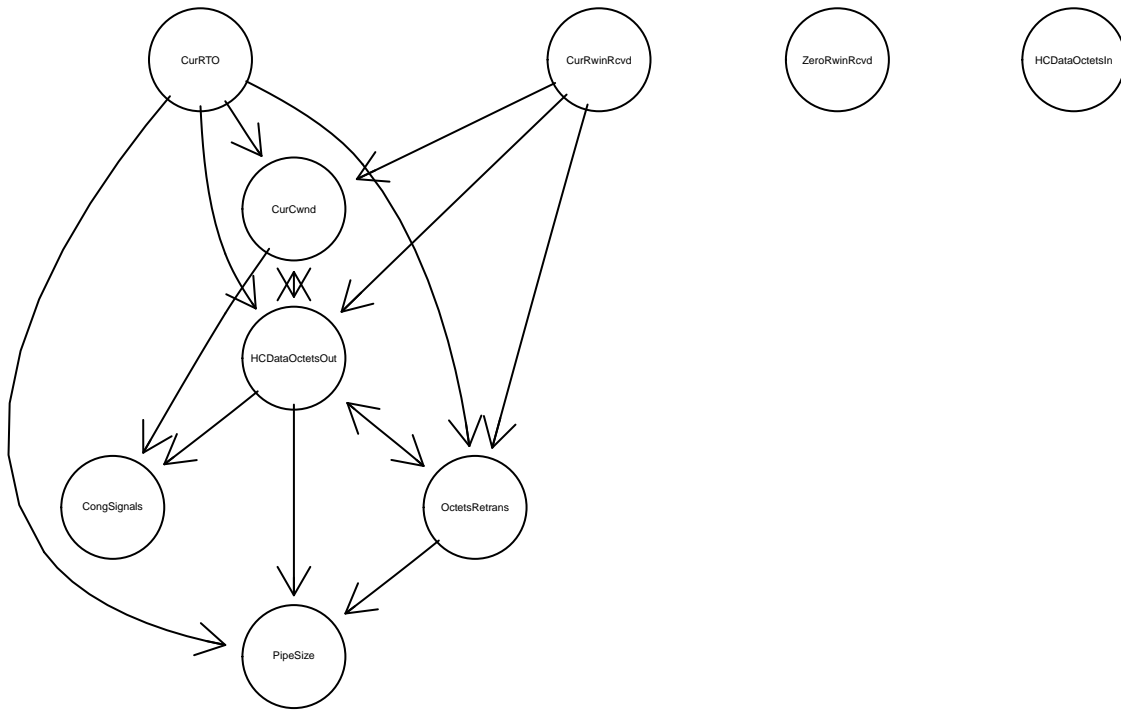
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] 149  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/6caff0d28fe228d0d0aab90bee8c6e77838bc2e687b273ebc9a1a4c3"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 150
## [1] "/Users/aaronkruchten/Desktop/PCA flows/6e5f1d7f2c563d4d64260d7587e7313508d759aa37b3e97d2bb4fb9c..."
## [1] 151
## [1] "/Users/aaronkruchten/Desktop/PCA flows/6e72e353d265ad2fa14b7d82d49a389b14d4c62fd961f91995bec3d1..."
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

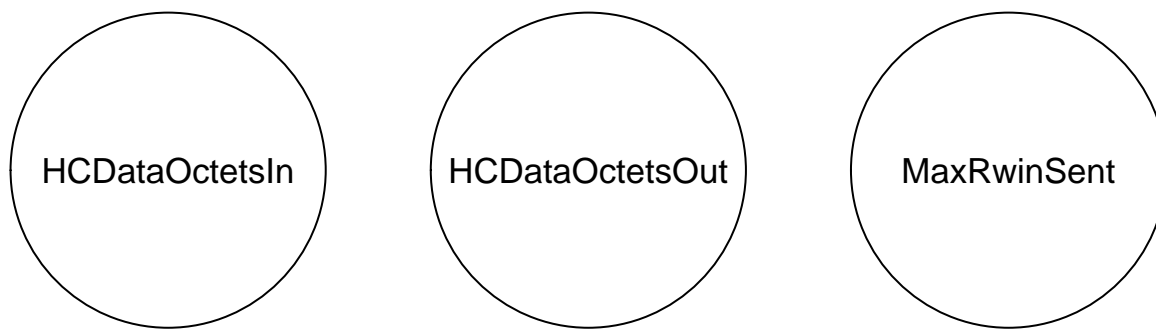


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 152
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7070282b9392e488976916851d36993e6547d87fa73535a6296ead69..."
## [1] 153
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7079d78431ae3e242ed0c1f2e037c2fcdad513a72250fa8295792c89..."
## [1] 154
## [1] "/Users/aaronkruchten/Desktop/PCA flows/71754737153b038e09882d04b143f49f04f21a5d9016d879d58c750c..."

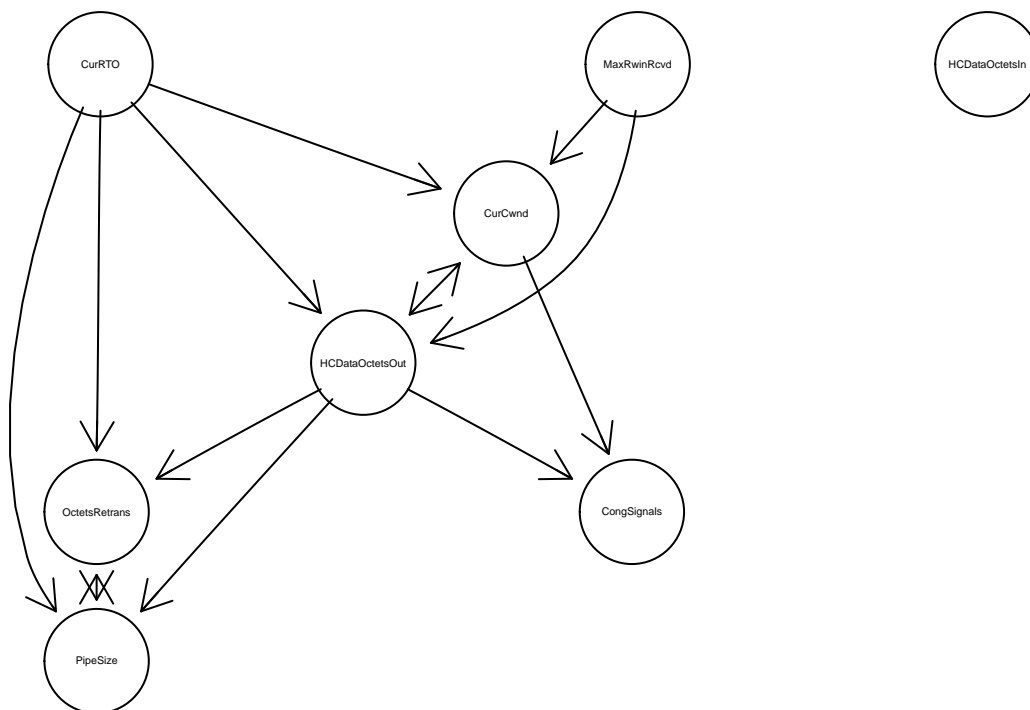
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 155
## [1] "/Users/aaronkruchten/Desktop/PCA flows/71c7811412f97a718e799f9957a52b417b2dcb5e55022696cd48036a"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```

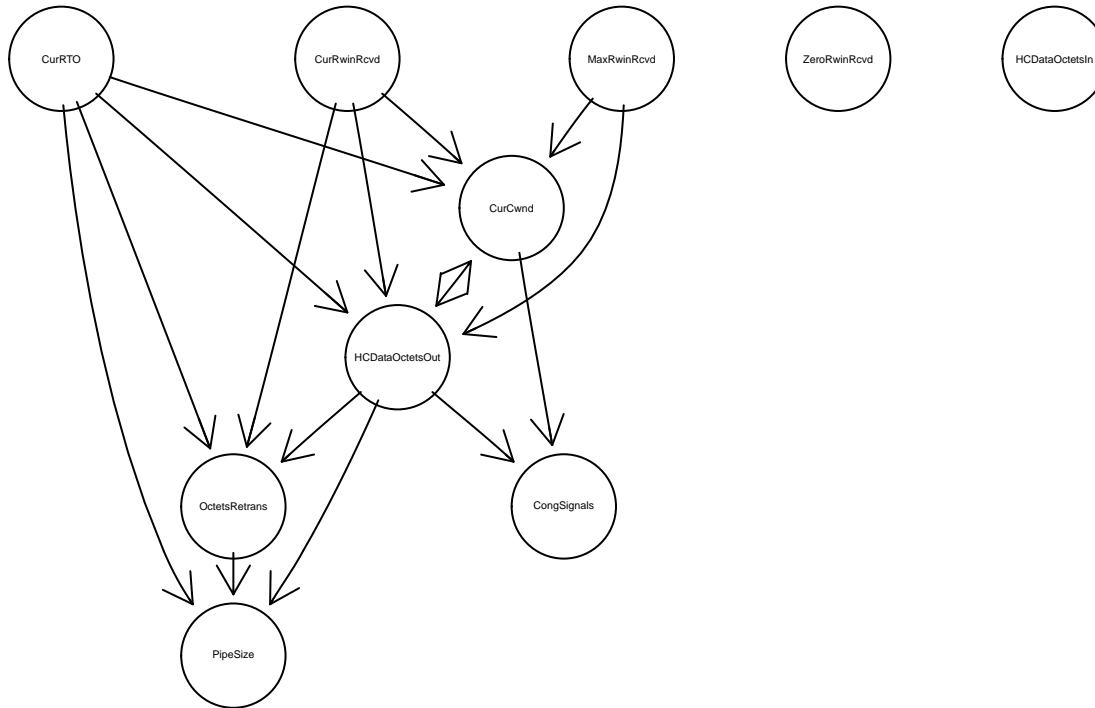


```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```



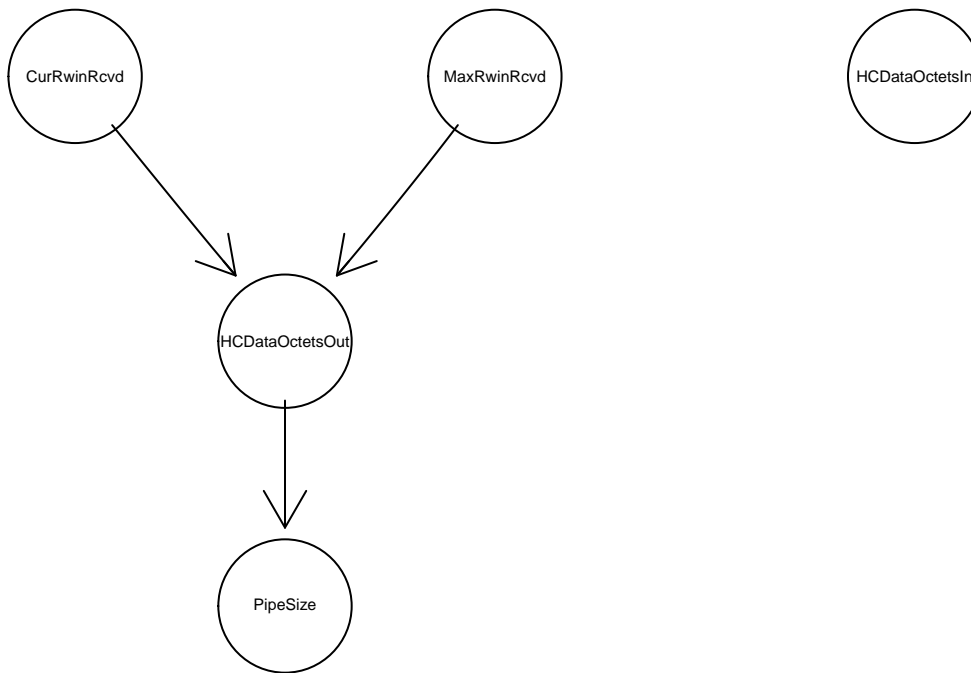
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 156
## [1] "/Users/aaronkruchten/Desktop/PCA flows/72bea6b10a016ec2d6abedb8ea7f373f827445da19372ad1fca0fb7c"
## [1] 157
## [1] "/Users/aaronkruchten/Desktop/PCA flows/730ca006f9cf6036410aa39f6181842fb6257cf208c1c699d943cdf8"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



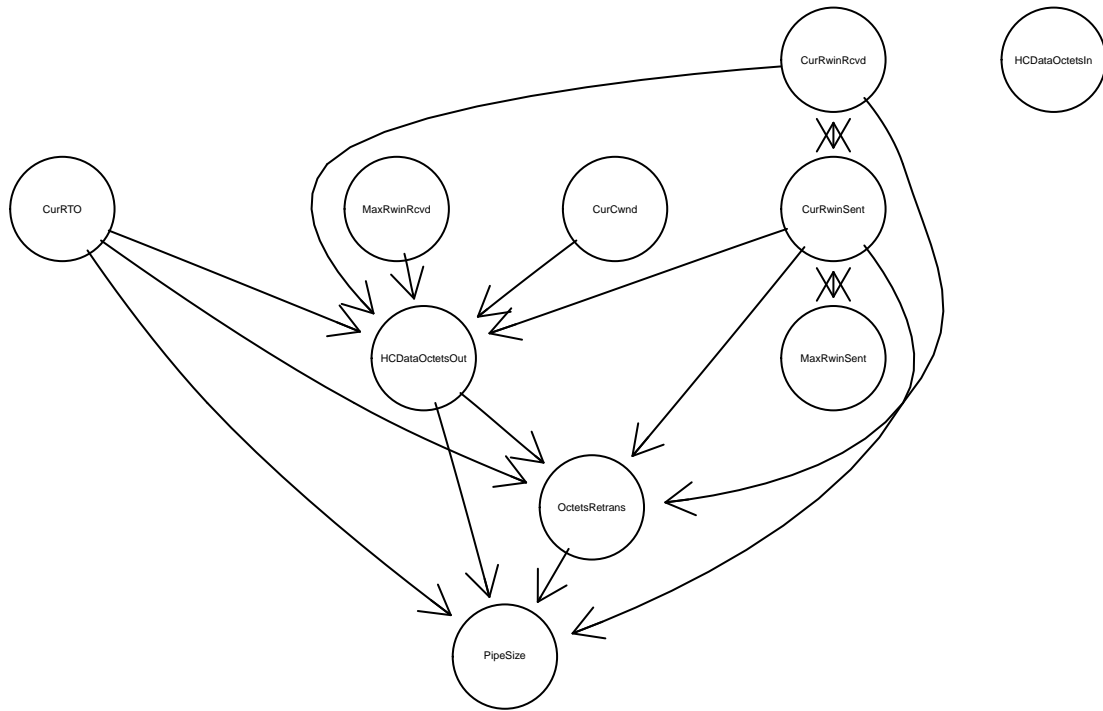
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 158
## [1] "/Users/aaronkruchten/Desktop/PCA flows/744c477f5d48508af279bd2a707ef89599e58ac7f51171e4c2f65b05"
## [1] 159
## [1] "/Users/aaronkruchten/Desktop/PCA flows/745f9b46b1f2f9c07fbeeefc836980a2a136aa8443fd3fb1fb31f8976"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



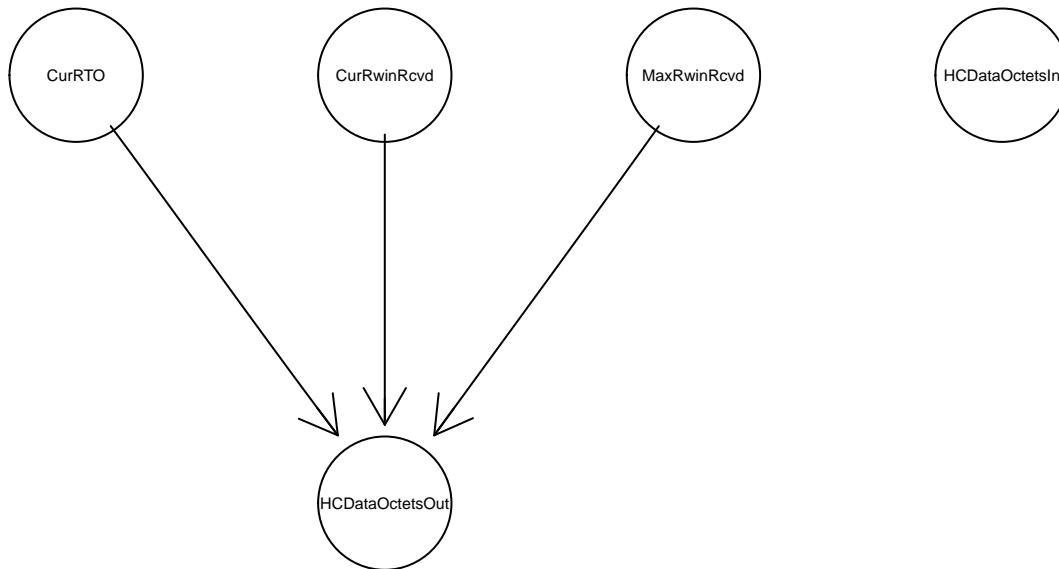
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 160
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7568e28b96aee6643f0a65c1b62845671cc032752e41ac0b2b66051a"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



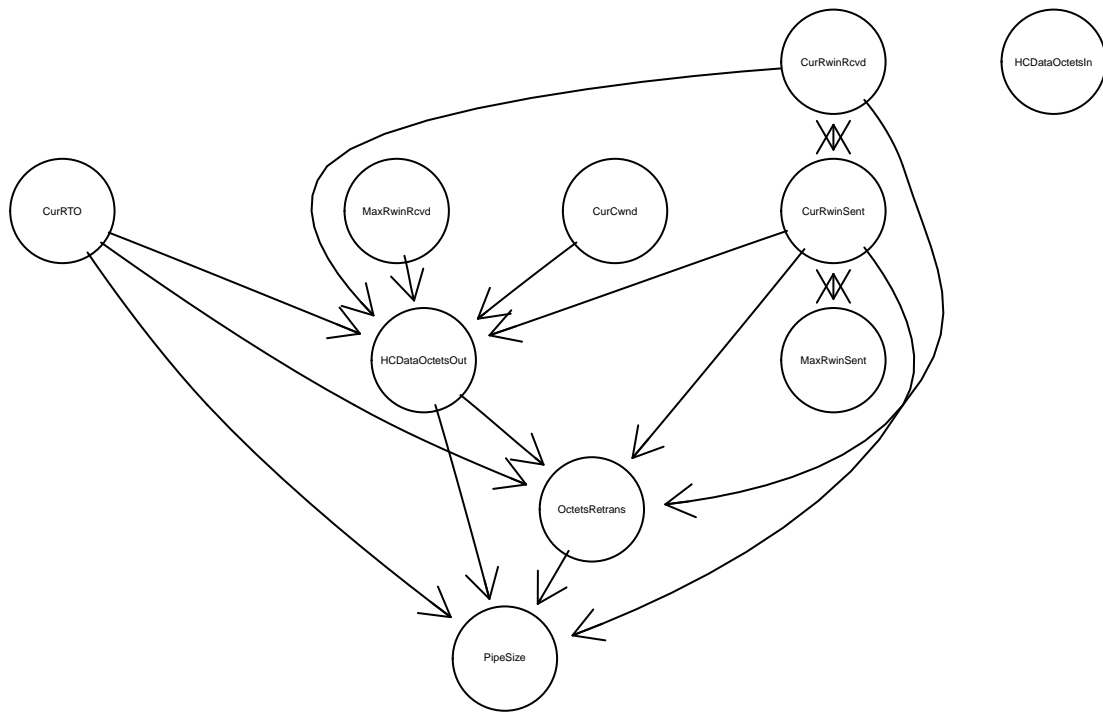
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 161
## [1] "/Users/aaronkruchten/Desktop/PCA flows/75b39ad87f0ce4c5f972927b485f5bbac4e83ea9d7230335b143d72c"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



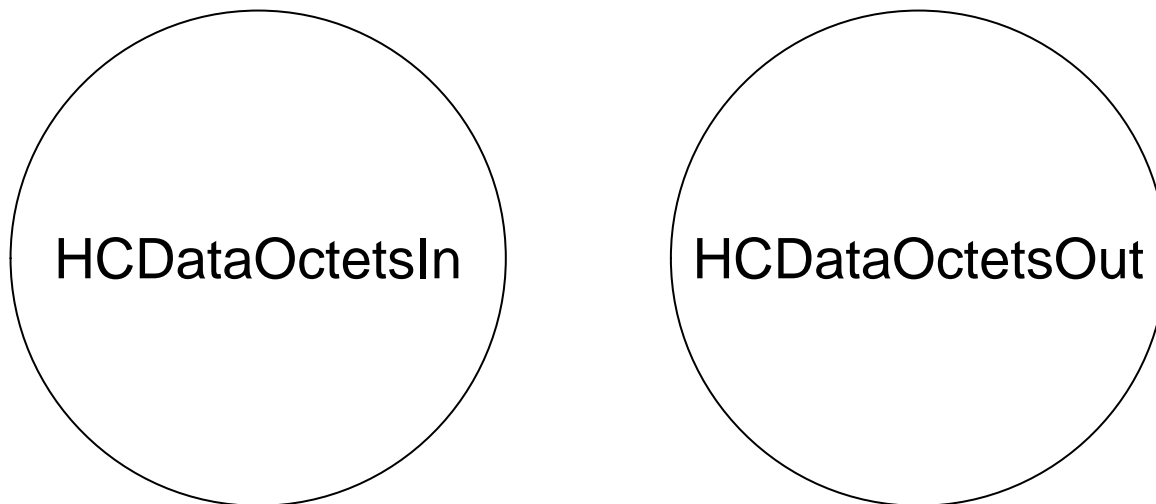
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 162
## [1] "/Users/aaronkruchten/Desktop/PCA flows/76d883854d8d5ab6a8dc7960312d8b197b45d415dc13aed69044fef5"
## [1] 163
## [1] "/Users/aaronkruchten/Desktop/PCA flows/76e4638cd9ebbc76fc5ceae7de8335fa746342272d1d916442a1836f"
## [1] 164
## [1] "/Users/aaronkruchten/Desktop/PCA flows/77579a9ab585f00cb056f340ef72a34972ee0e6a76b313fd332f4a66"
## [1] 165
## [1] "/Users/aaronkruchten/Desktop/PCA flows/783f4f67fb964e3d528ad43be12f6e936f54820f51370f9c8f56d0f2"
## [1] 166
## [1] "/Users/aaronkruchten/Desktop/PCA flows/78ba013e1c884a30b3ddca43981dae2084b7ce4a0e1fe6cac56694e7"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



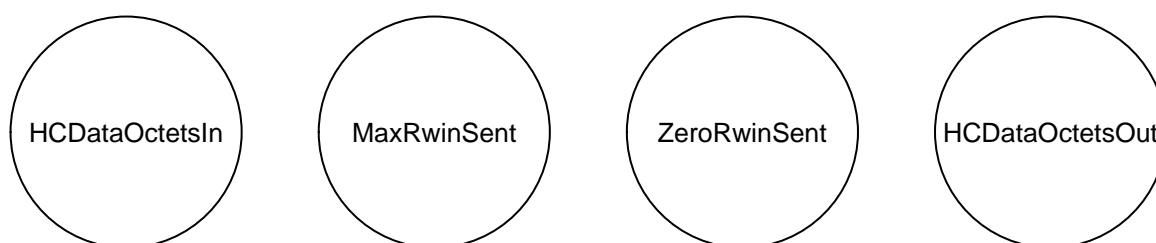
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 167
## [1] "/Users/aaronkruchten/Desktop/PCA flows/791e1aec486a2a48885b2ef9ab92758377e4aa369c303c4d31f58cf"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 168
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7ab77abba5d5ea70c39bfca05cad9637a3b96d101783e7000677f926"
## [1] 169
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7be9e573d7ae7c07e2cbc59f580c14054a5037236fc5210480102699"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```

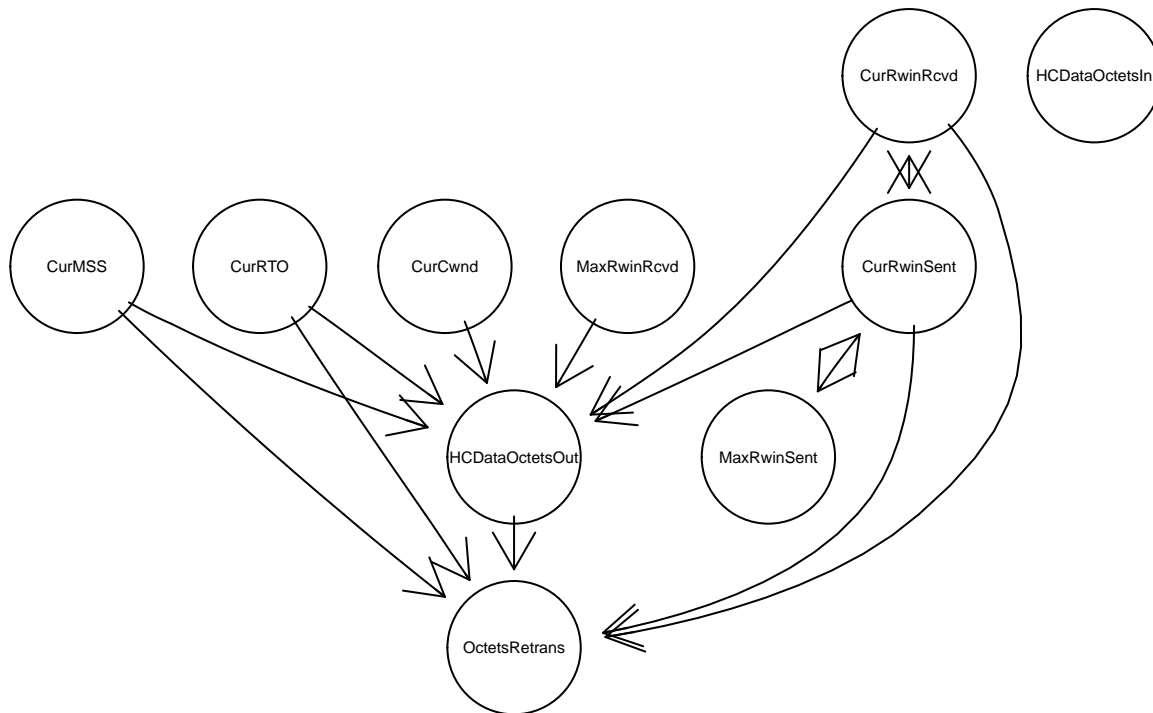


```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] 170
```

```
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7ce5746f264c0dbb6fe1f792979d5b6048f352107acbd9a0358f1271
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] 171
```

```
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7cf7fce097a31995dc3234a2bb4da5130e64abaaa804de11c5622f98
```

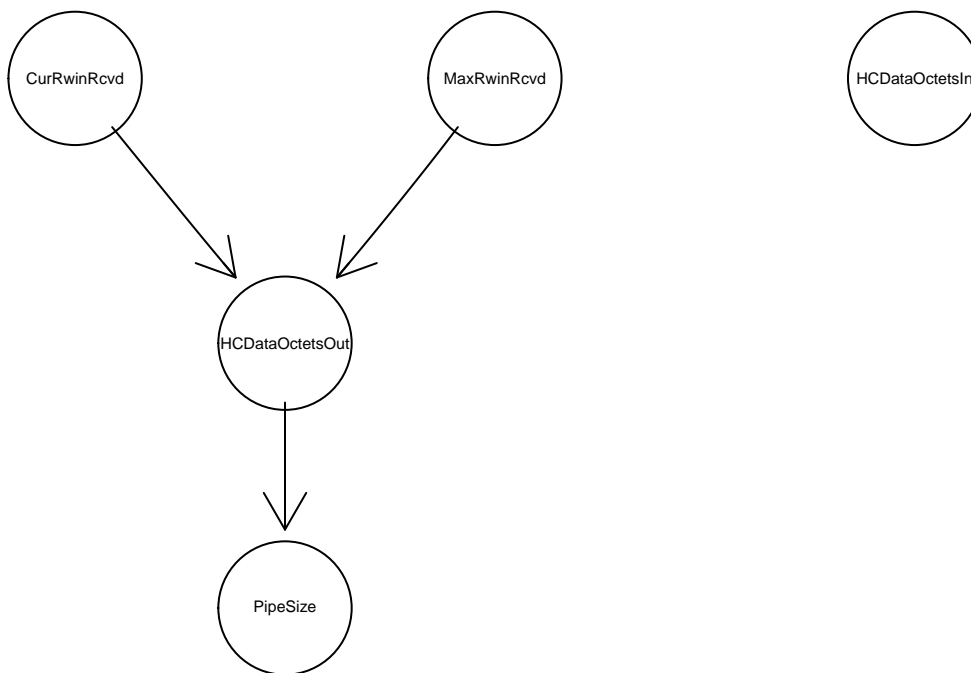
```
## [1] 172
```

```
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7dab66ba87c6c431f341fbf0e62ff232327d2d0019f140a02f60e48f
```

```
## [1] 173
```

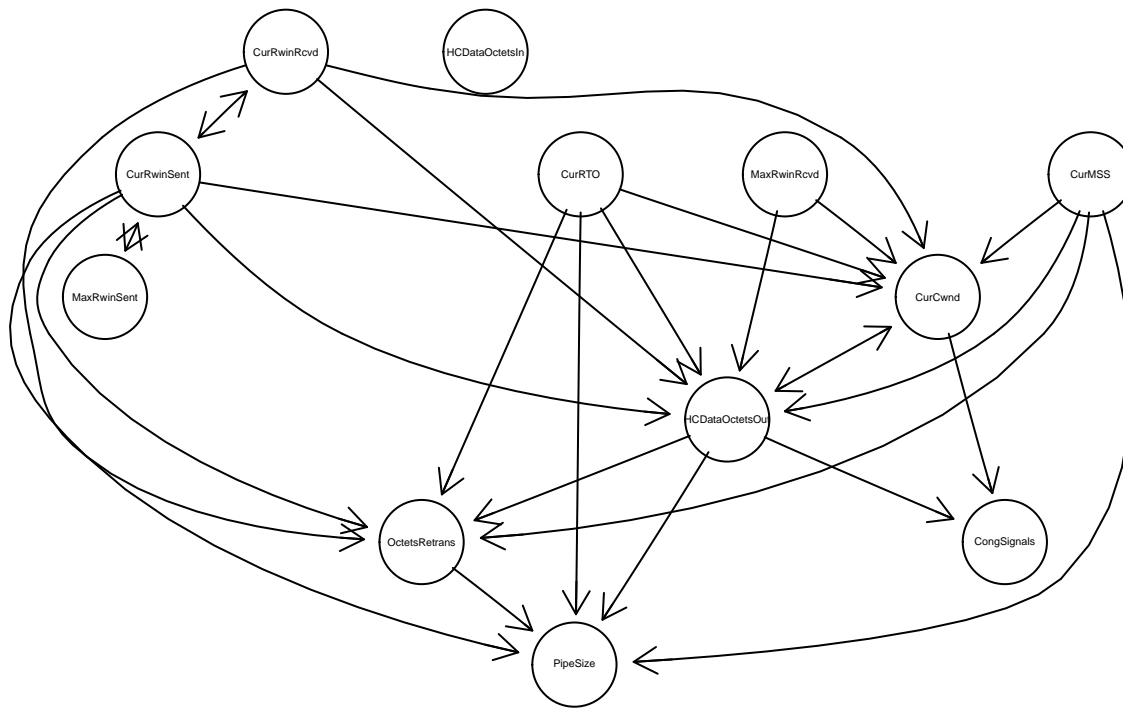
```
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7df4705b22f01c35bb5317a6fd7816429a29729a66c4a00a63dcb268
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



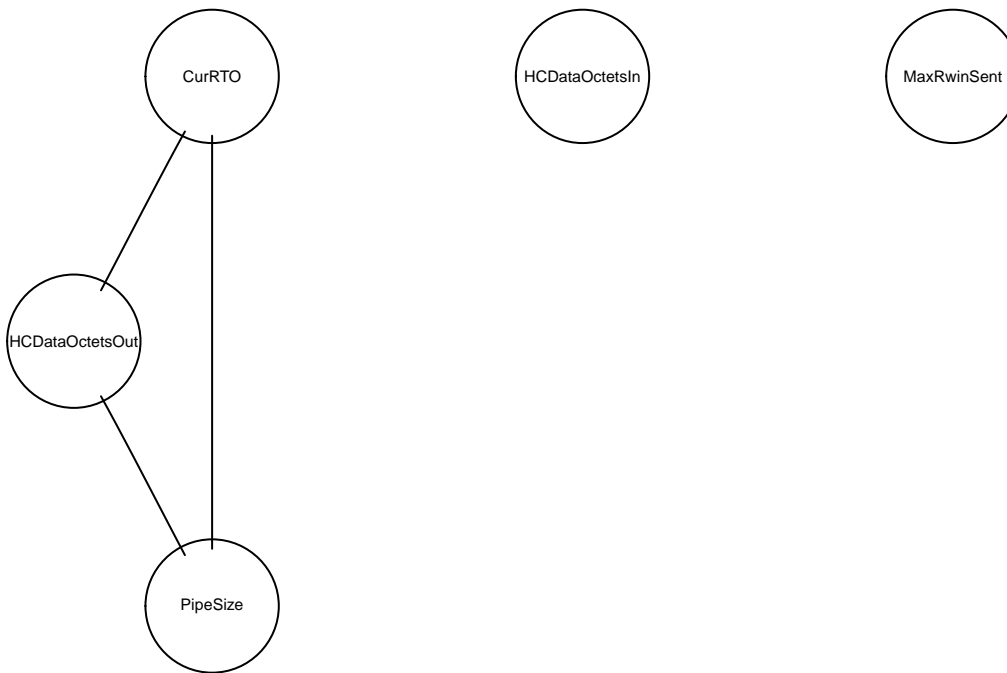
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 174
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7e1c339f2409c4f7cb31b3ccaf87581d59cfdd0a5d90b9ee25710eb7"
## [1] 175
## [1] "/Users/aaronkruchten/Desktop/PCA flows/7fa3a0253284940cbe008569dc404ee7644009755107dc351033135e"
## [1] 176
## [1] "/Users/aaronkruchten/Desktop/PCA flows/809be500aed7d986ca3d448c33881ef703b25918f96f92554b1cdcd0"
```


**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



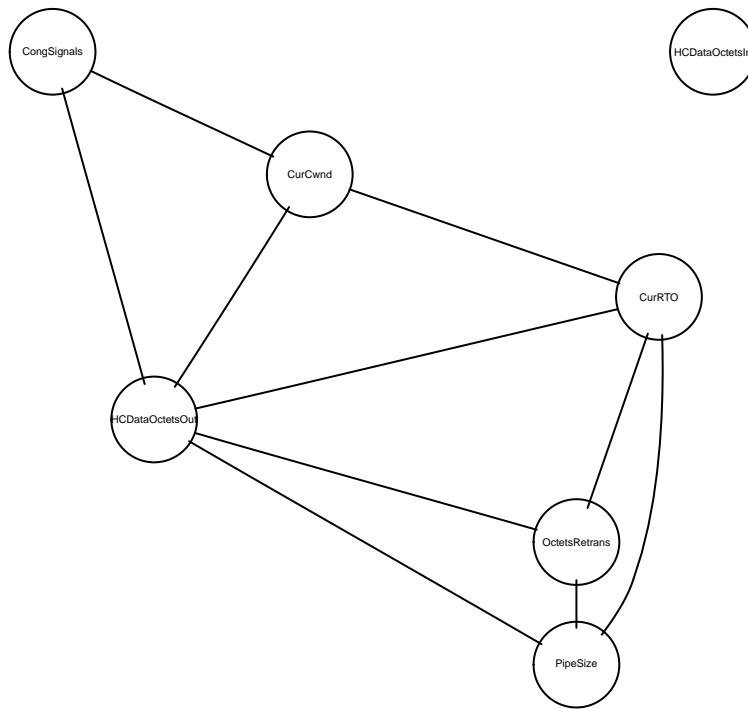
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 177
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8138f775ee0104aca5bfa2b4e9d469e849e9c429043391acdbaf3556"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



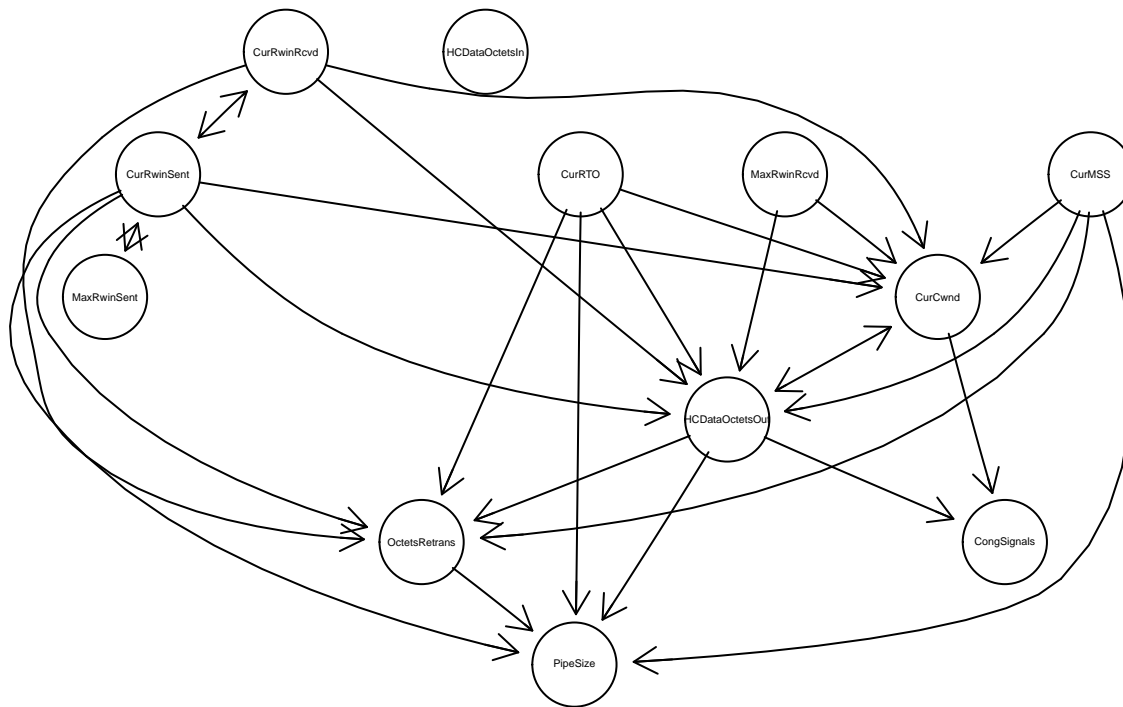
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 178
## [1] "/Users/aaronkruchten/Desktop/PCA flows/81c921afbf914b8672ece2440e9e7342c7a4f4b8b96d2e5333d47d0b"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



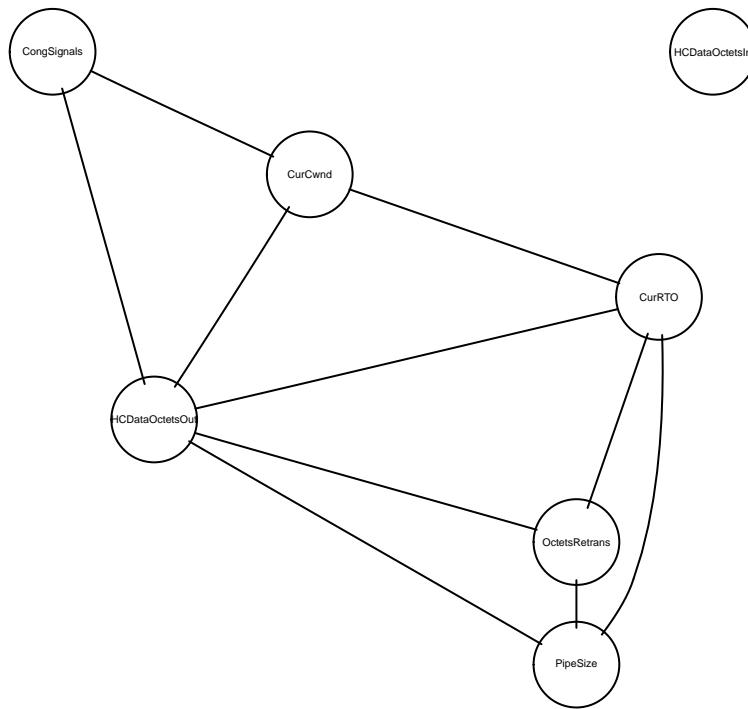
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 179
## [1] "/Users/aaronkruchten/Desktop/PCA flows/83cb6bfd375060871418fdb7d13465436e3828061f972ecd73b0895d"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



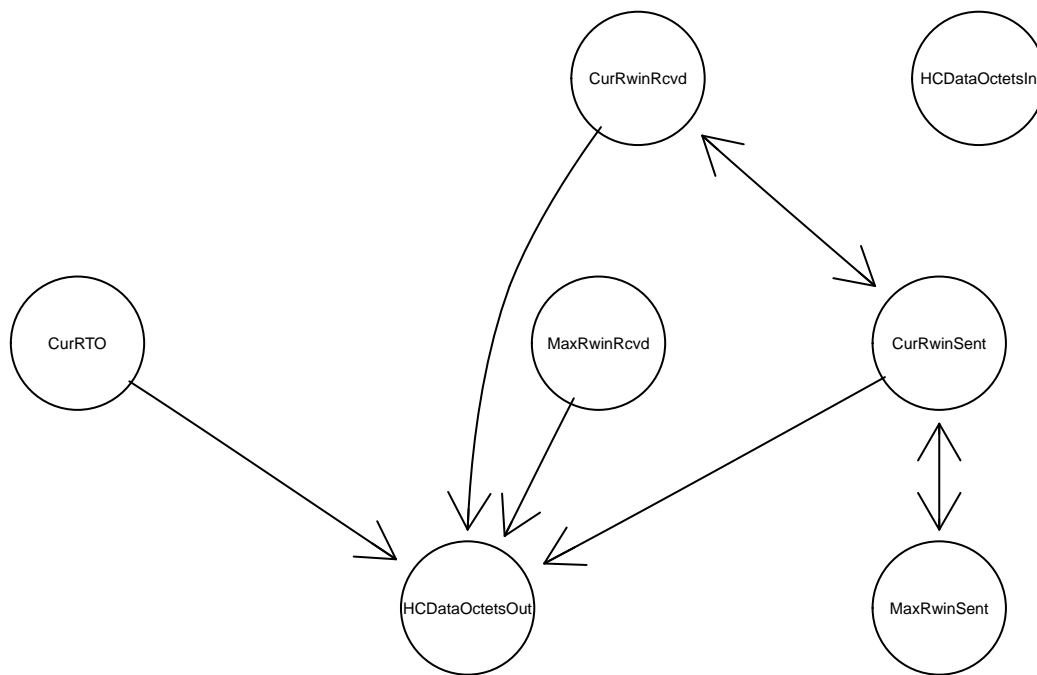
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 180
## [1] "/Users/aaronkruchten/Desktop/PCA flows/854413b54c8c137b279bb66288d7ef4e524e5653de340c62007c723b"
## [1] 181
## [1] "/Users/aaronkruchten/Desktop/PCA flows/86d68e342a0284302fd0689d282c9496268787d854d3d5f4986c6b75"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



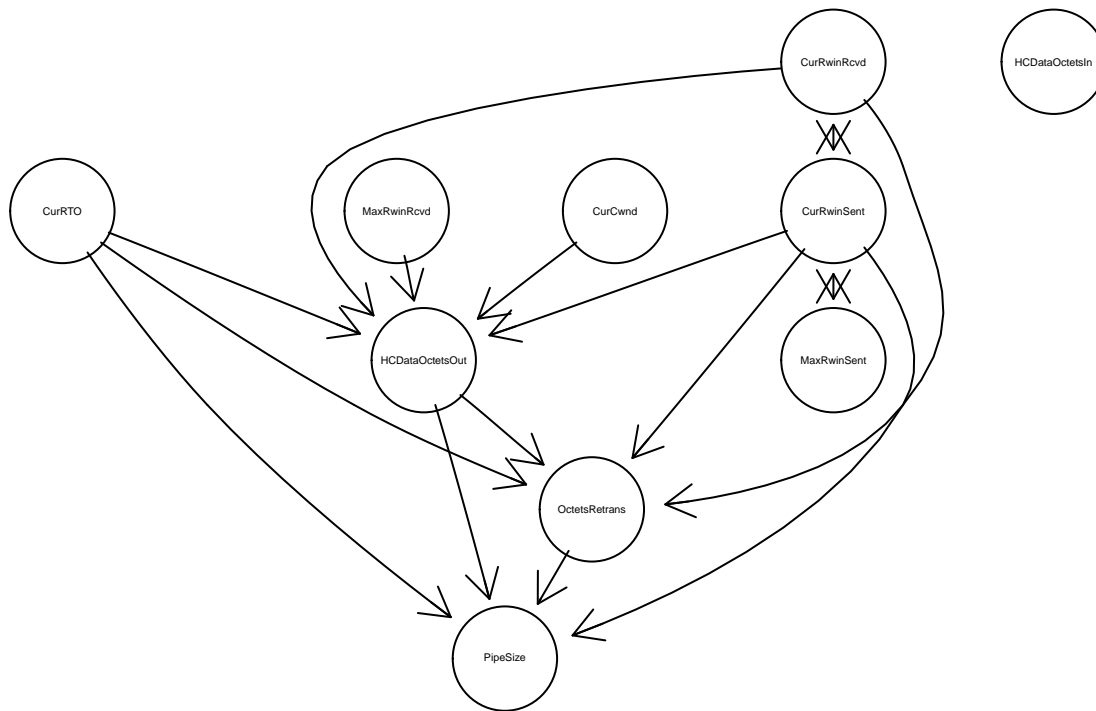
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 182
## [1] "/Users/aaronkruchten/Desktop/PCA flows/86f4967a5806e7809433b5b6727004dc3cb504b571004b91564cc922"
## [1] 183
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8701092de8447ca12a372f74f1db072bc35b3b5697a61c0a9aae8a92"
## [1] 184
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8710909d0b75a0f4127f42cb95e8c9d5f70449283be242ff043a6ead"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



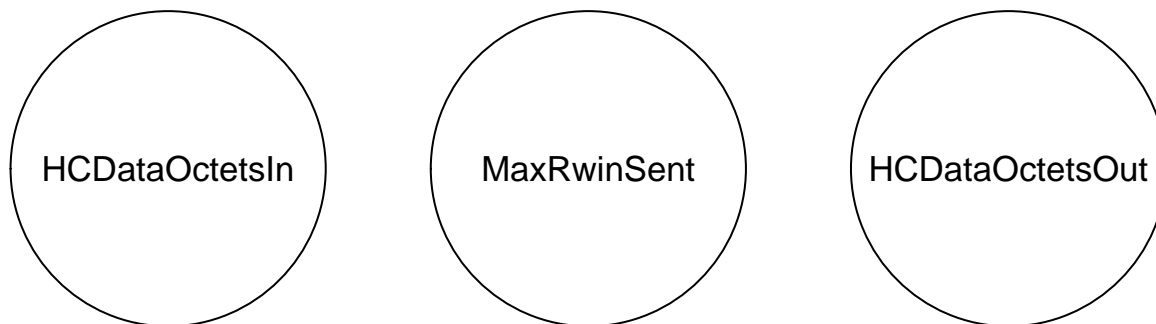
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 185
## [1] "/Users/aaronkruchten/Desktop/PCA flows/88d97b9fe95d2ecec729d25a53f85ceb146d6041547d7eab893b0f2d"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 186
## [1] "/Users/aaronkruchten/Desktop/PCA flows/891bfefadee2dbd18d3b28d214fcfa13fa4fce29a470c2831c628aae"
```

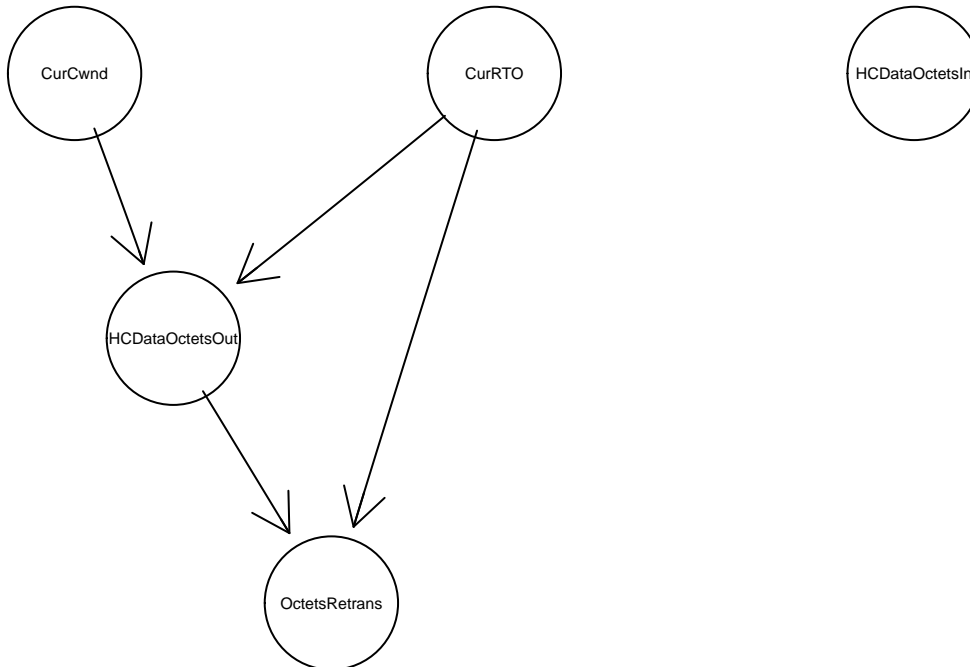
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 187
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8a4b4c8a1b473f0b498c36997233671216a43b5f92ca526186d0423c"
## [1] 188
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8aaf8c90f6f6f9e9e5220d9c0725cf386b8c79374ac259a95900ad97"
```

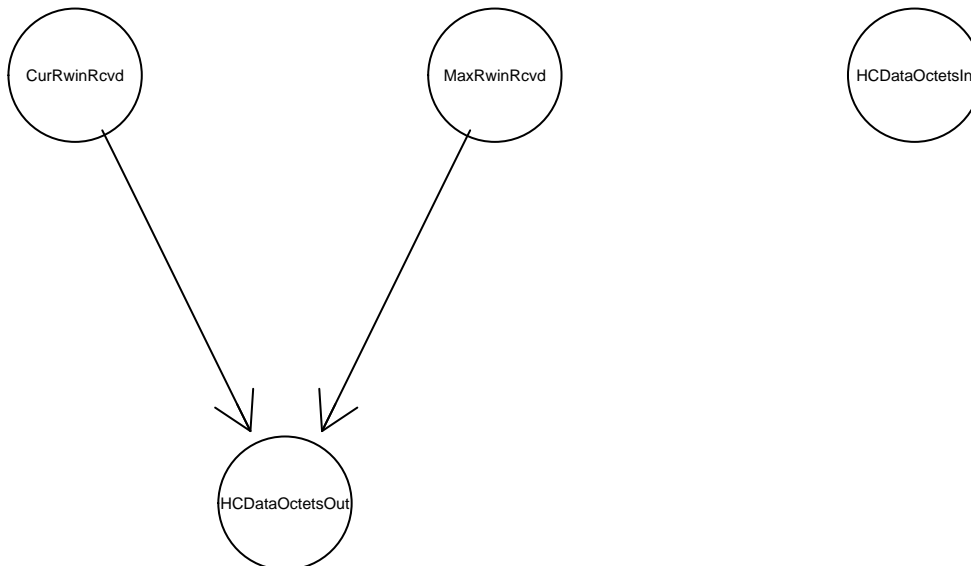
**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 189
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8ba1fa5152478298b1435100302071fcff7a2dac99441ab585b3f41b"
## [1] 190
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8d37fce5010f2698c5f9741d98759f3b482a9d5e9c0acfc3f97e8993"
```

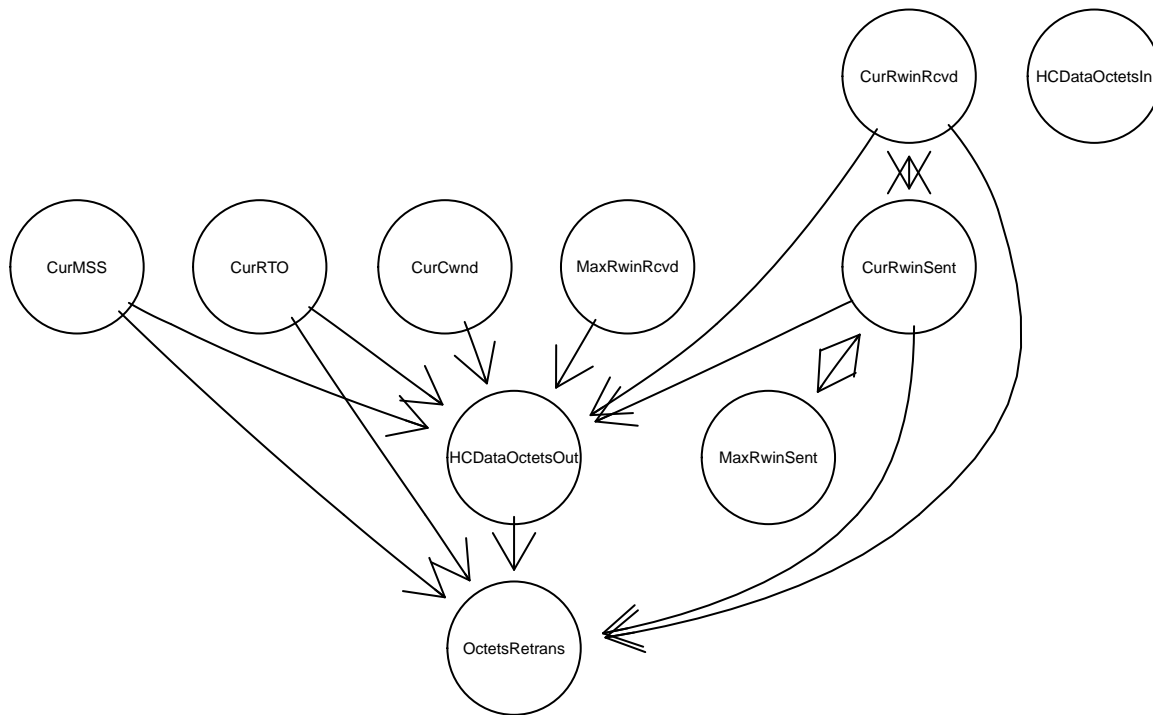


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



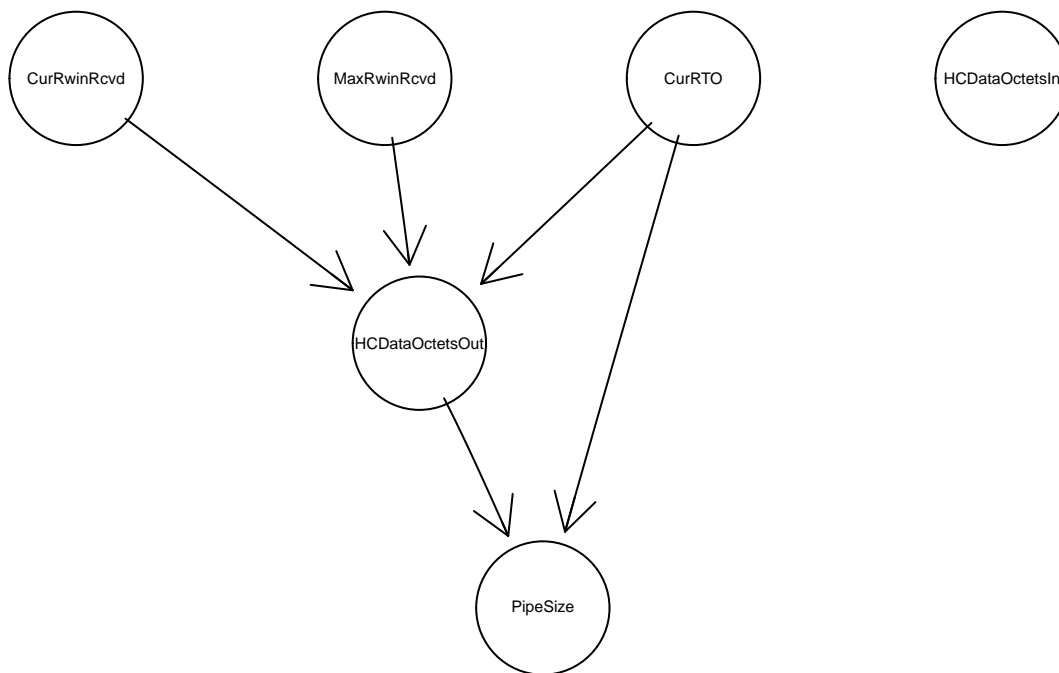
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 191
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8f0078da656272c5e3d83dff520feac188416ab4b35d7318b7e3a689"
## [1] 192
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8f16d3705552c801cd36454e940ea8ae281bb3dad47fad1596bf7923"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



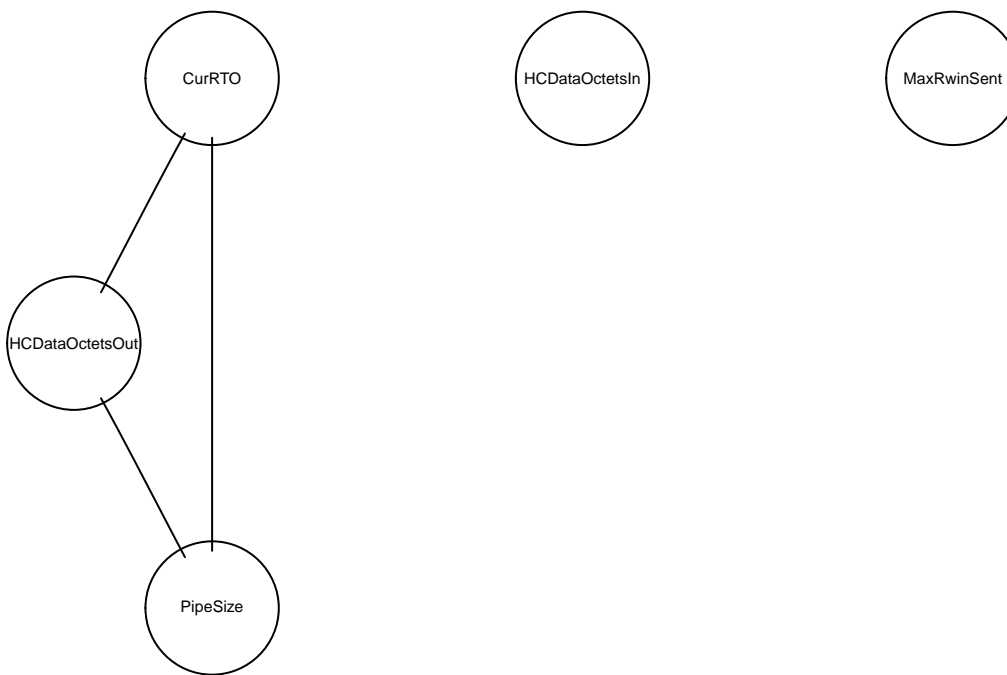
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 193
## [1] "/Users/aaronkruchten/Desktop/PCA flows/8f7946854442766cafdc488114c7b4581303e251ac64212e54467591"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



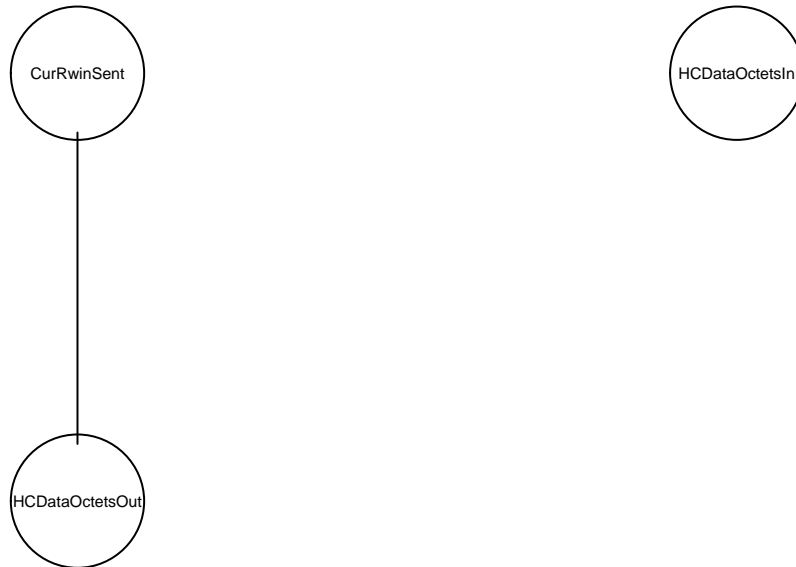
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 194
## [1] "/Users/aaronkruchten/Desktop/PCA flows/912604b4a41e74be12aaf841ff9c91577ac0b4c18cf21a62ccae4640"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



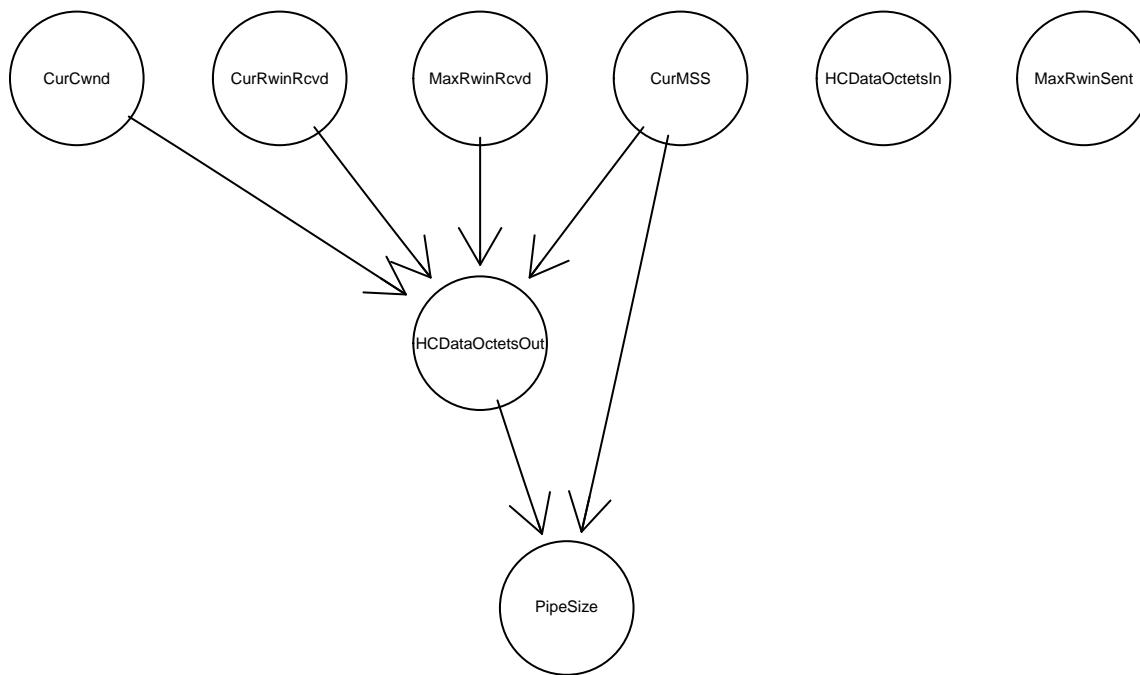
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 195
## [1] "/Users/aaronkruchten/Desktop/PCA flows/919ba7dd8895921b2adaf712901714819b03d16191c4c034d7aae835"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



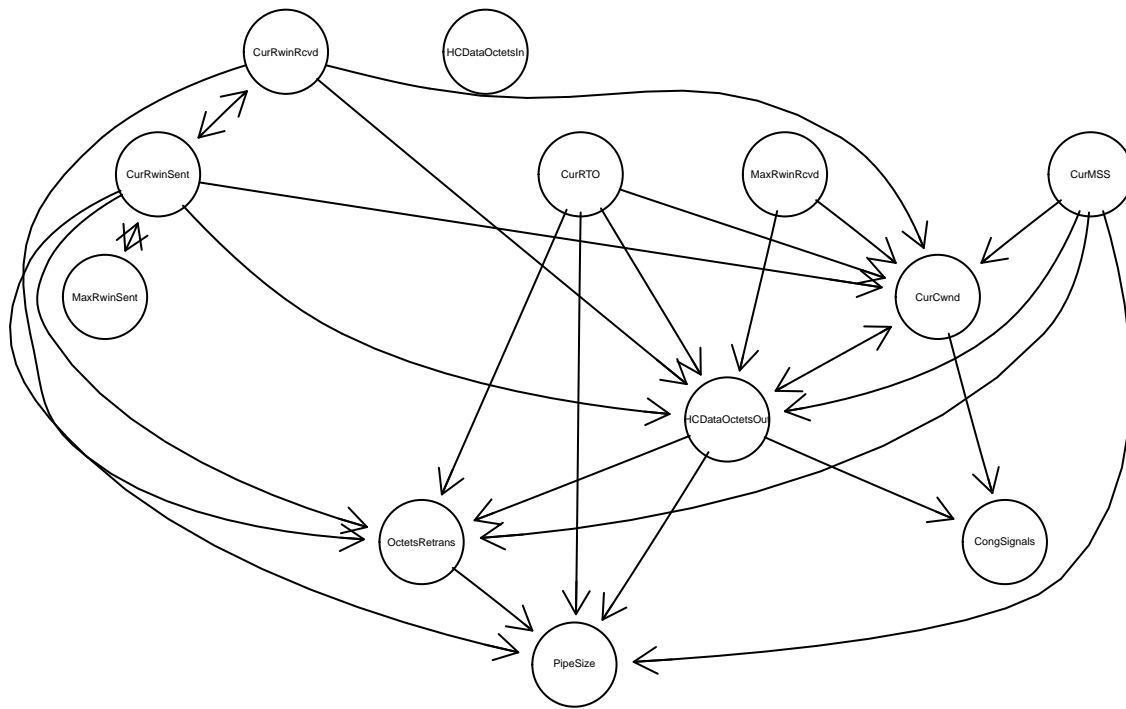
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 196
## [1] "/Users/aaronkruchten/Desktop/PCA flows/91fb1d9a9995bcd2cb709fd73ca3eef28f0926fb39f38277b99e8d8"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



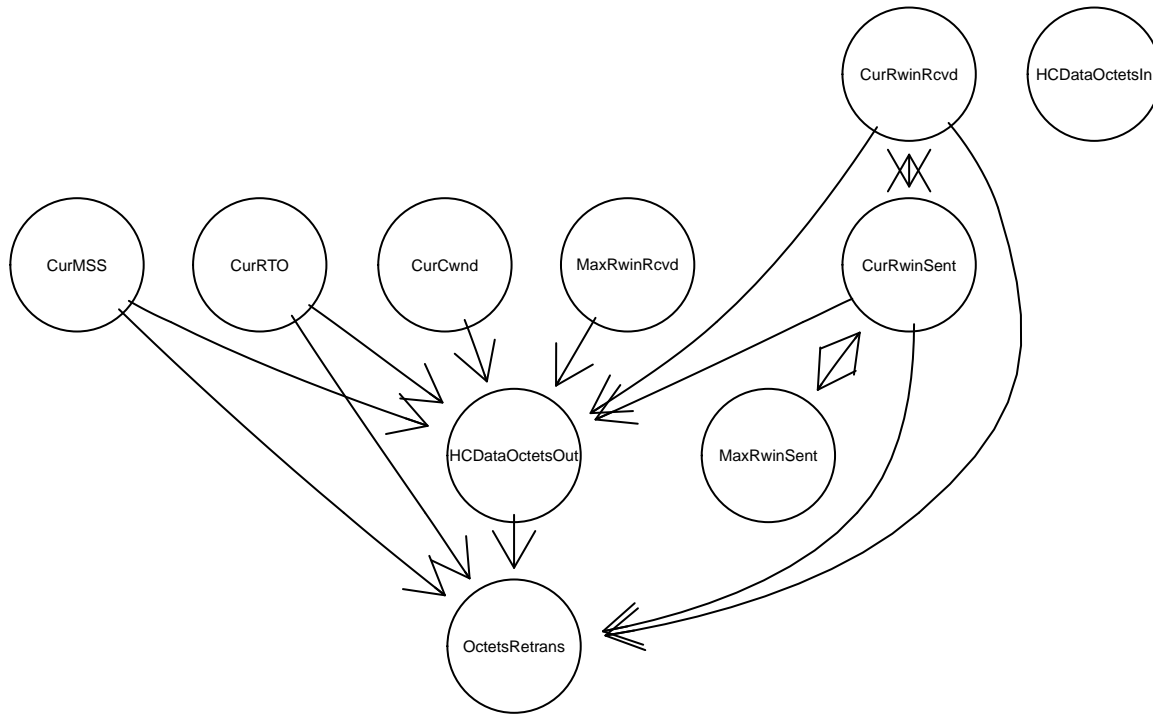
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 197
## [1] "/Users/aaronkruchten/Desktop/PCA flows/922fae9171cc3ce4d6a2eaa8927e19bebd45d47449adcc270d0de10"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 198
## [1] "/Users/aaronkruchten/Desktop/PCA flows/93e6536e332f1c790003237939b21065c075a7e454686bd9942f57b0"
```

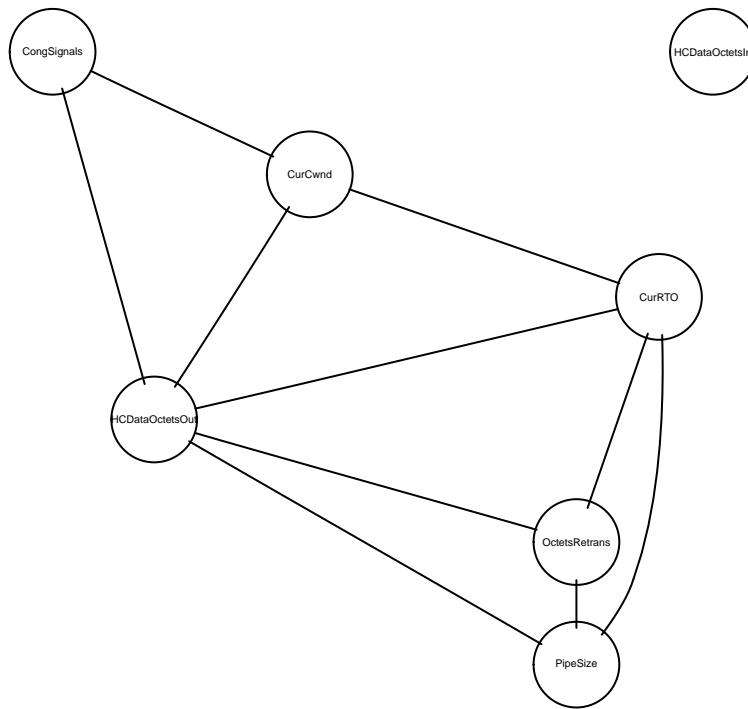
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 199
## [1] "/Users/aaronkruchten/Desktop/PCA flows/94c82ed9430500ad6cf9e2e21255fbefcddc842c3c3e49ef88114ebd"
## [1] 200
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9525163cd0e19adeb645e2d3c34128537b06fa7659c81dd9ba29ab5f"
```

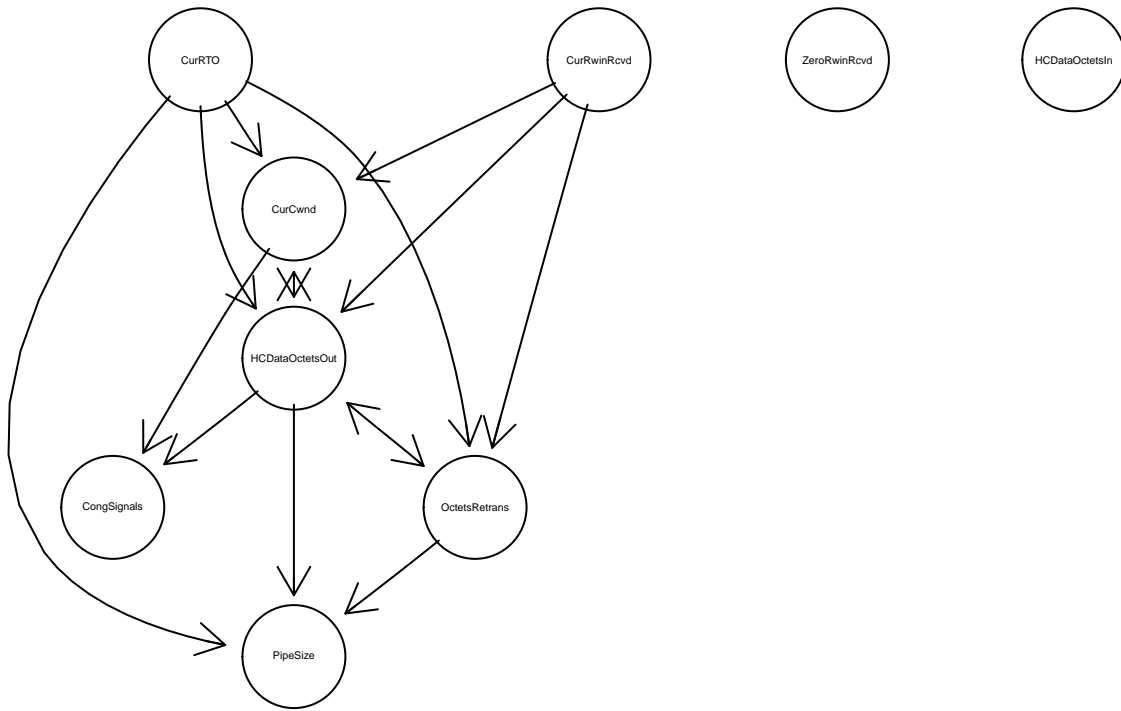


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 201
## [1] "/Users/aaronkruchten/Desktop/PCA flows/958097c50cf7e400c4d556e90dbd7f57f4356551a2d07084b4a86fa5"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

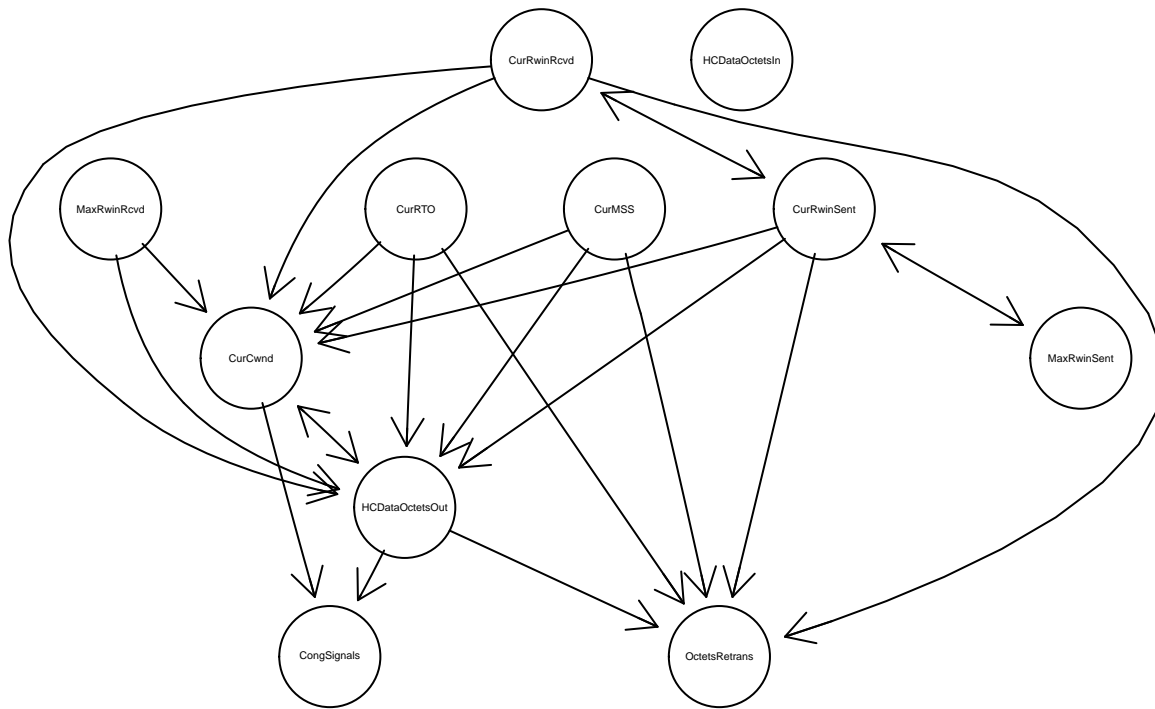


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 202
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9662d0f4eb26df55360ed5eaf81ee938badde8ccdbf24fbb5b72d99e"

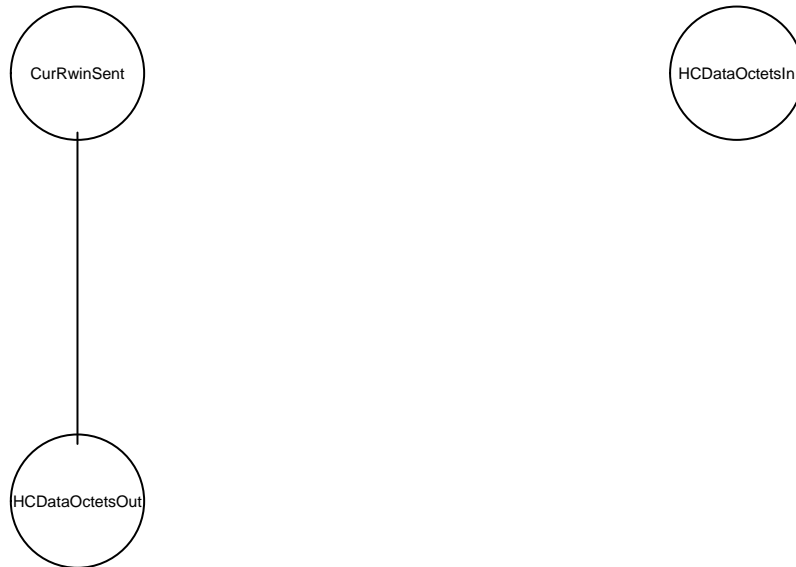
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



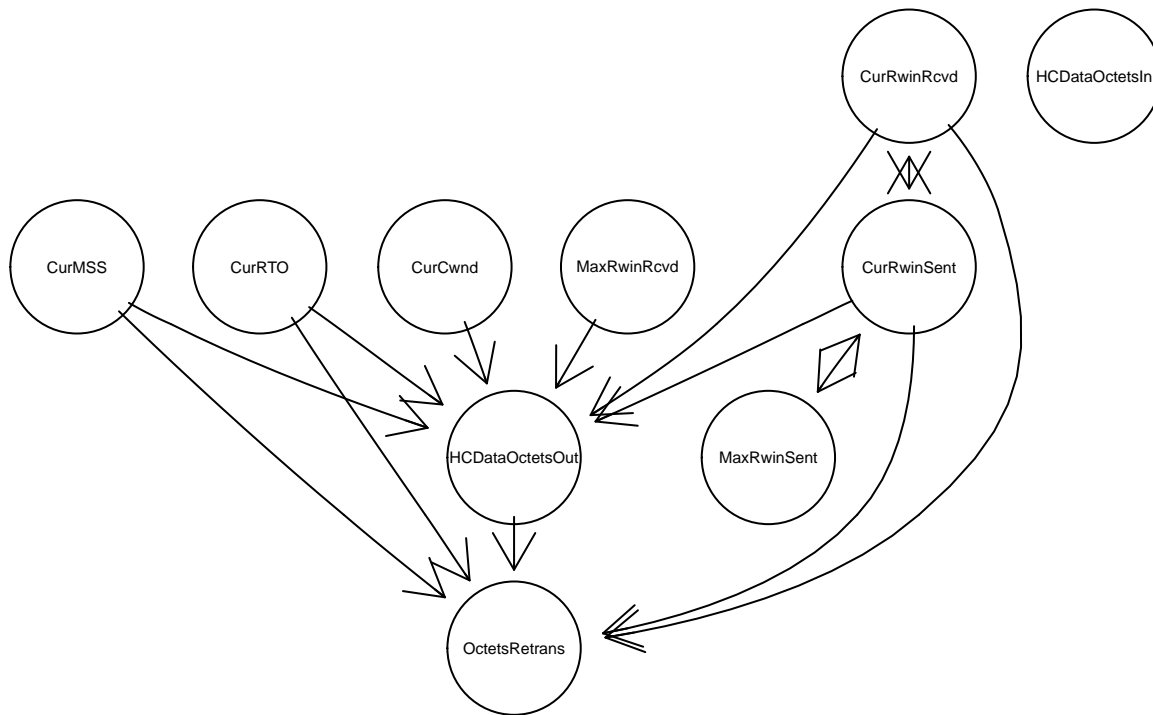
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 203
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9776b0e75d8d8188abd85e261949f5c13bda0b0d654ee52721bf8358"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



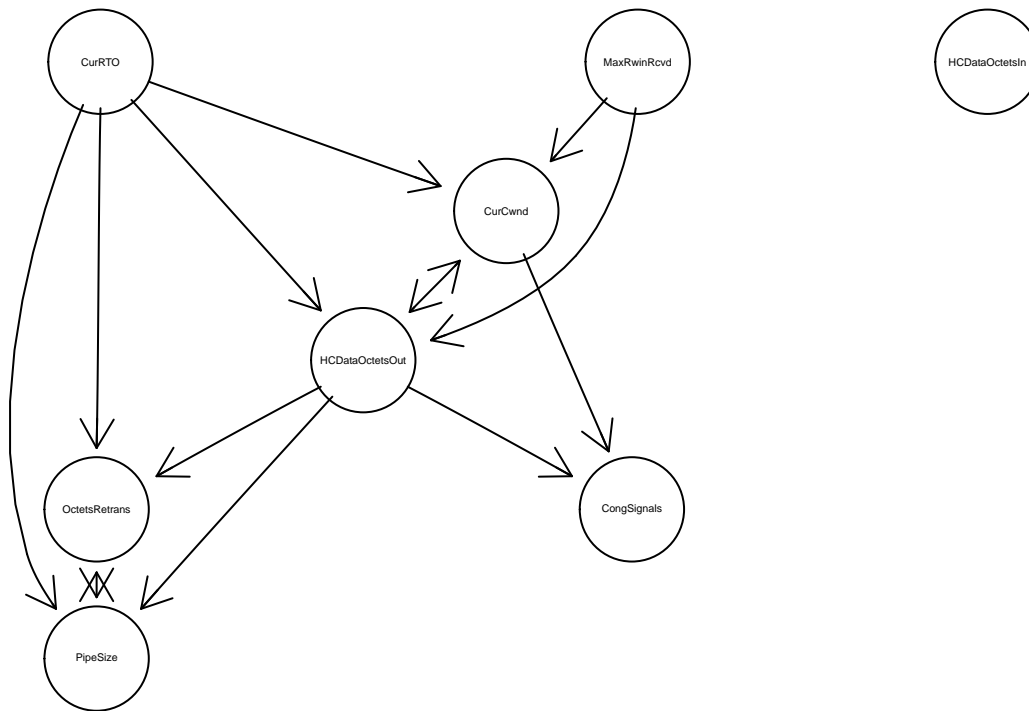
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 204
## [1] "/Users/aaronkruchten/Desktop/PCA flows/97c79d0f17ea70d2d5e4a6bac620b4b266fe9e903376347f7f1acdf8"
## [1] 205
## [1] "/Users/aaronkruchten/Desktop/PCA flows/988aa2d8be1ab56efc221243c4dd0da3224158f6123e2e1d5d6b2cfb"
## [1] 206
## [1] "/Users/aaronkruchten/Desktop/PCA flows/98b977f2b5c479167823d94015db11019c2f56a3a9671d82986a15b3"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



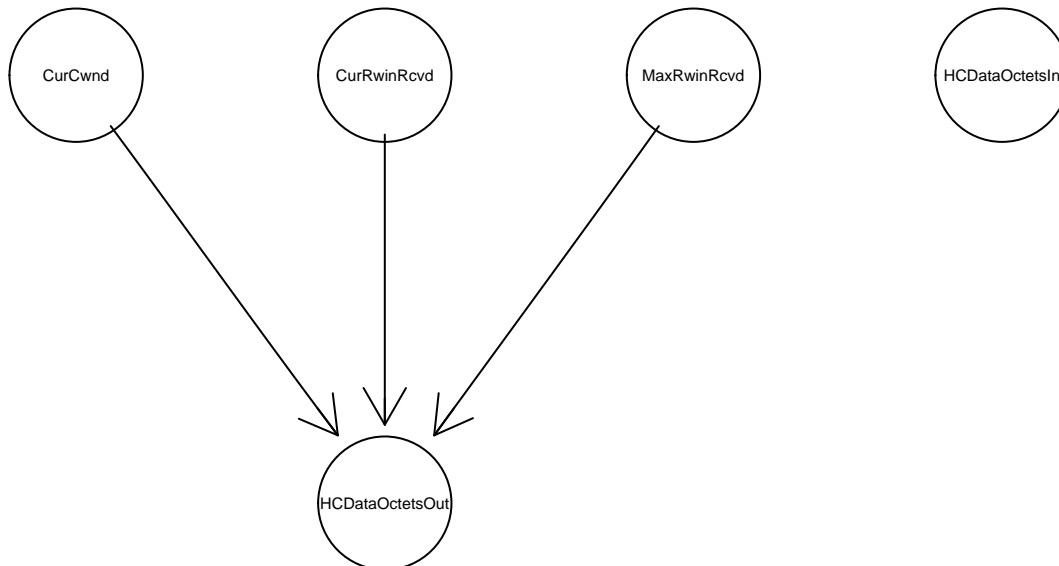
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 207
## [1] "/Users/aaronkruchten/Desktop/PCA flows/98bd9f70a03ba5a5157481fd7a4a1952a1b0a92941349d6f4eadc7a70"
## [1] 208
## [1] "/Users/aaronkruchten/Desktop/PCA flows/98c22ce8fbd478412e8e4b80b4bd0ab4ef7d435d9012a4455a6b01c5"
## [1] 209
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9a4100dde22e53b48d478bdce6ac1edf09cf115520b5dbf67adc9c77"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



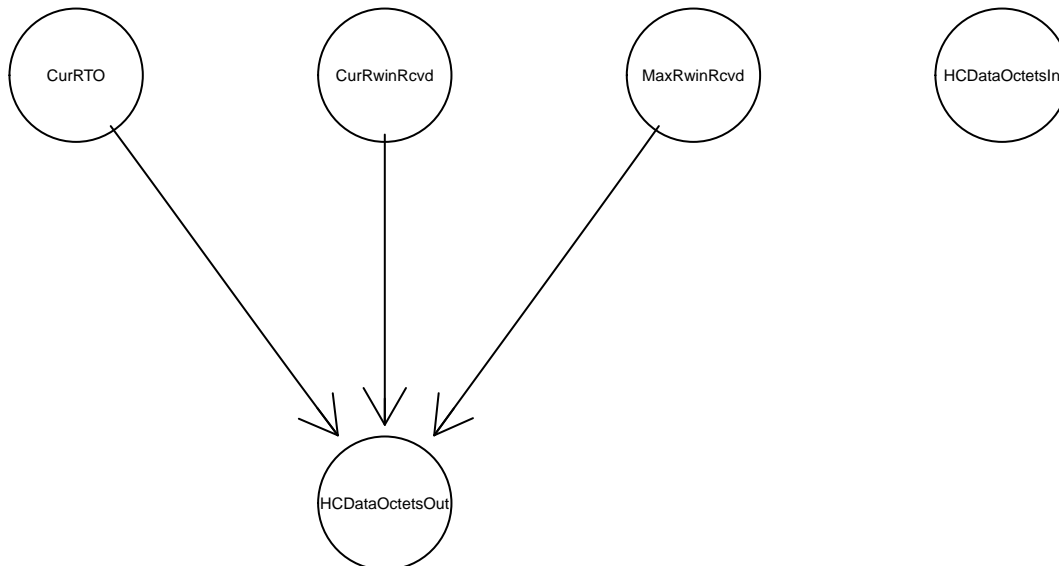
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 210
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9a9be90c54e7c6dc4ba97bf748ff928617c9adb245fedd847d9e6164f"
## [1] 211
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9ad9f8905dd45086ebe4ecc596b378fab72fffe4f3f4cf588a94229f"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



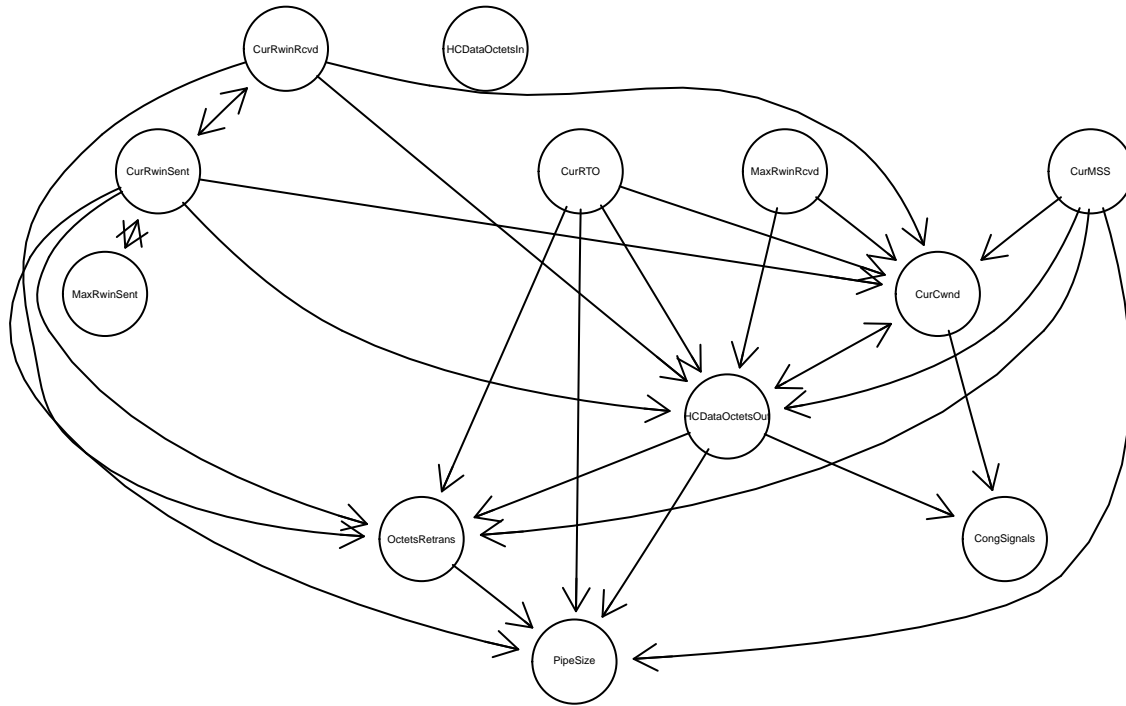
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 212
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9ae7ff4a01f18b376f7f8b4a8e2c4b23420f5980d37df9ec1bcc0061"
## [1] 213
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9b3888616a574e7b5875621c541e50f2f9194bcd5ed926a789ff2d8"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 214
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9b897c278c83c7d1506c494973e5a62fe0cb12f07799b519ea4ad1f3"
## [1] 215
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9defaf5e8b178ffe75e806aef5c670f9899844b51d11a6e8f09bc574"
## [1] 216
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9f15ed65d4c65e8d43786de46bd1f308241d4c6847e4809213b179c8"
```


**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

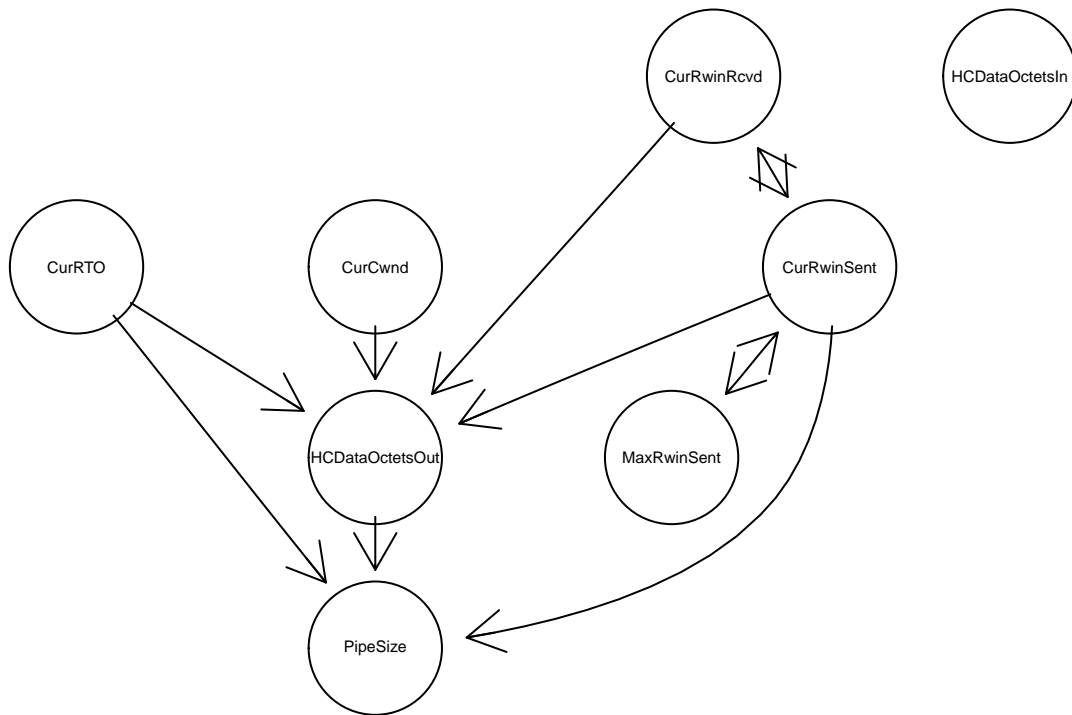


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 217
## [1] "/Users/aaronkruchten/Desktop/PCA flows/9f3570b308dc6c7719a2533d143ed8c1079dc2aa90db0dc6104d5fb9
## [1] 218
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a0c147d80e78dac1a4333bd0c50f11f6ab5839588f3a20e107688395
## [1] 219
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a1dc75efabaf1dbaa1745bbab5bb4e84685ef9ed554fe0b953bf66fc
## [1] 220
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a20cdbd885c437fa7d8183893577c4c51523ea22175e2dc9ee26a382
## [1] 221
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a364257806bee54e39f601e2f193c34799565b098c0ac1844b725753
## [1] 222
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a3ad8e210efe714b473b91bee65f70d7202dc8b0ce9f558caaeb19ef

```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

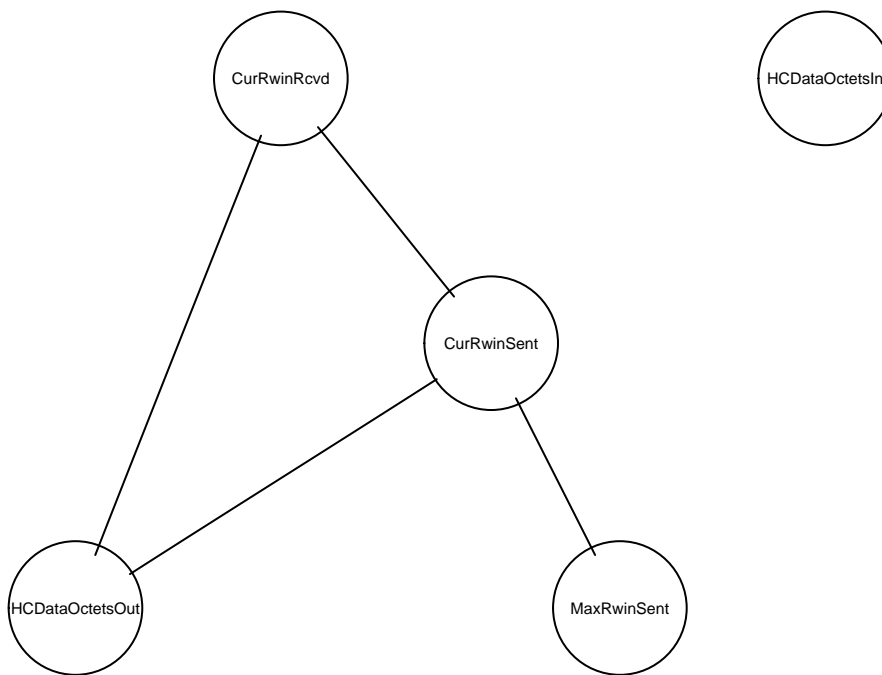


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 223
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a5037f8b2941b0cc924759647e6df28f98235185bb95a615722f26cb"

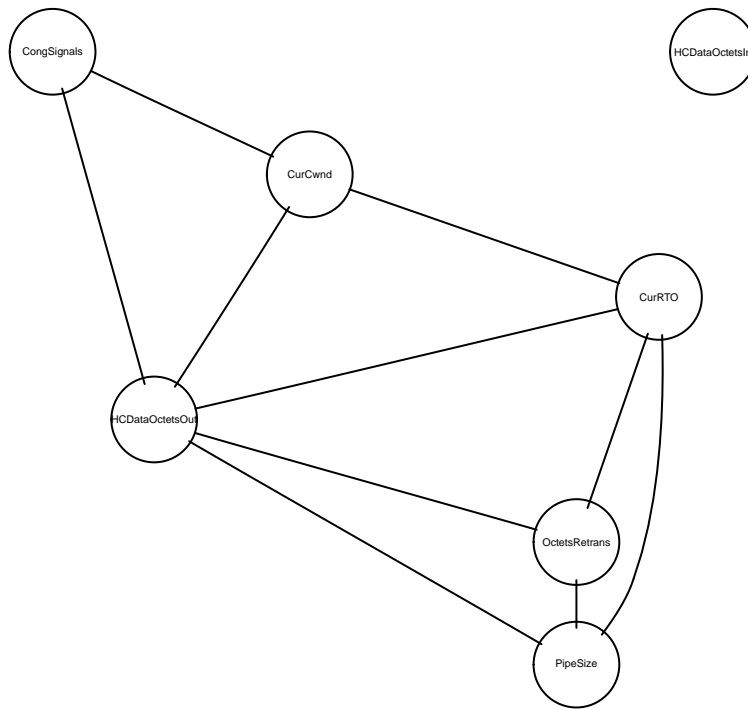
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



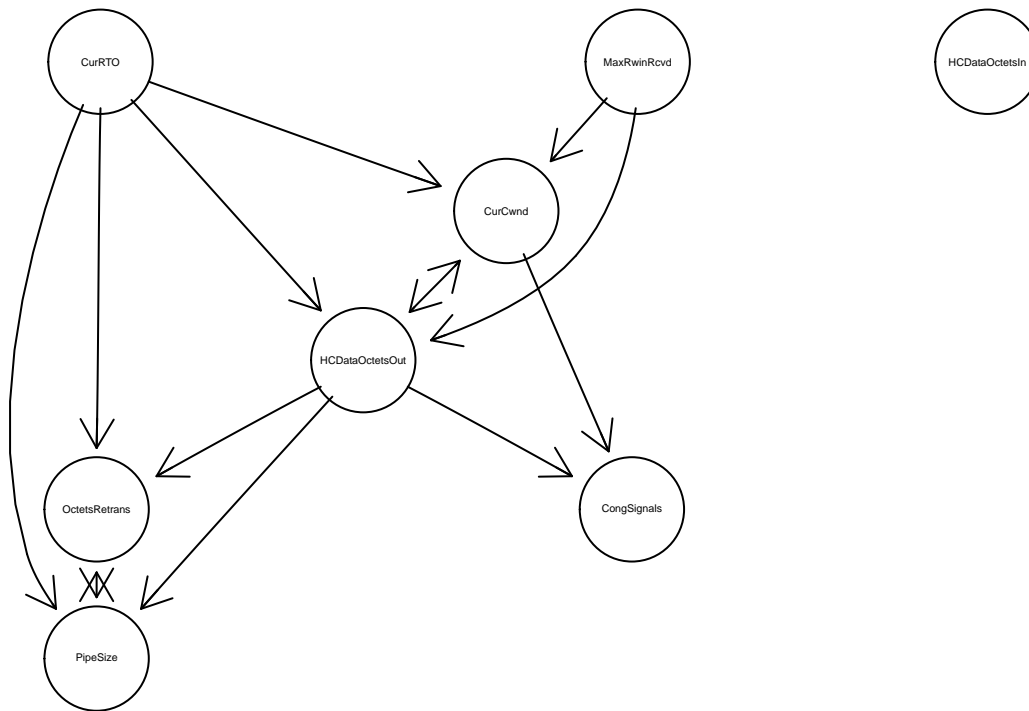
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 224
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a5e745f3e0a37057a794d4761e9d5fb3ea8febad22a7081ce0c119b6"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



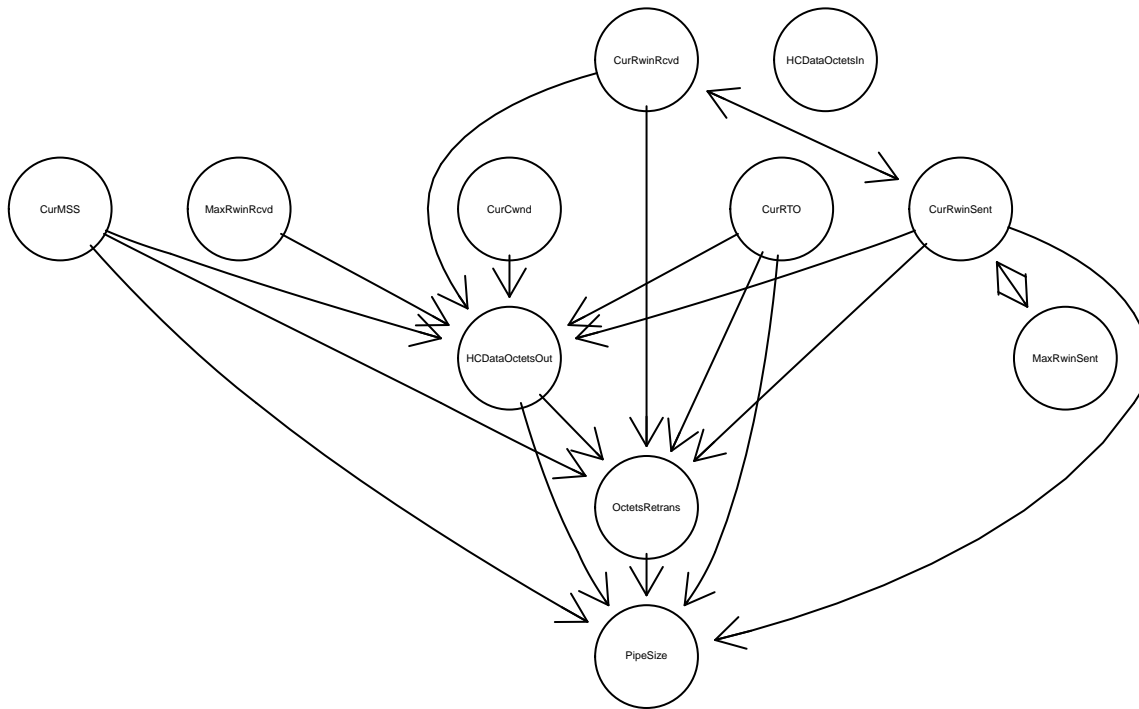
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 225
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a8635e373ca8ef12276c6d13a6e80cbeae5c727d585b169e1efac9c1"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



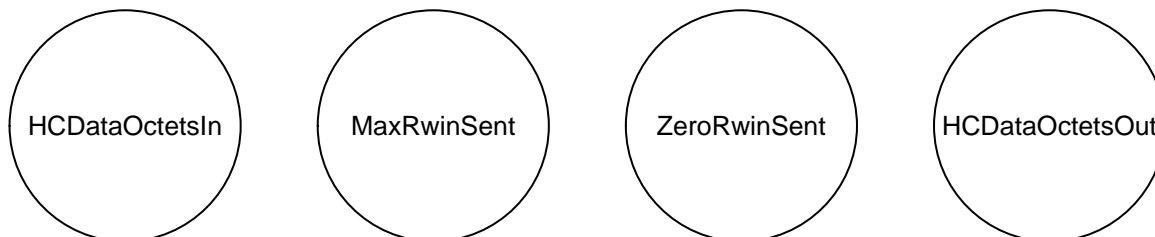
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 226
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a8c1f5564139f0268acfb2663ba373a1ccf7d85dcb9de2cf35148d19"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 227
## [1] "/Users/aaronkruchten/Desktop/PCA flows/a9b81f5b85990c779017f4eb7432a81cc676e75203a7cd1d56b64a8d"
```

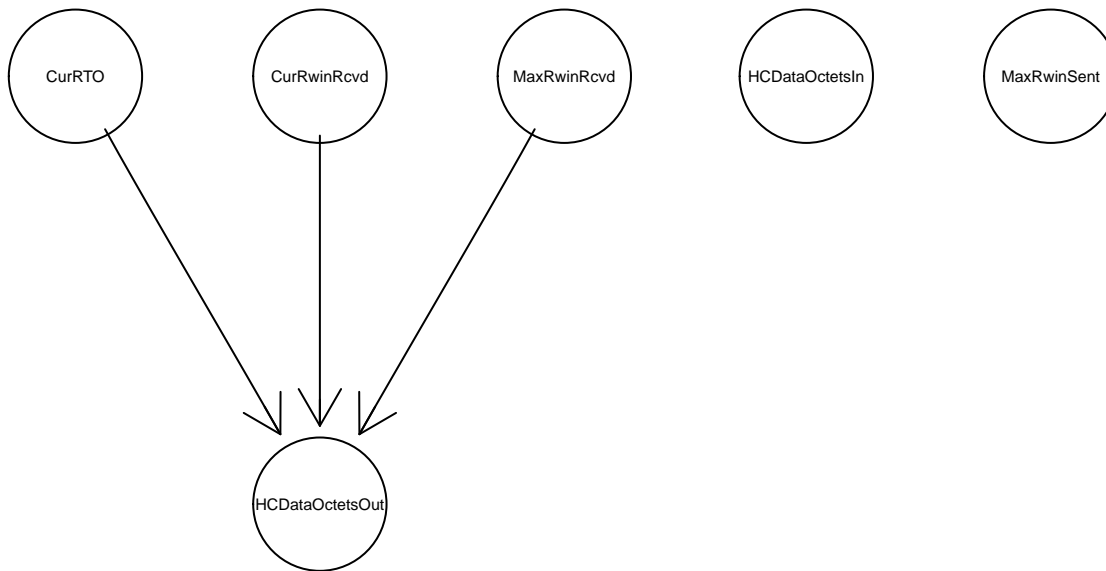
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

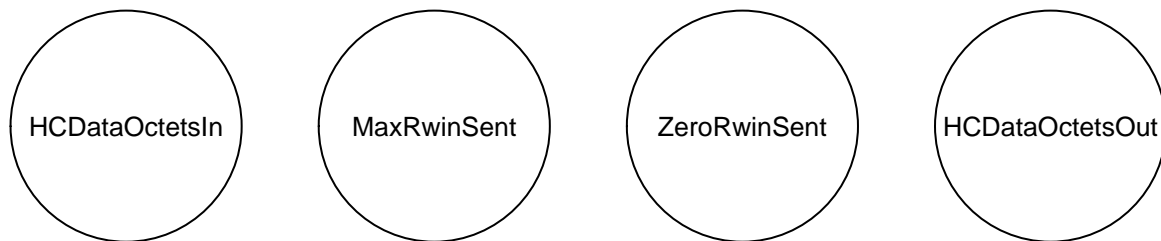
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 228
## [1] "/Users/aaronkruchten/Desktop/PCA flows/aa37a93bfa896e41c7408aa94af71d0b7e42348c334cc07aa2b7dceca"
## [1] 229
## [1] "/Users/aaronkruchten/Desktop/PCA flows/aaba86789fd964b1c0272be0942470fccc53f64430df09d9897952e7a"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



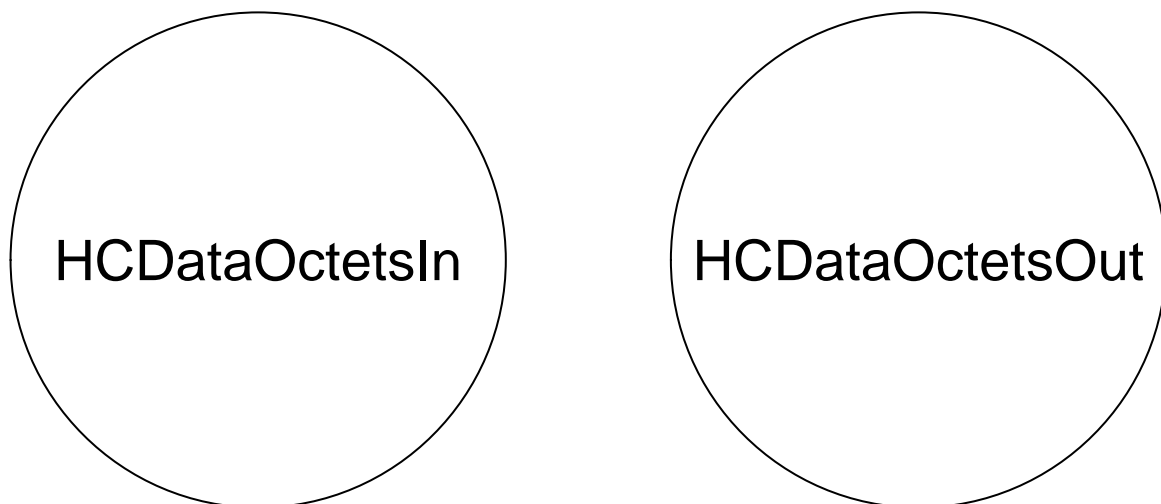
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 230
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ac1299eac5858a80e39178e249f3950dc6c2c9da80fe05b8260a59ab"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 231
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ae2e78b8ffdc5f57b91af5dbc8beb6dd725c36ed1ad840aa40a58b1"
```

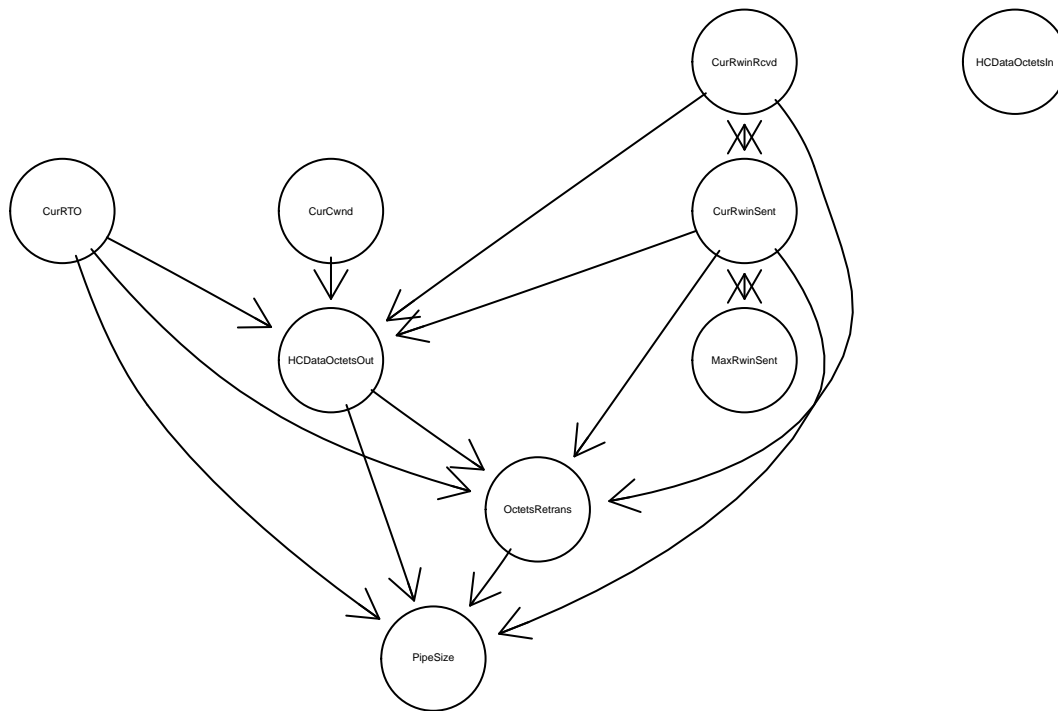
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 232
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ae502419591c7b4d21ed9ab9c468bc841dff3c58dd42362675613e08"
```

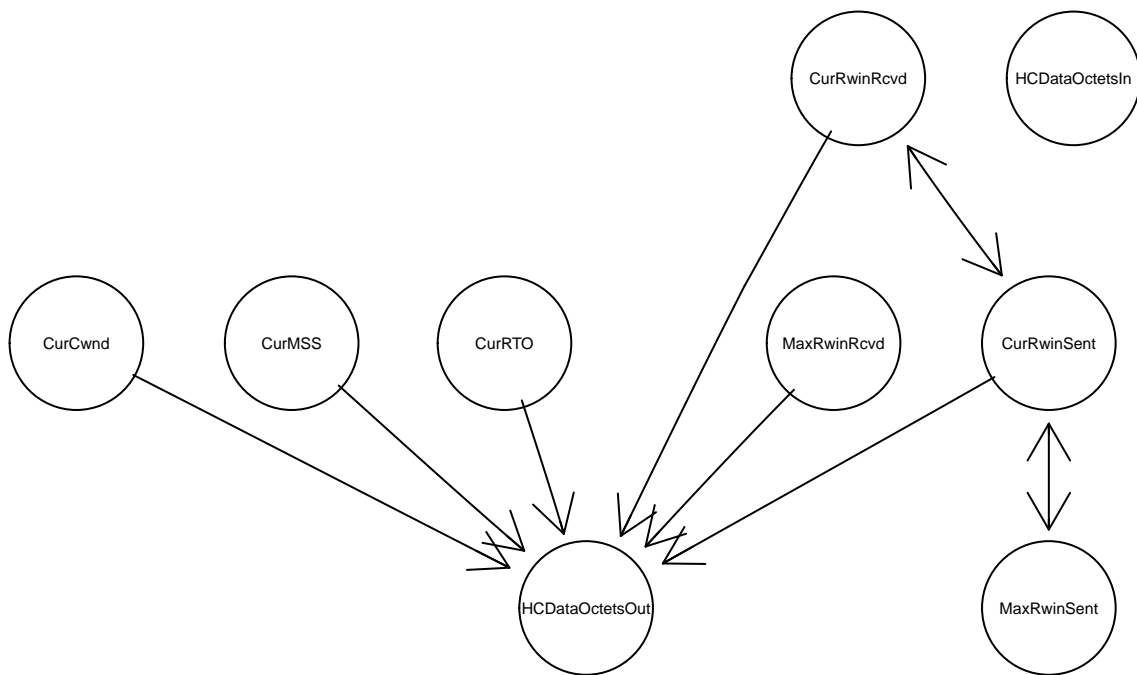


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



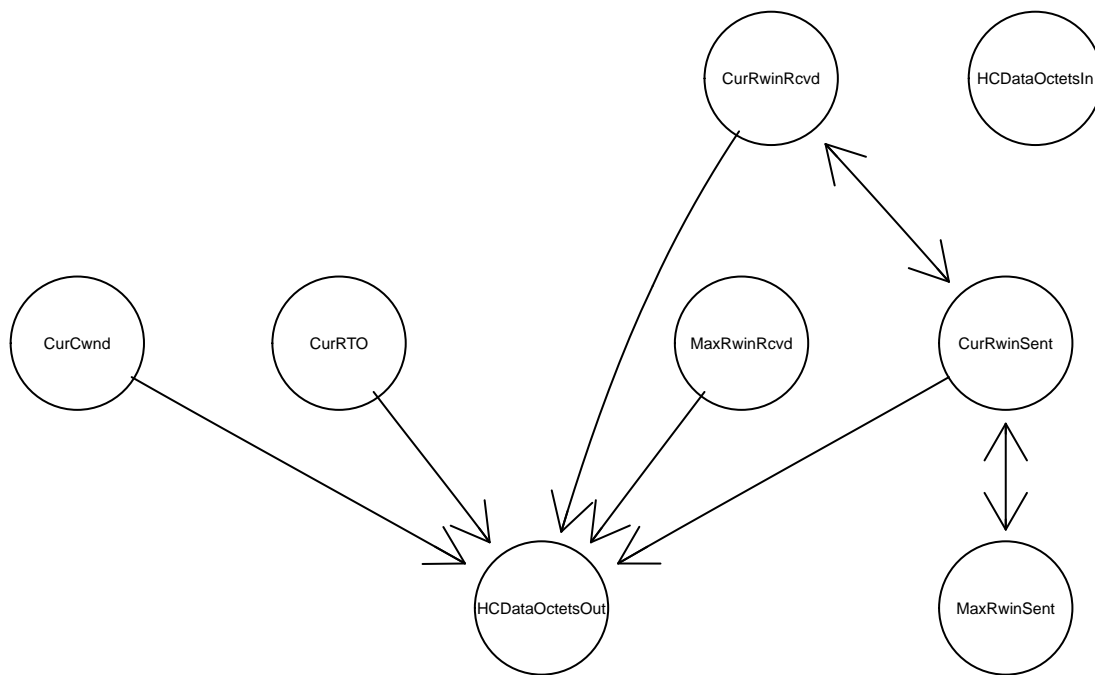
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 233
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ae6cd514d611b4c7220862700fc5865f4adcc1888be2d1baac39cca8"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



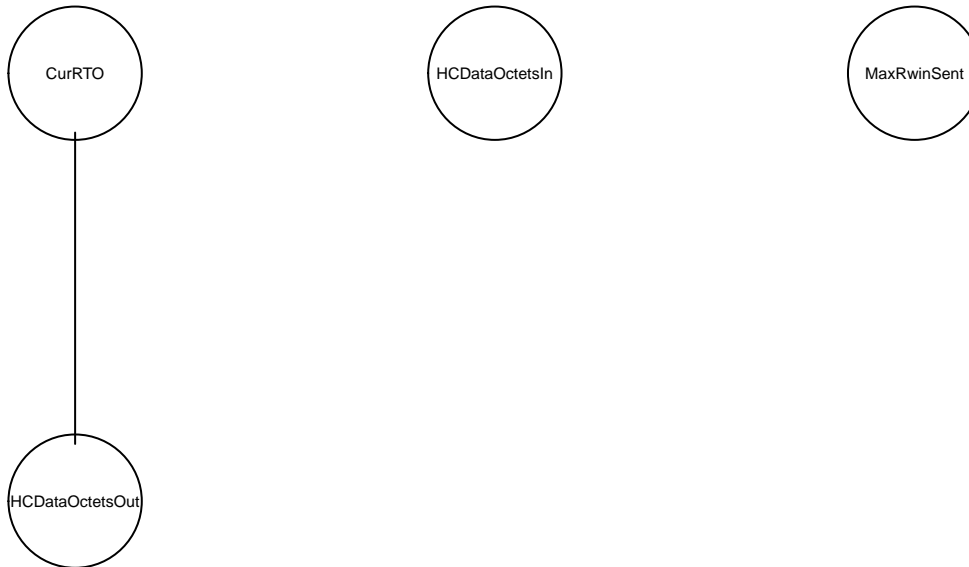
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 234
## [1] "/Users/aaronkruchten/Desktop/PCA flows/afd0c22a8ac36dba6f1f8d06cb2bba60238a6bf6f8d085acd7a2c6773"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



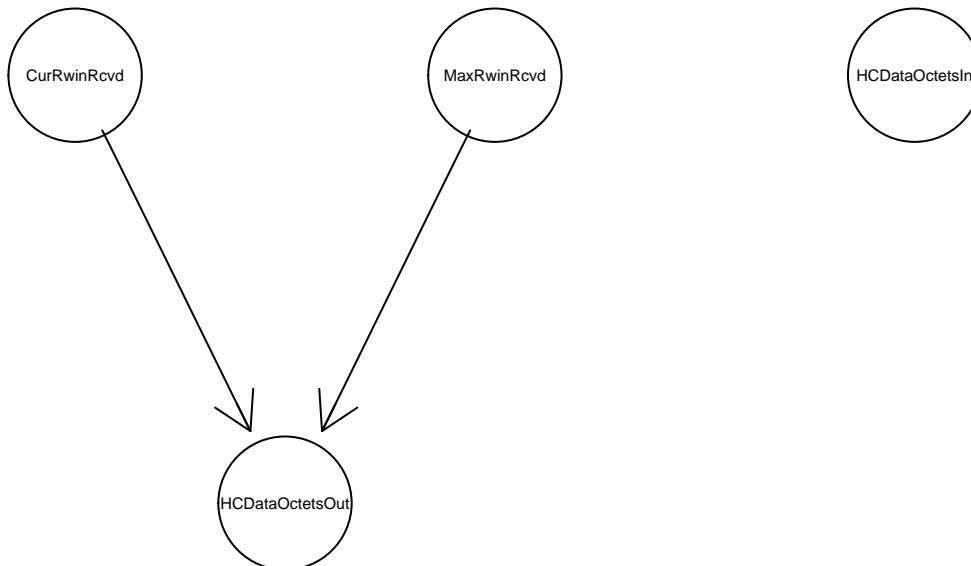
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 235
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b02bb2287e64e85e4885af006181dedc9d677c43831628f61d1eecba"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



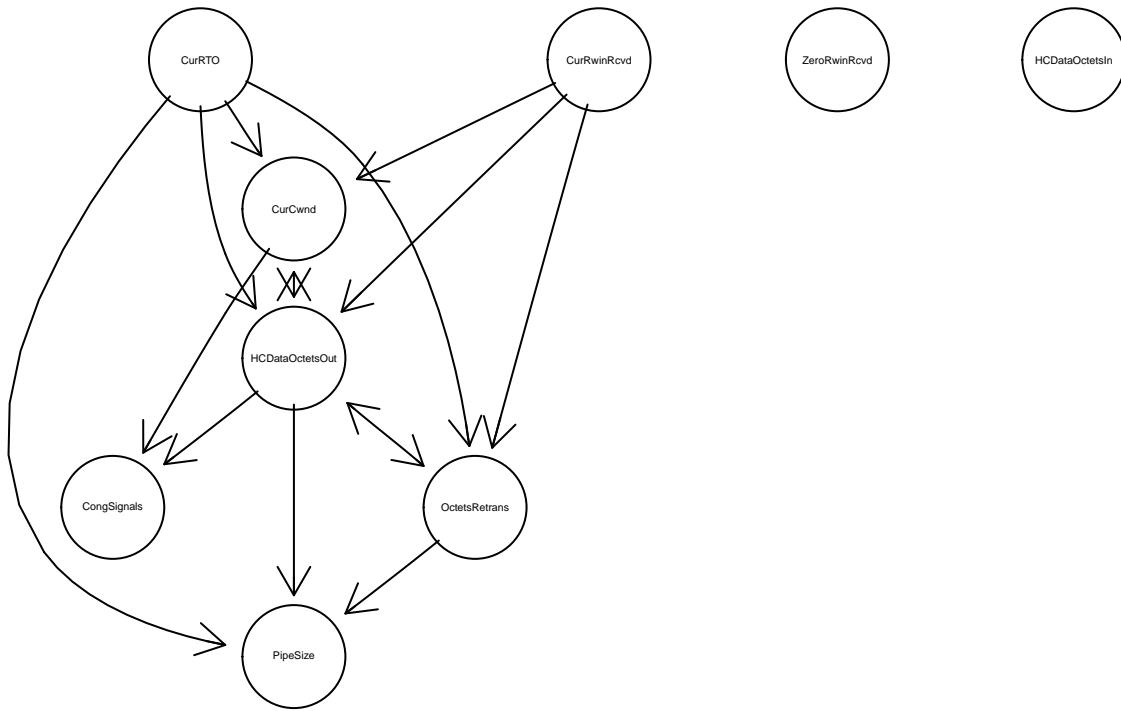
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 236
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b06679fdc9acce7efa6277a57ab8659182a68b33e15fa9d773db4558"
## [1] 237
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b0e6e70ef2452ff17e842c6046a59d605ac466cb36a92966168c7776"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 238
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b29c2c4badb623fde7728173a354d004d80c9cb0685b2698474364ea"
## [1] 239
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b2c6e0f86a063725b8e5e1643a5d32f558fca1ea1627982c0b2c2634"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

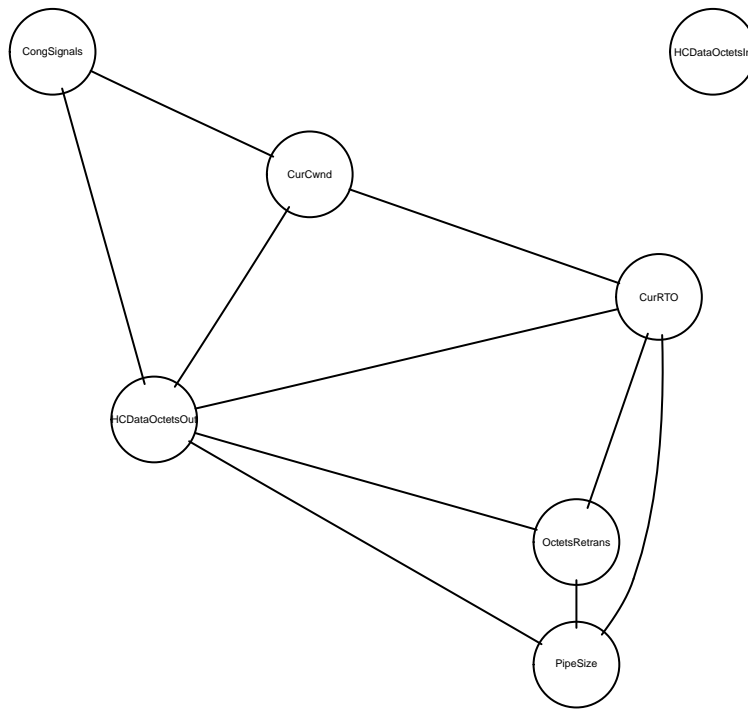


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 240
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b2e1e6d29d31614b4ef919f3decc15775827fef06ecf4ebd6e11f58a

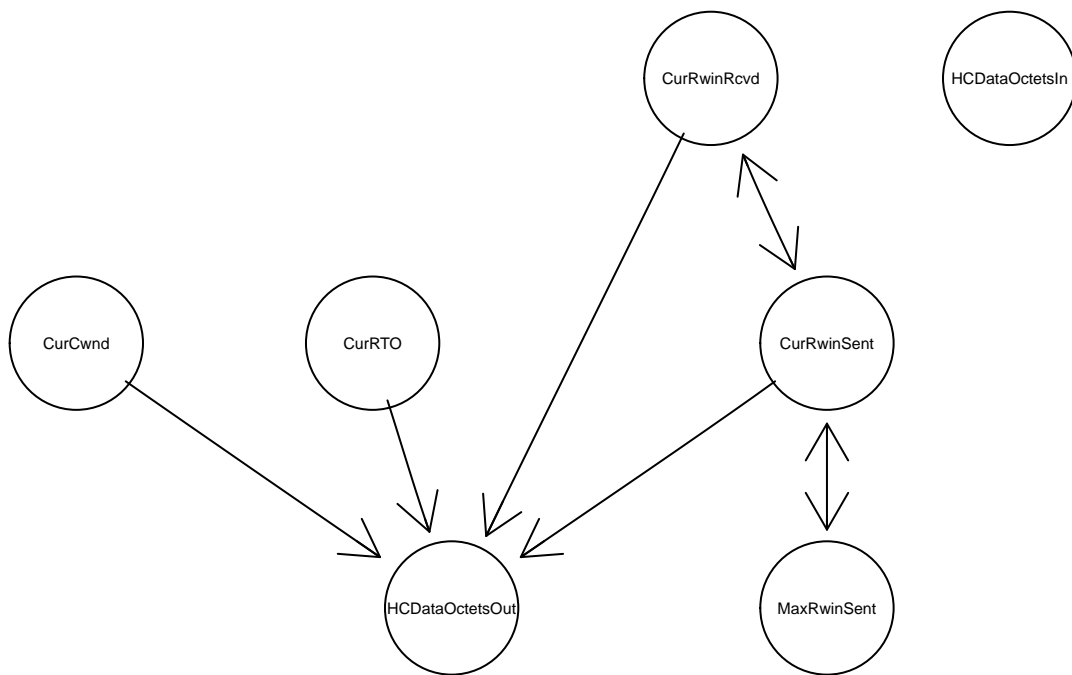
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



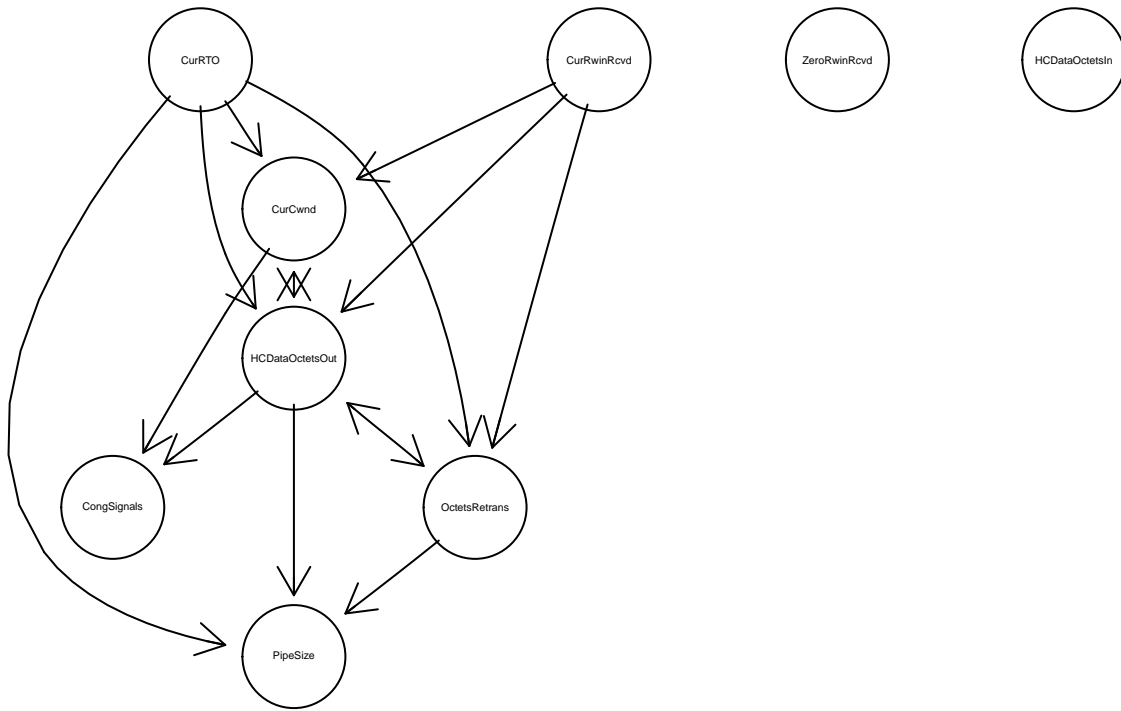
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 241
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b34cfb5b90f588958c986ec8619ff91d76e2d4149567d6bf341a49de"
## [1] 242
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b5232939f0ce2c99f12adc7ba2ab8abedb674a9aeceb11932c16d16d"
## [1] 243
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b71075628d86ffe79b0a8a68bb7eb90b8c22a7784fb03df7b4f97370"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 244
## [1] "/Users/aaronkruchten/Desktop/PCA flows/b8f2c7b528332b3cce20dfd9b115034d2174e4d4775fb924cb61586a"
```


**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

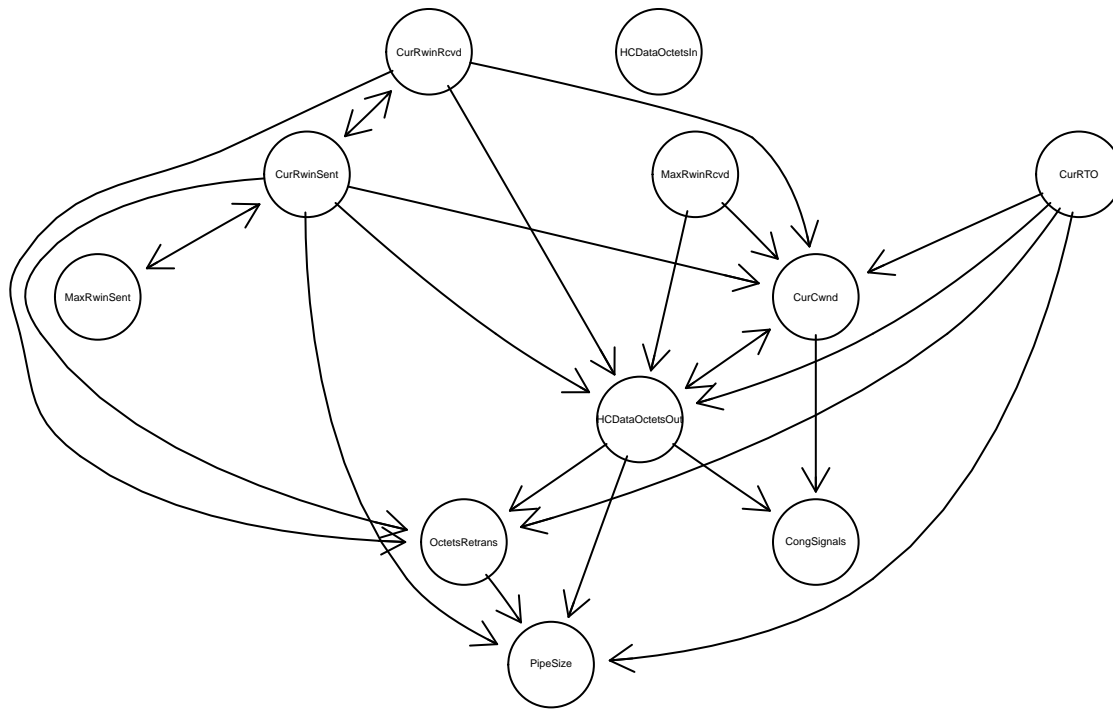


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 245
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ba071adca16134b04a5db778f264cecf3983e2e386916c8c3603cab0"

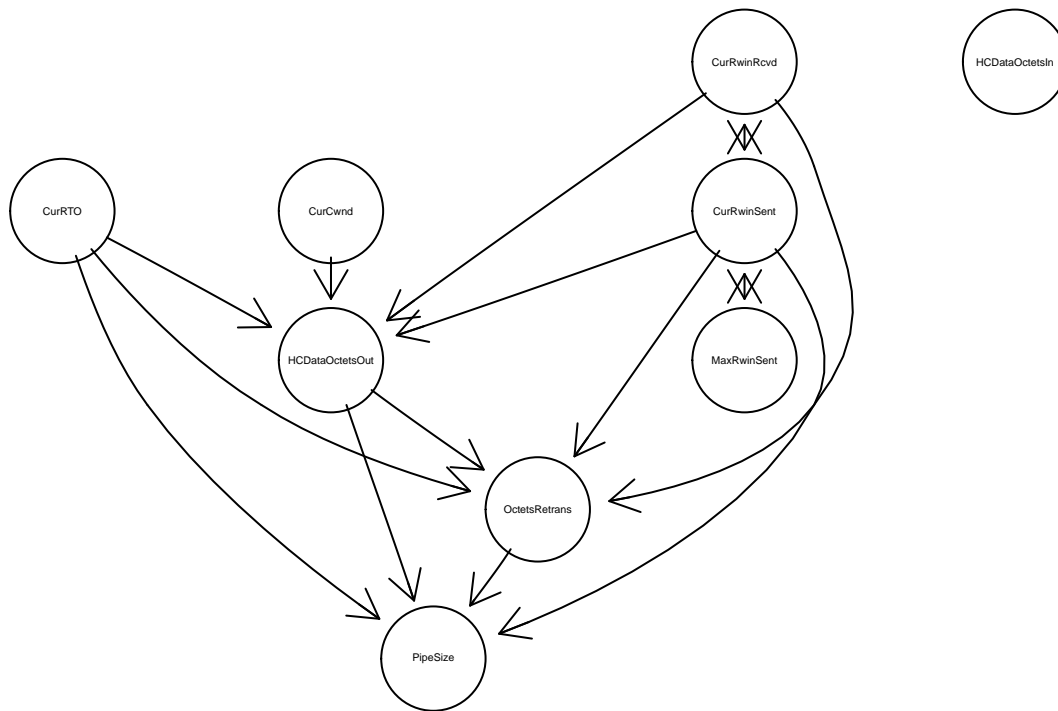
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



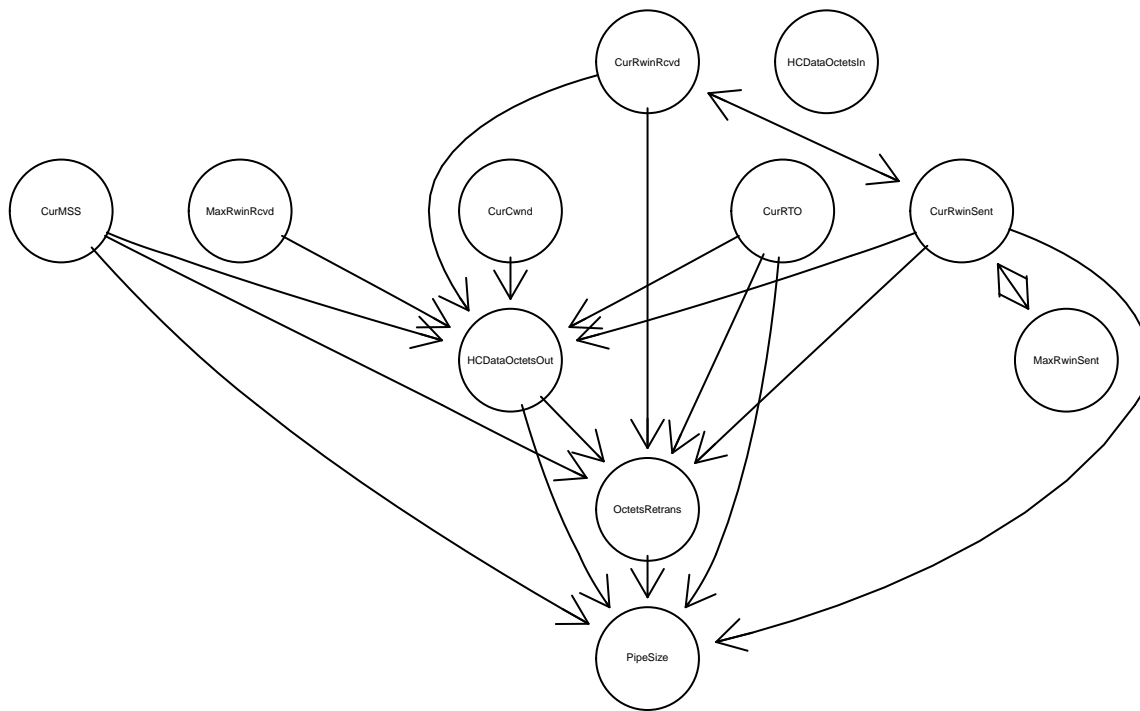
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 246
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bb30f8e578e713e03092e87b6529bc48c65320989941ceaf243c4721"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



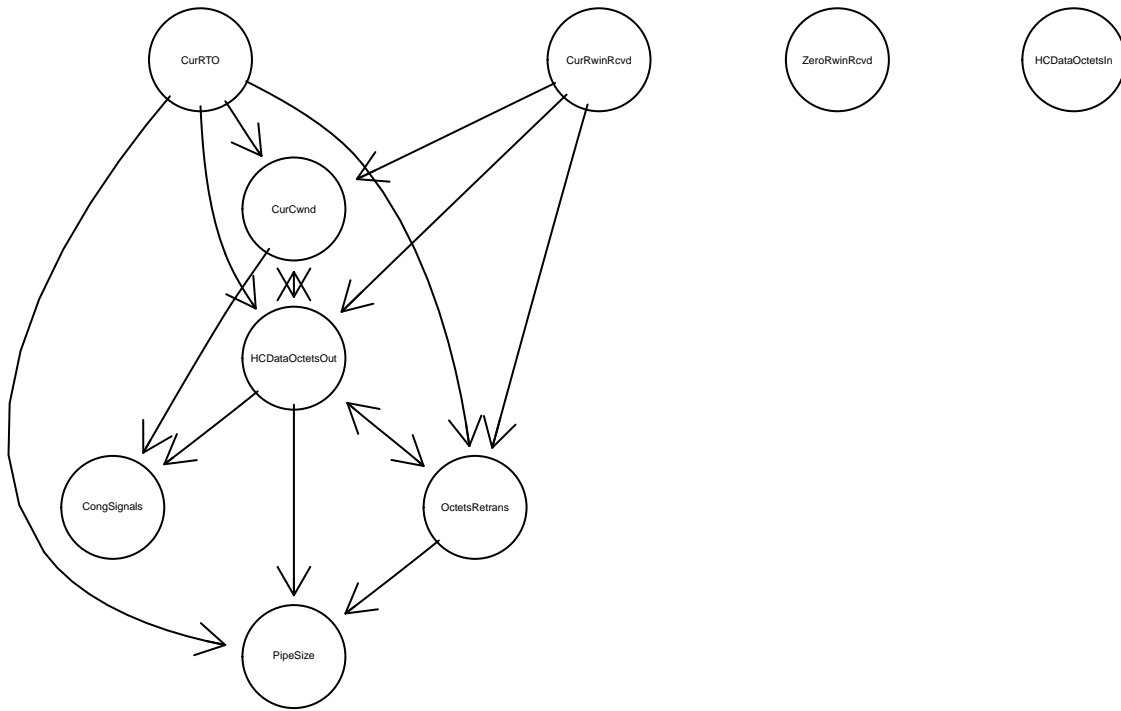
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 247
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bd3997e0534dbed2ae9a62474d7dc48ead0fc05d3987bd2812f946f2"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 248
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bd4d85723b4f141d96cde95c6aed3941f25ec1624ff9ecfe46bf8d0d"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

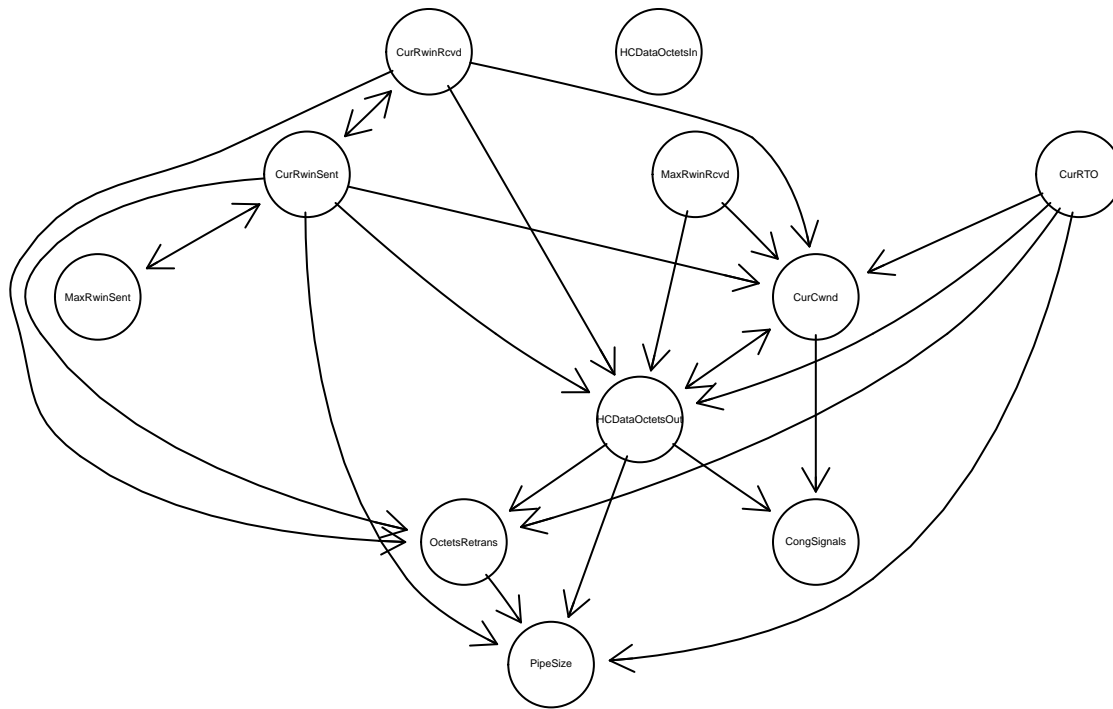


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 249
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bd548666a9a2bd1ea87a8c4ba1fa111668d77b621c6167e959b3011a"
## [1] 250
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bdd1d56e0a7ba165d742f04b3b382634b66643d93c7f6fd5a3af5ddc"
## [1] 251
## [1] "/Users/aaronkruchten/Desktop/PCA flows/be5fba09c9921cb679849e53ef459b5629cb8b5562000adf03a5751b"

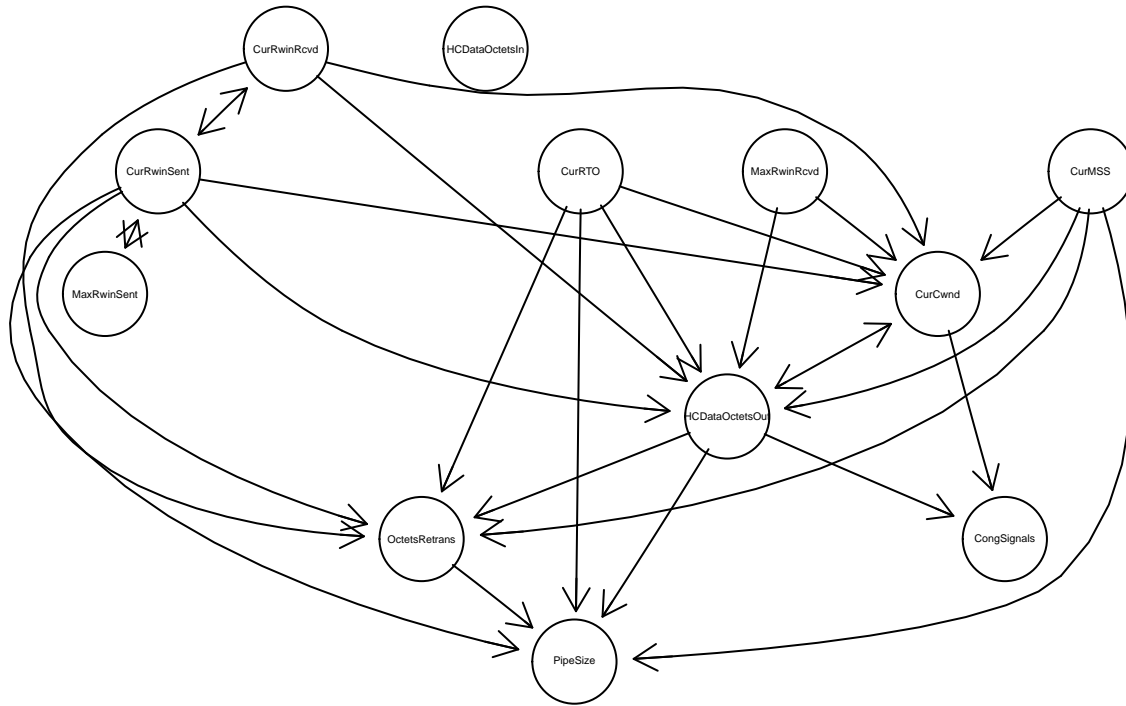
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 252
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bedf9253ad61e06999c05345b81cfc5269dbcf3070840199fddb3331"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

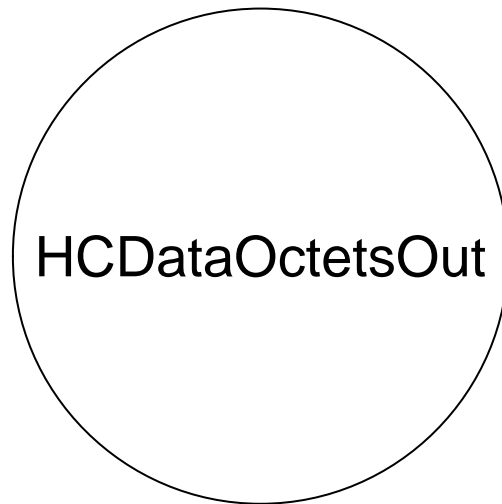
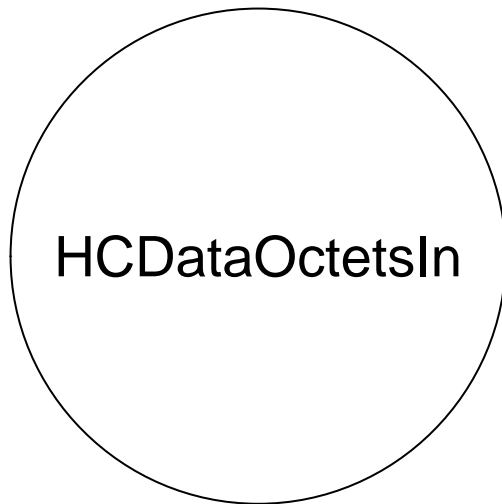


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 253
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bef78b32677ed9a7976f9c7729510f67316fa00e2d780c2b27ab1d54"
## [1] 254
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bf407079fe952c771613b956e3ce285cff6e00f96aa8f901c5099b5c"
## [1] 255
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bf7d12014f549e5bfe3036a71a8db02fd799f532922b650aa99d59fa"
## [1] 256
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bfc6de4dfeba4331ab58236078cd7efe6f61d4fb0419b20428db923f"

```

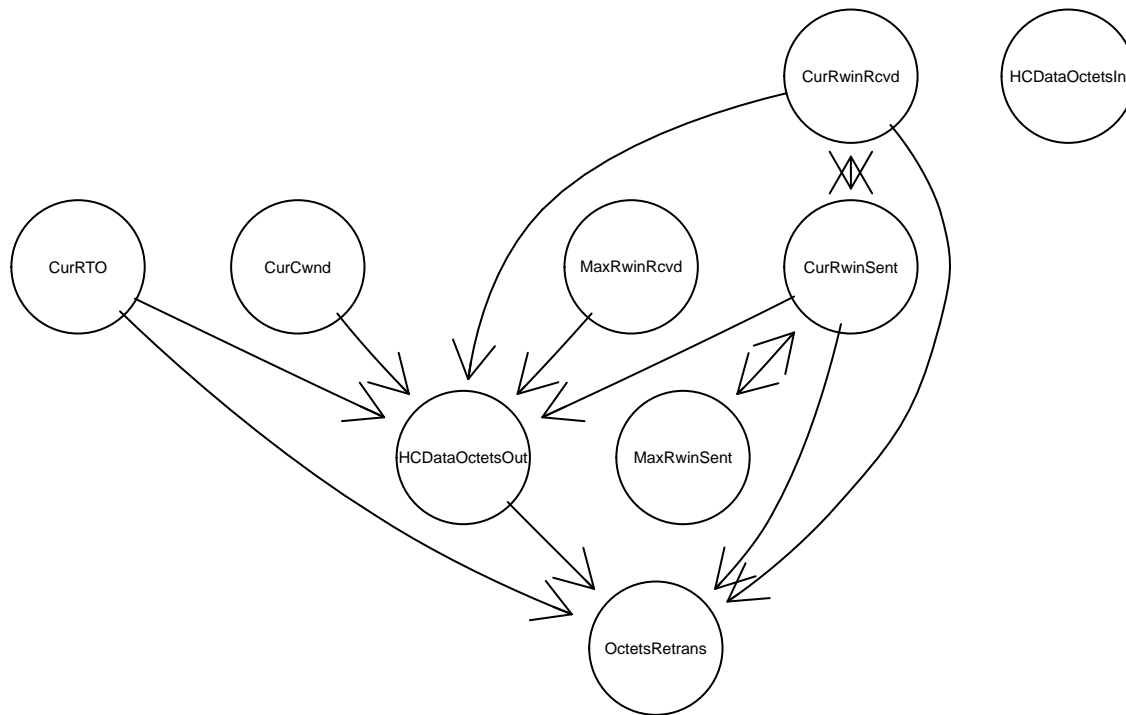
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
   labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] 257  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/bfd2a4b289ef8f0874bf5ed18fa8526d82ab45ad8ffc14f25499d7e0"
```

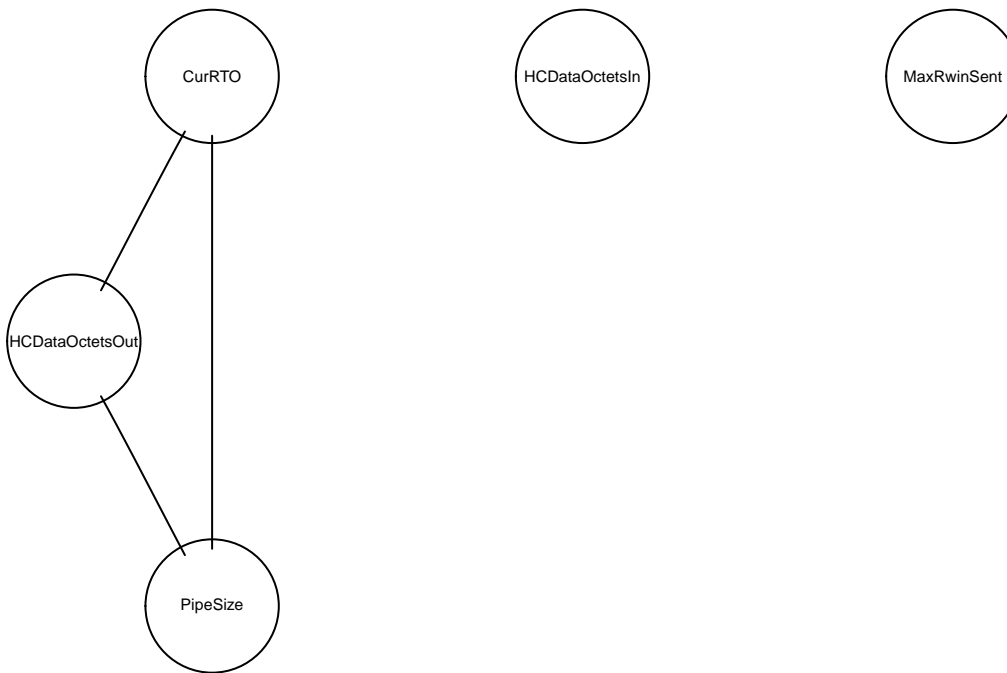


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



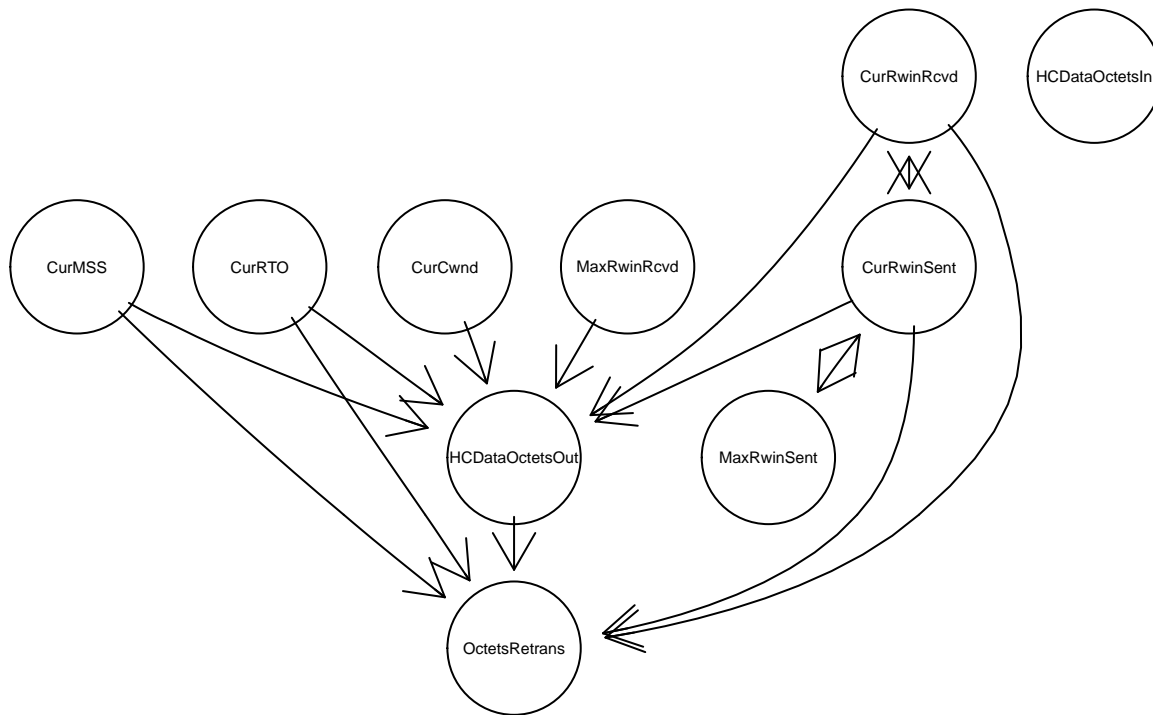
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 258
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c10ddb16c294d5a1d8bd2e899475d4d90ce26cbf194383b27fdb4ce"
## [1] 259
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c33aa4b3758fa6170a753df06e1e7f85aedf85cf744237cc72f82304"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



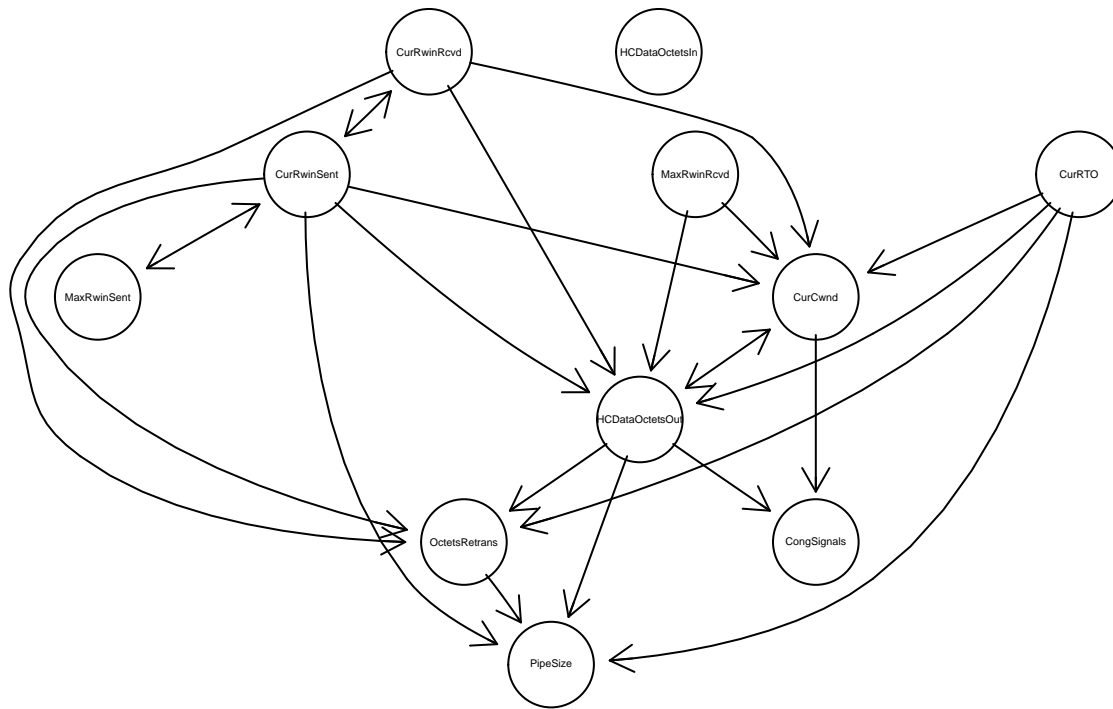
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 260
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c39b0e7ca61b04df4a62a5052e46b2dae12667c9b8a45aad0a9324f0"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



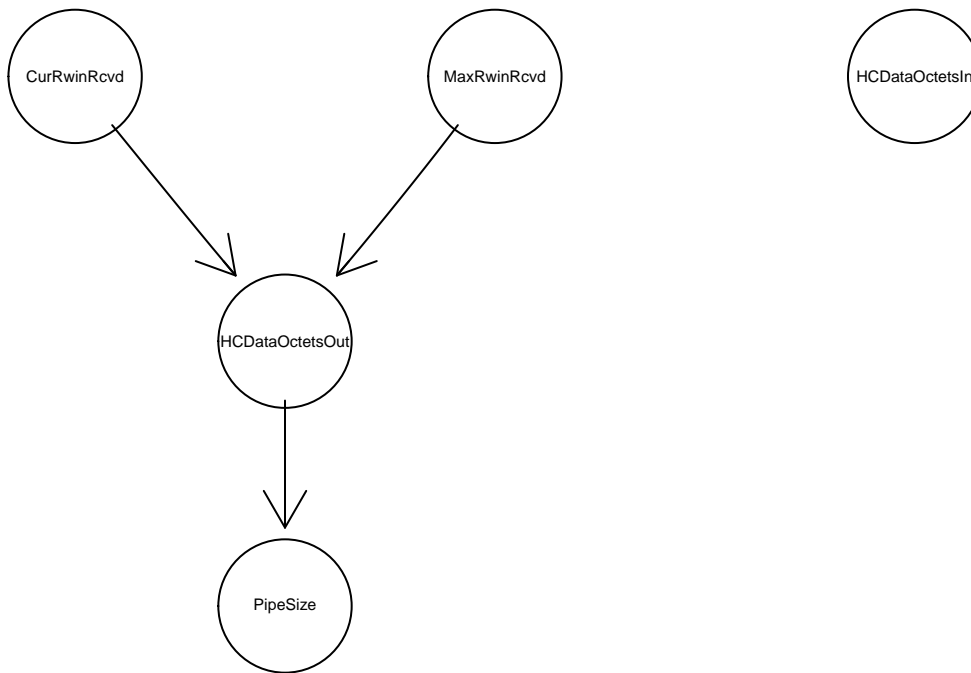
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 261
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c3add79ce866faa81c972594bf4d439599a6c3c45c61604239cbc2ef"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



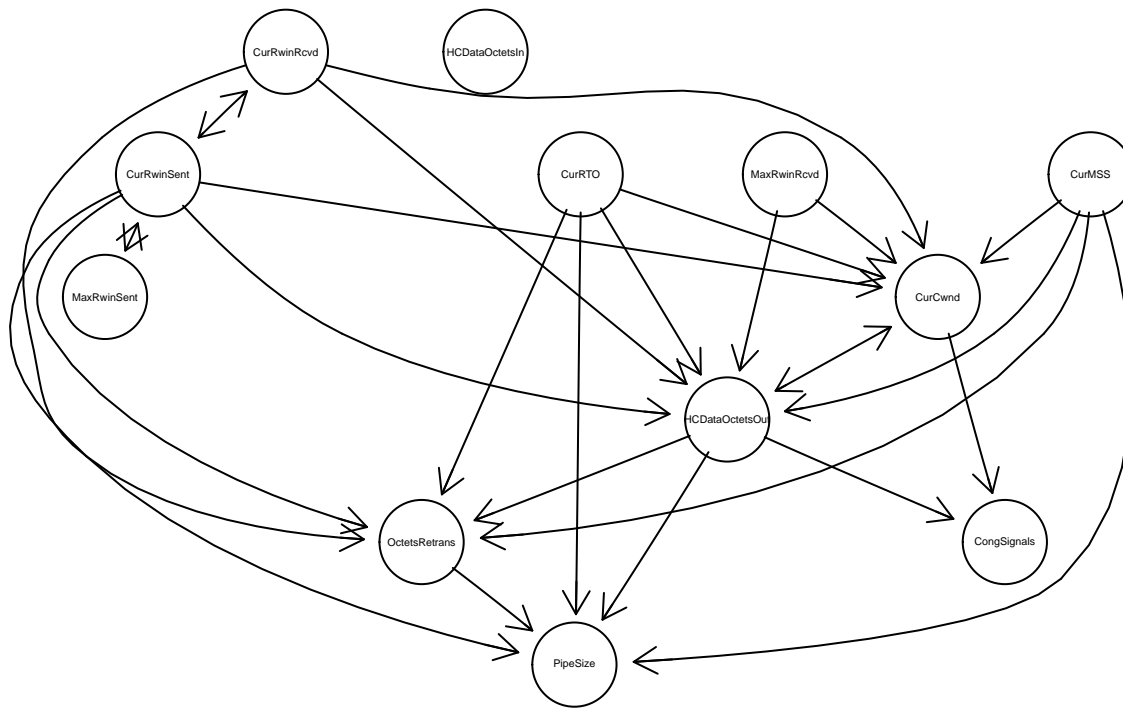
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 262
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c48f278f22f631849fed13cff493e22b3bdfc31f38d461a224c6716e"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



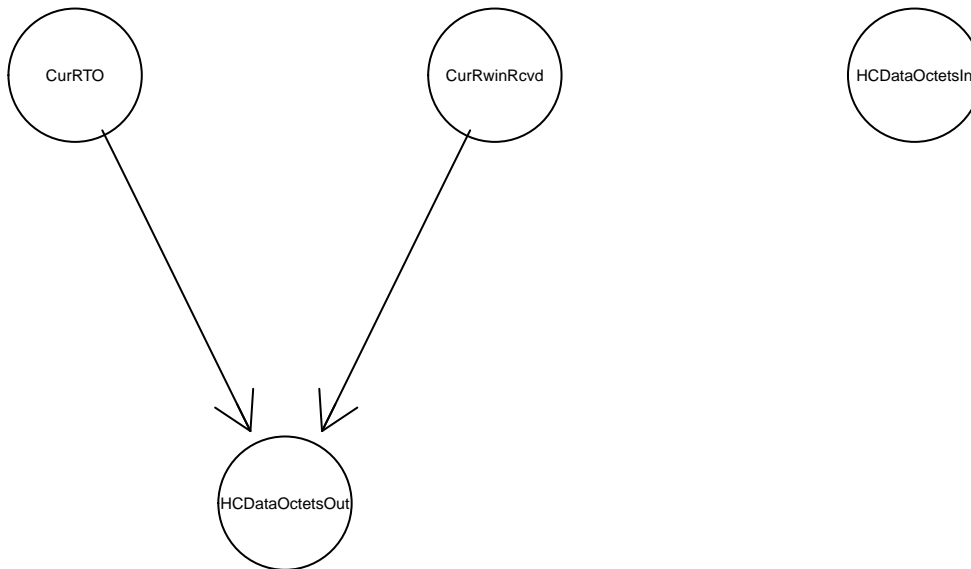
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 263
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c4a6ecfc7dbe545914ec1d033101297bd12521f073460d6d83e40519"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



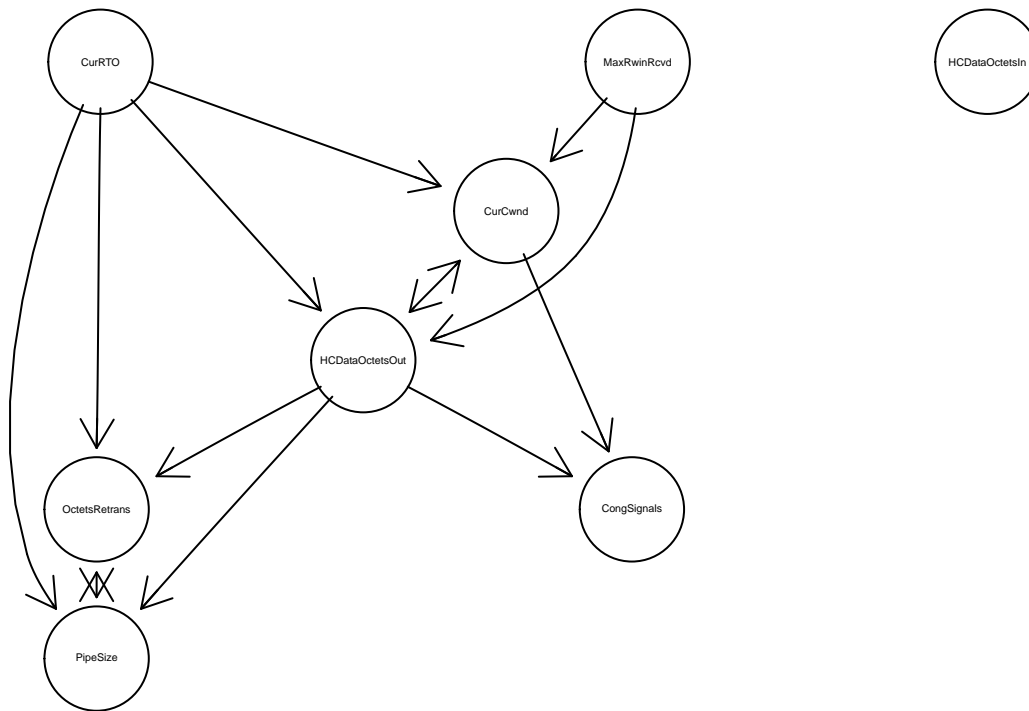
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 264
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c526c1a75da76640d733e9ec2cbc3ec5a41dfb117a0f9de1fd3f6d28"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 265
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c624e0b25e756366285ddacf28ace6ca0840f6ba42287274a7f119a5"
```

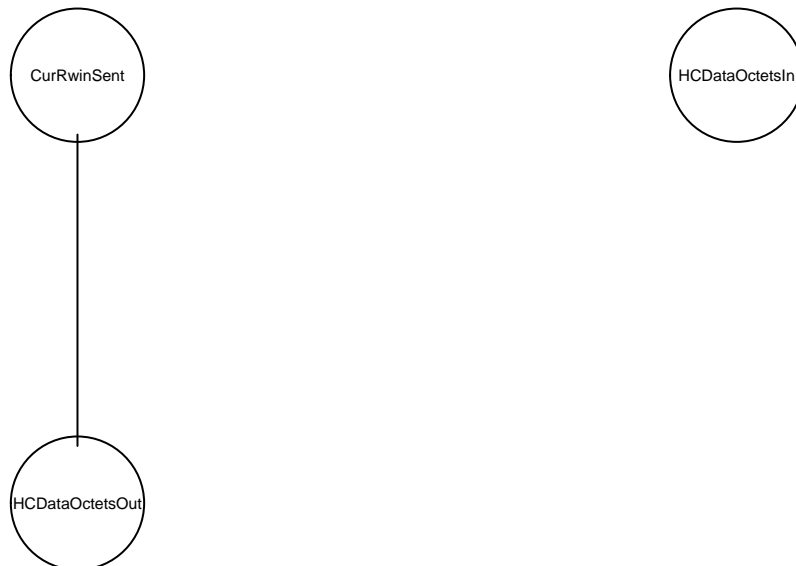
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 266
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c8530e91043e322e7cc40025e24d42f0c2796aa243bb4d21e2480606."
## [1] 267
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c8e54c29838f7fff3286a998664ad24cf6446ac131afa7b4c64d648c."
```

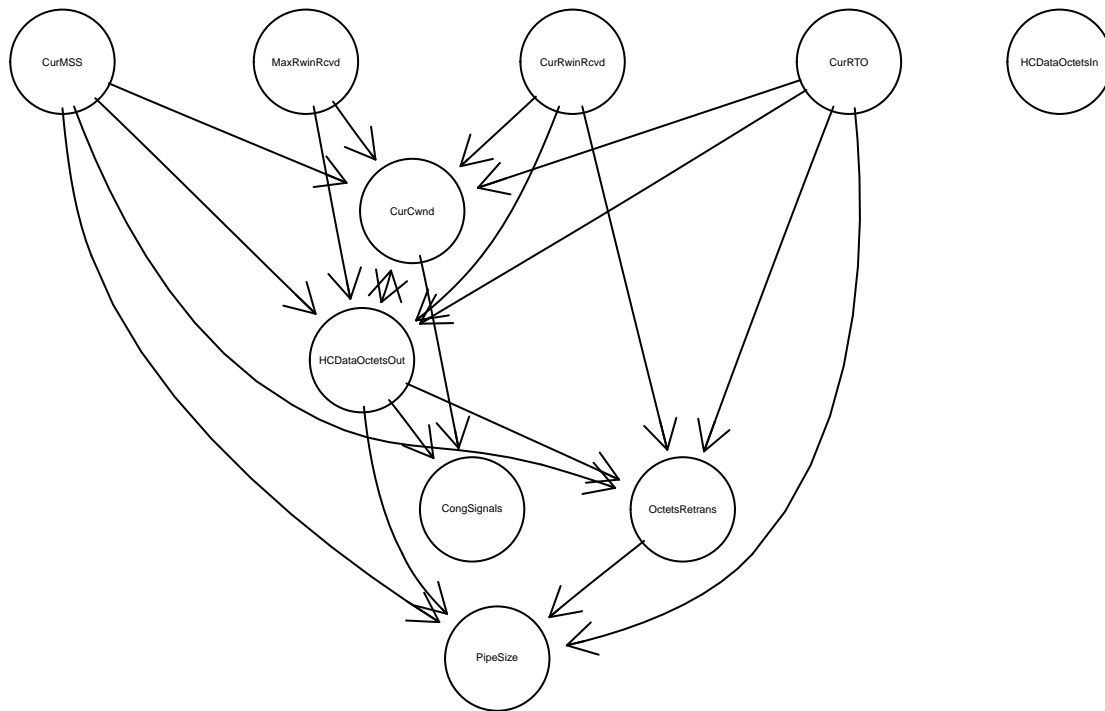


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



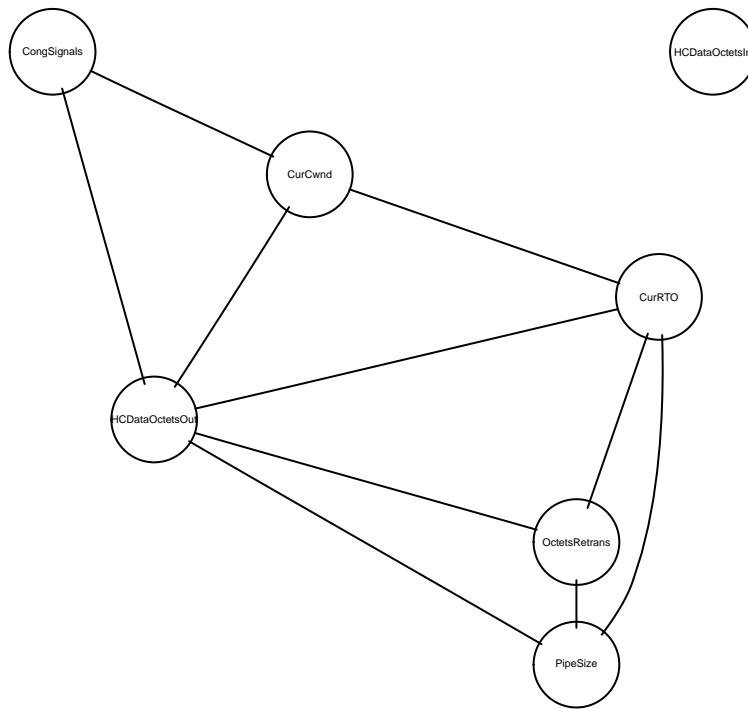
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 268
## [1] "/Users/aaronkruchten/Desktop/PCA flows/c9b18da331a7840f52675fe64ba85360e392a57f3fdb071416e06b1f"
## [1] 269
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ca598c6da4dfcca8f532ad7c2385f07c5d953aa3fc53f0503f43e21a"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



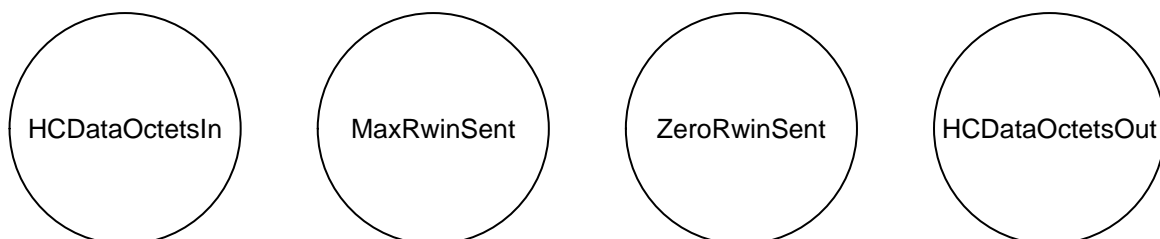
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 270
## [1] "/Users/aaronkruchten/Desktop/PCA flows/cb71d1f4f41ee133102c3add15418b16eaa6e7a76976ae5f8e524d"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



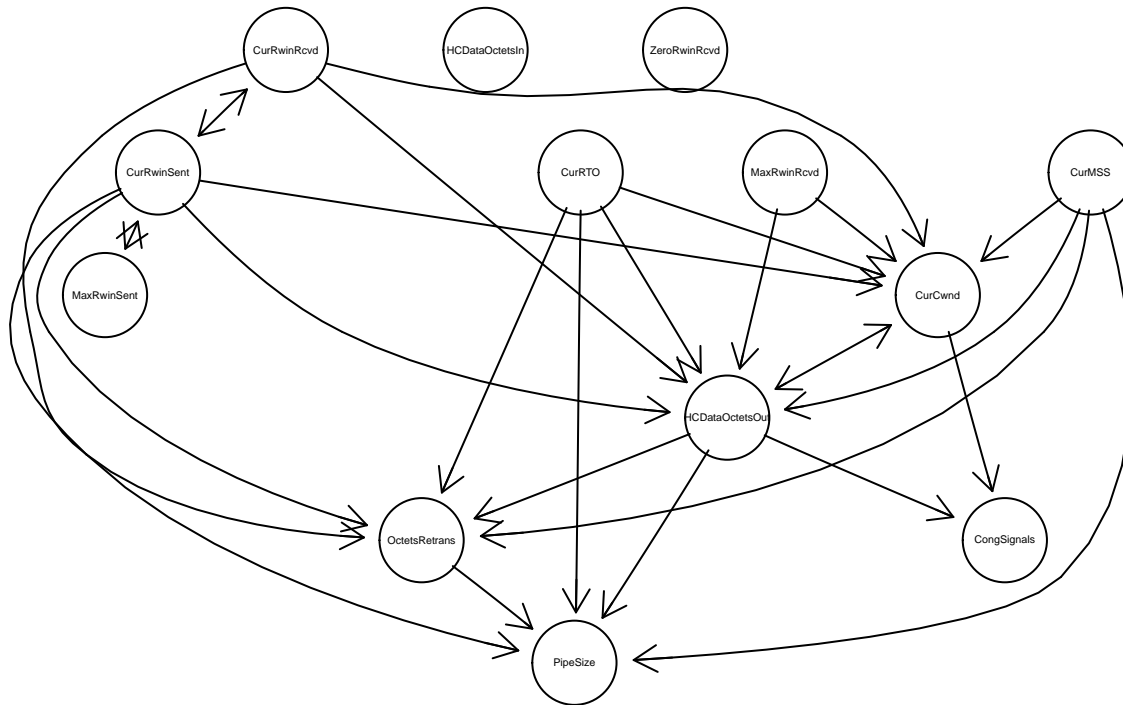
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 271
## [1] "/Users/aaronkruchten/Desktop/PCA flows/cbbd9deb0f73a8a512c8768c51772b4c057cbd1517e6f7d9c287fac0
## [1] 272
## [1] "/Users/aaronkruchten/Desktop/PCA flows/cc690037edb6e1b9593d24b90eb36237c8c0bada87af57dd4ee9f7ae
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



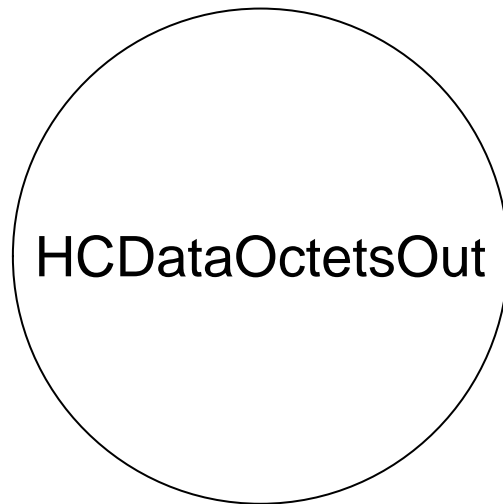
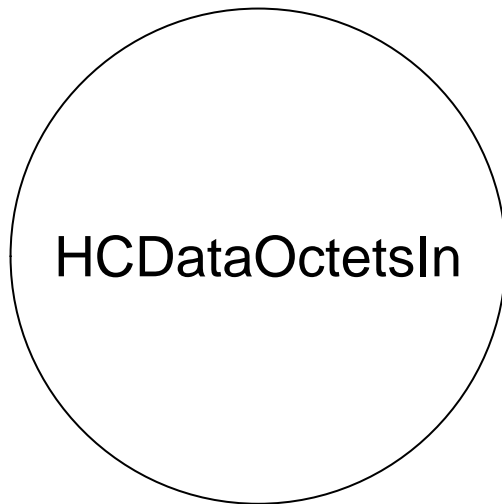
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 273
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ccec0721b6968105cd21b97a9dd3ff2d2cd26a46c839950adceade6f"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



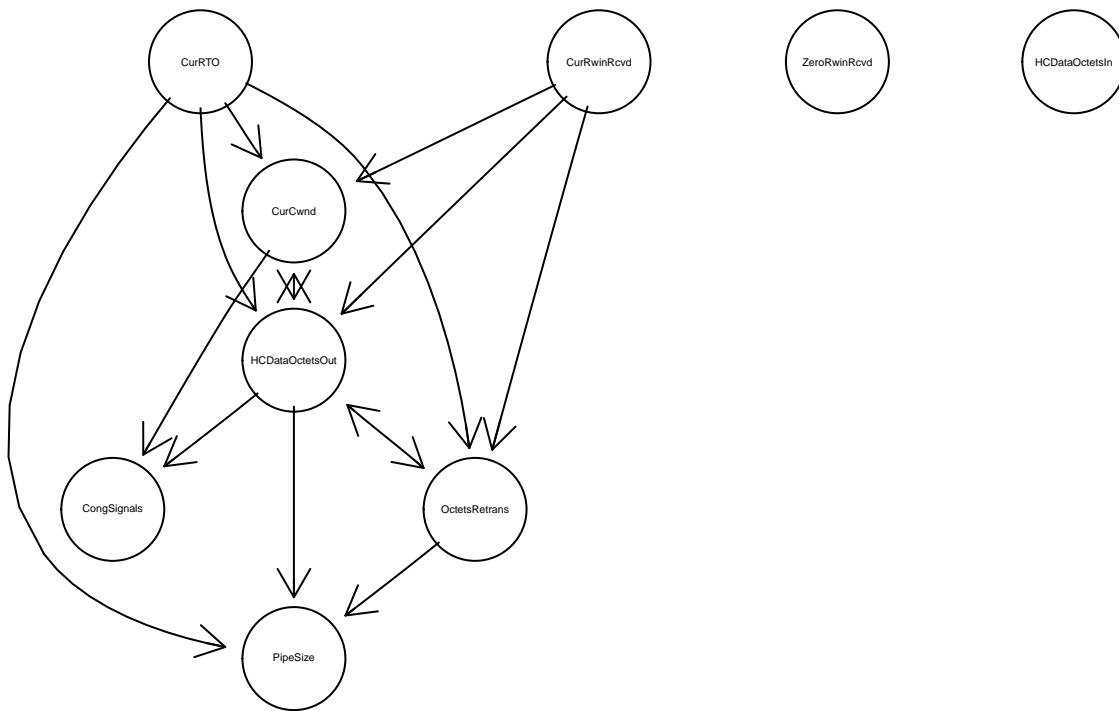
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 274
## [1] "/Users/aaronkruchten/Desktop/PCA flows/cf45e019e028716e3af4514537f7dd640033c2914b7e20694c70ef77"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



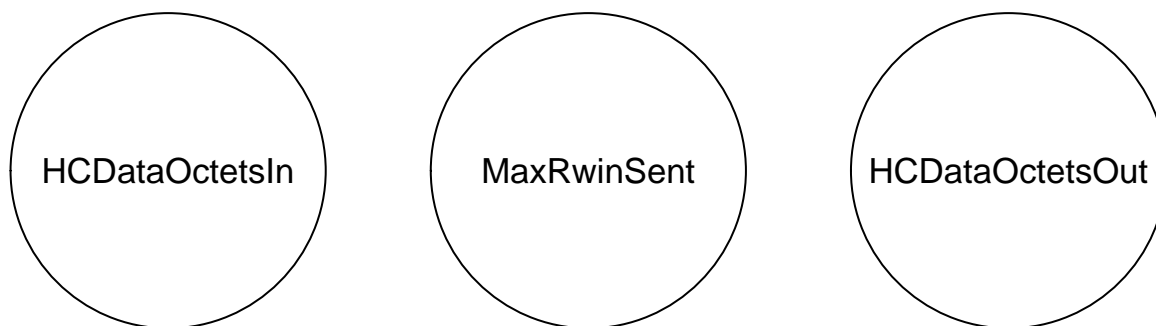
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 275
## [1] "/Users/aaronkruchten/Desktop/PCA flows/cfa379ff79eec828134411cdeaf775d0ae6f0ebbe0078e0d734ce012"
## [1] 276
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d105c92cc38922334ec60639c1575aef2fb83d6f6e68c2e80d90c2d8"
## [1] 277
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d2171e205d8cf414cb1455802c80b12720fb05a7e7c99d7e2f0f4d02"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 278
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d2fe86b67147e3cc0e010557d421b18d91183bd3c4dbbc3dbad7e29d"
```

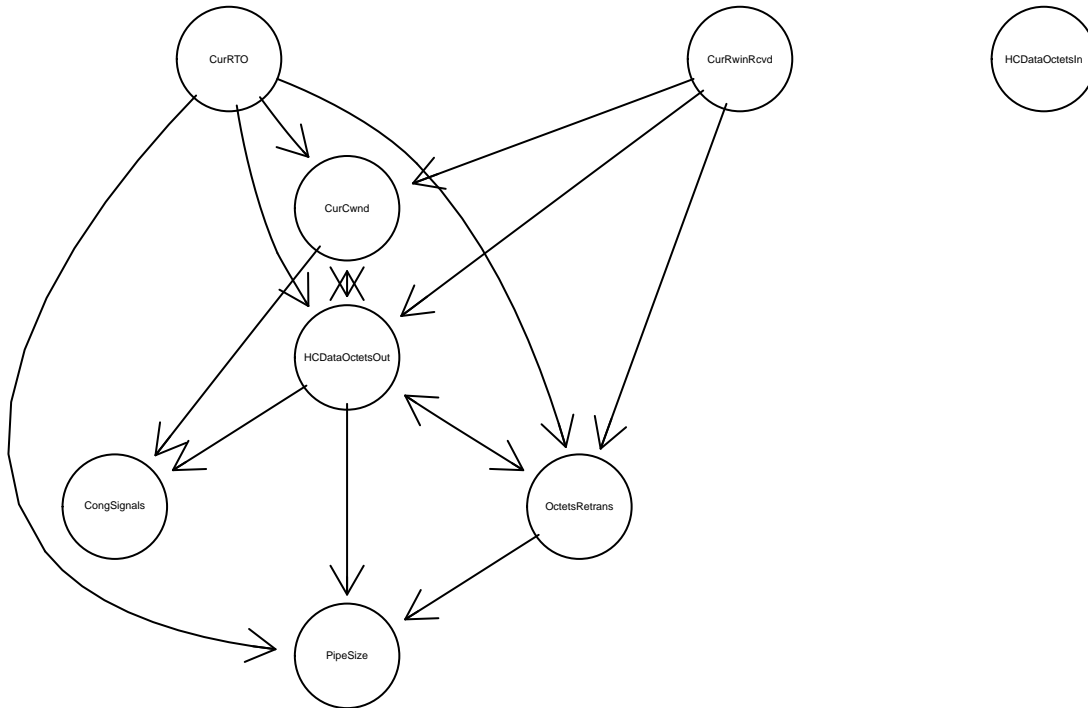
**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

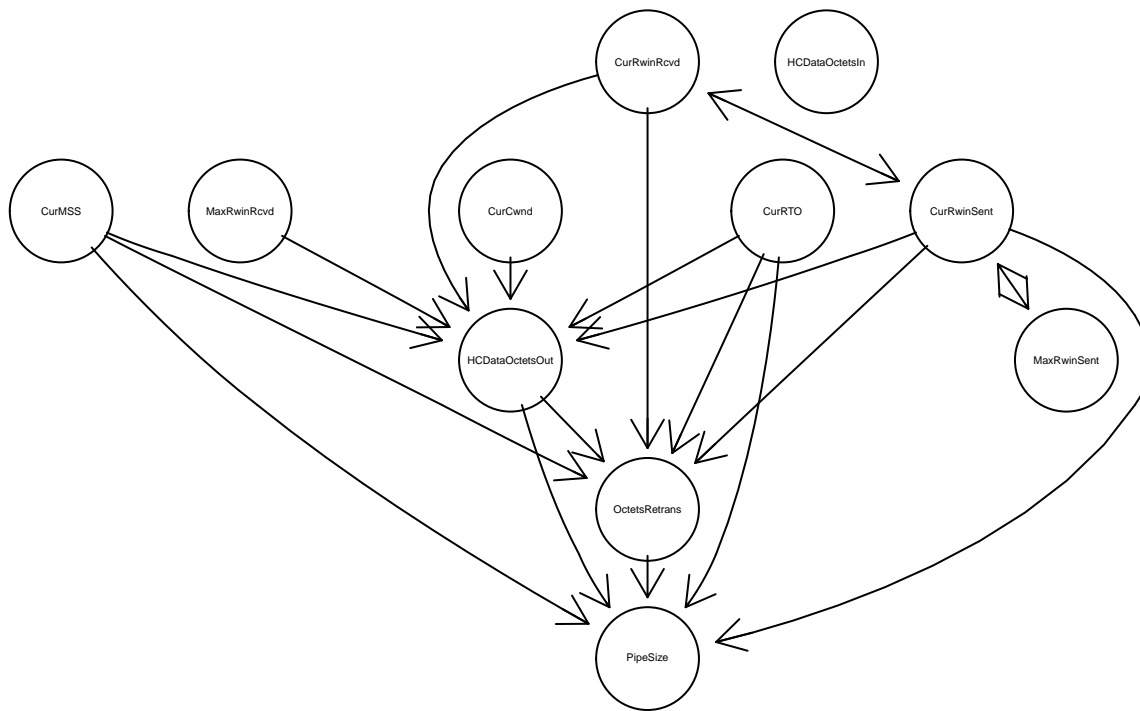
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 279
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d35008ab0757bf16d66c5e19c37271f79e84e9fdf817146d5d8a6ba7"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 280
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d4e8f18755a7940a6ab01e238e1e6c0fb0b1d3f5c02ad11f7f936c67"
```

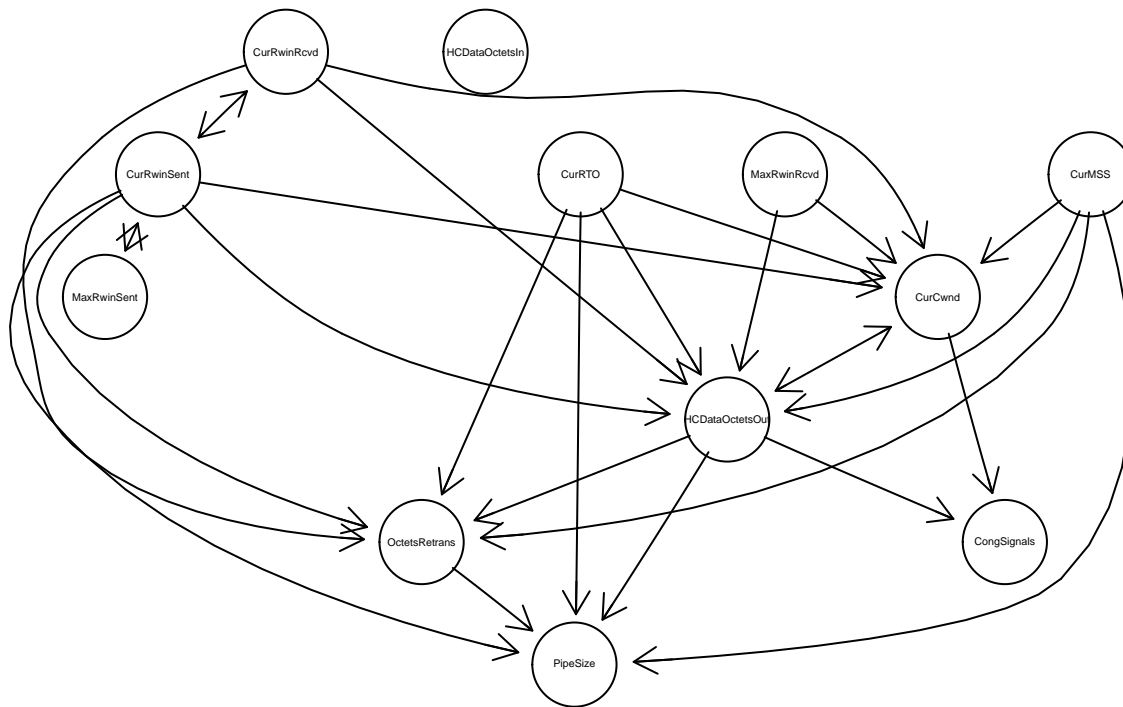
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 281
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d50f51aceb862ceaed90cfd7c9b65cfd6a9bf3f79d4fceb5bde5cc3c"
```

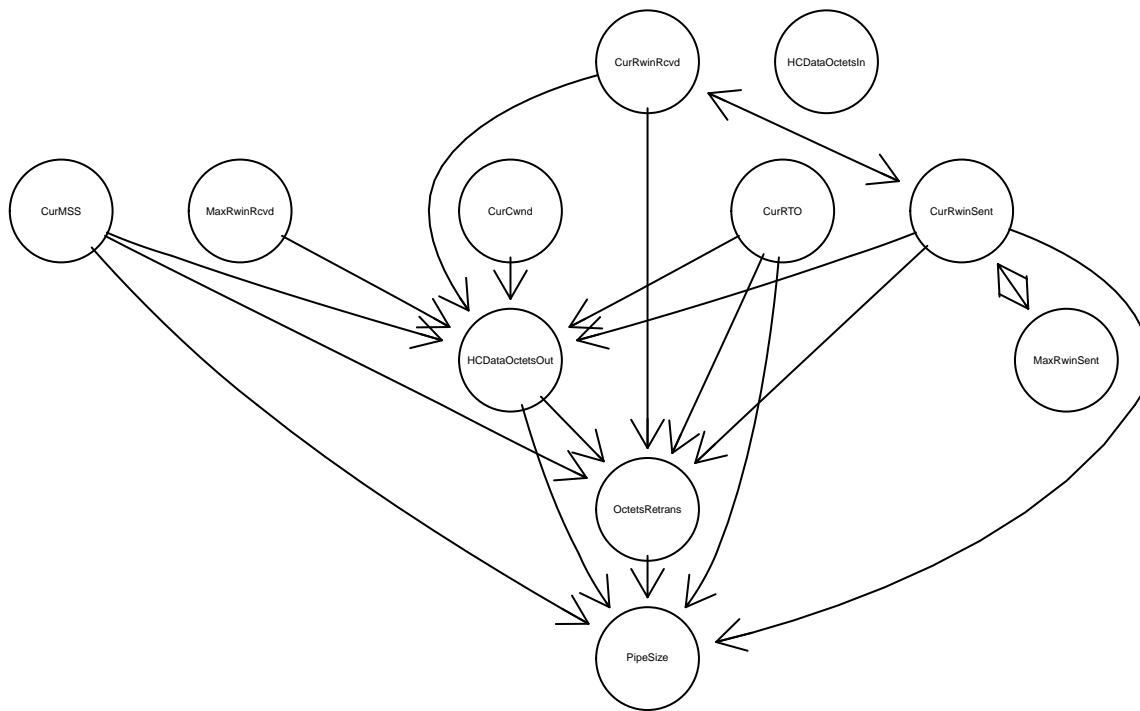


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



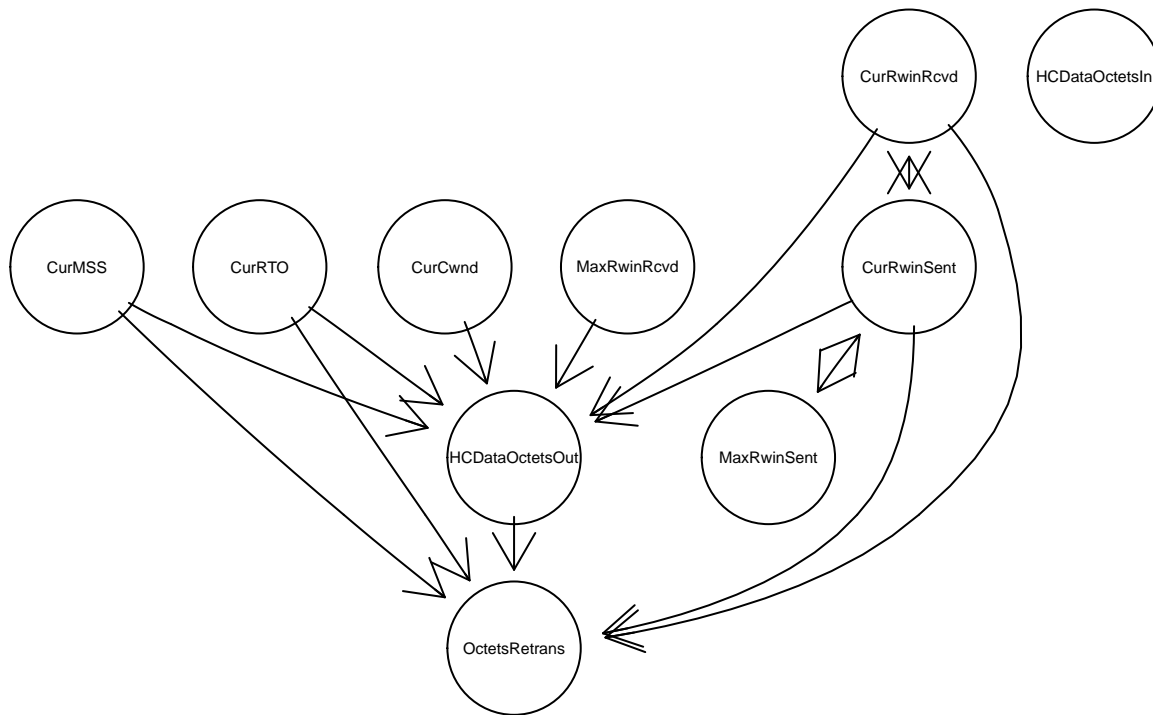
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 282
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d578b7f851477f1419105fb7fee578f5dd3c4e15109abb5054c7525"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



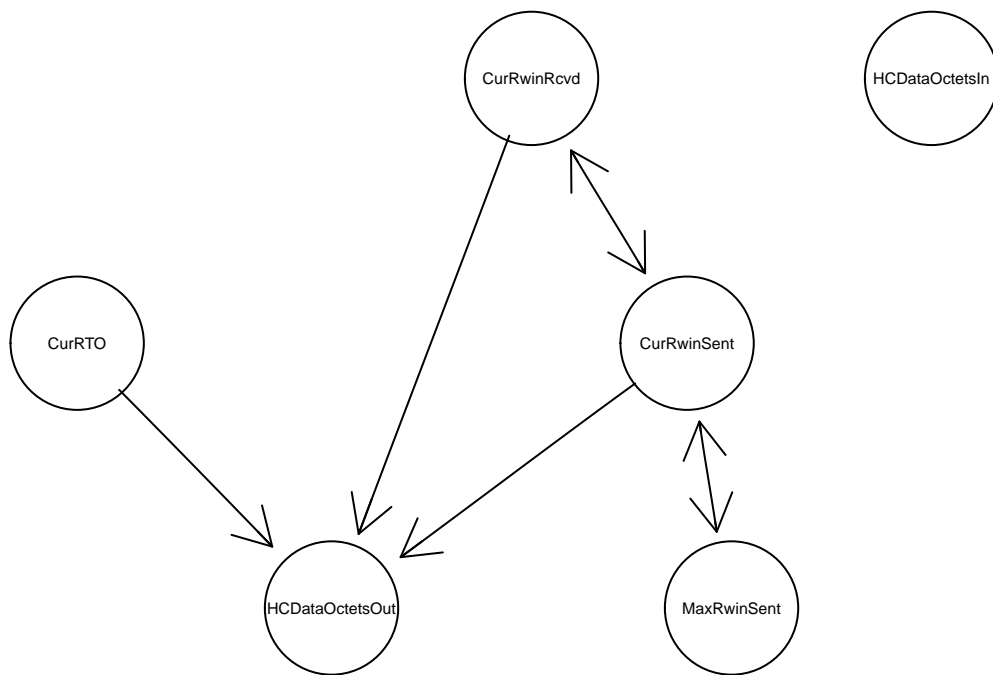
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 283
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d733f617087beadeb267ef21be8962e9f2fd32ea62110e879a65de1f"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



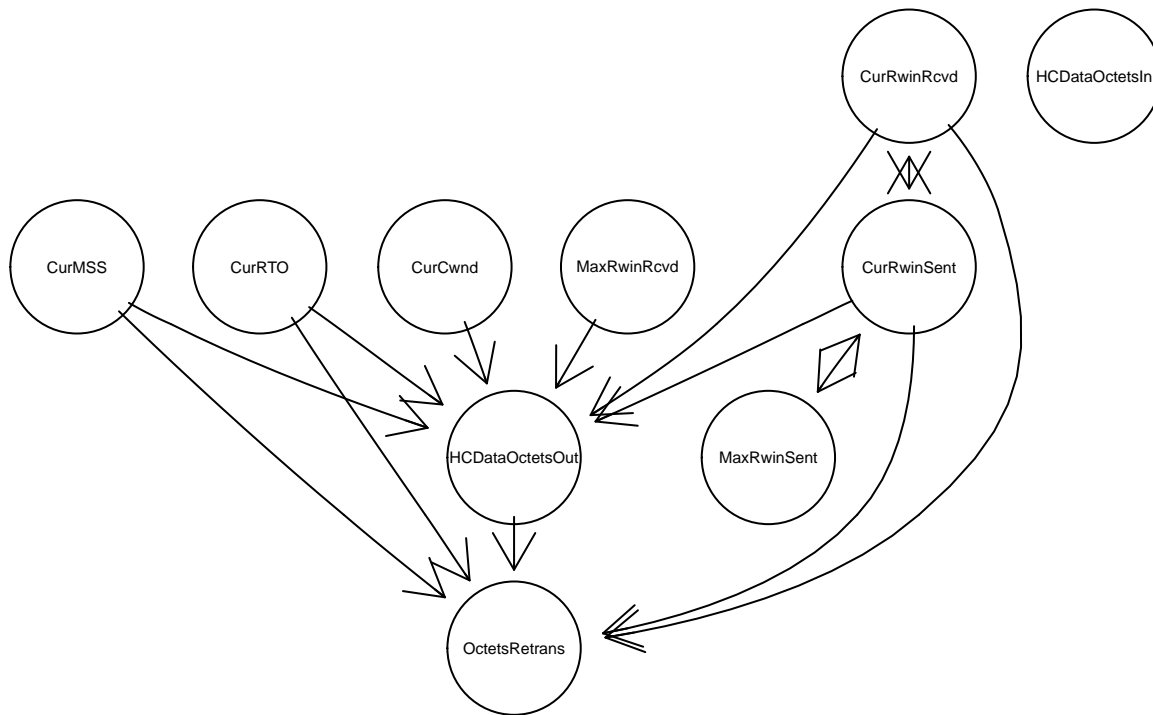
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 284
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d79319a76ae4a998ab4d66cbf8853c52a9087b9b0eef97b816ea3b63"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



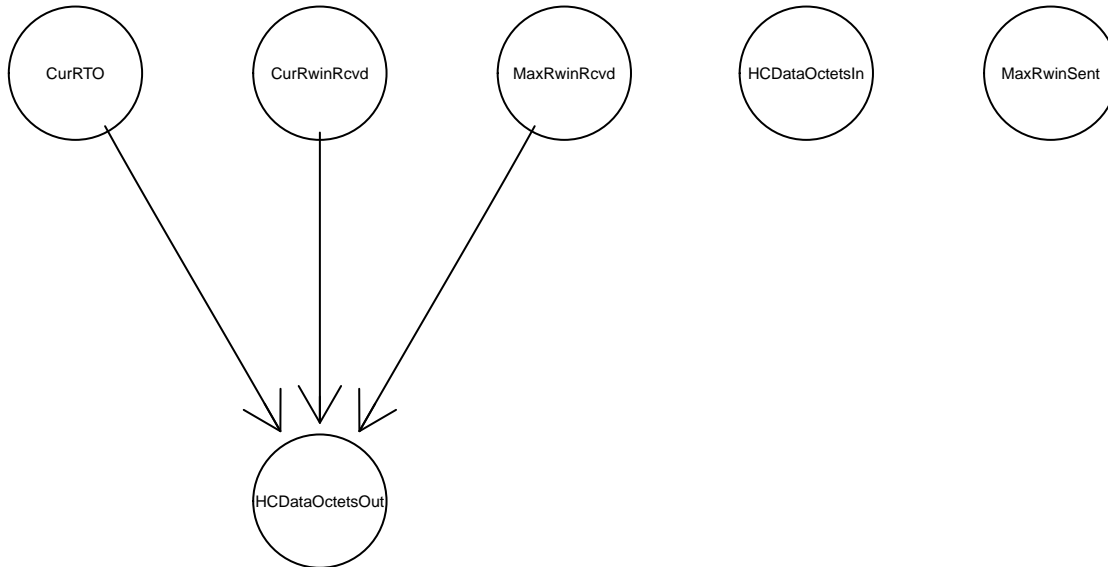
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 285
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d863e8ff42f1205f60ffaba7acd251be0bda9cf8d374f0114e8a8930"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



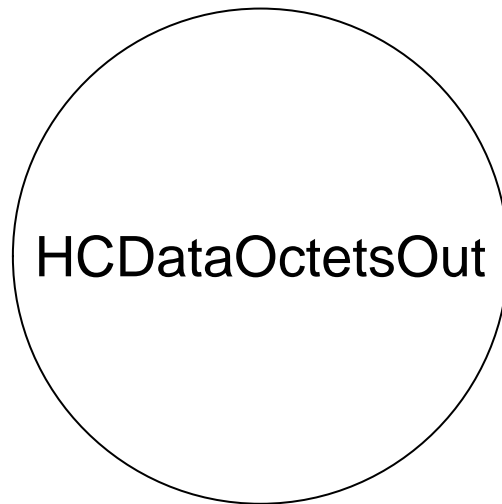
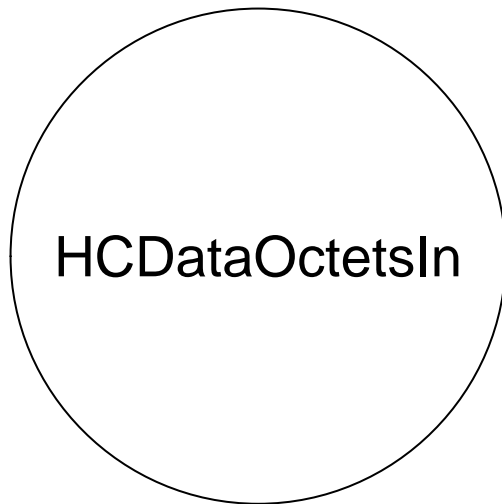
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 286
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d8b9414f61a350a99253d205e17580bc55a68a3f1c525cba8352caca"
## [1] 287
## [1] "/Users/aaronkruchten/Desktop/PCA flows/d949feba31fd83a99ef943b4b663071434db28034eac4acd8c270624"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



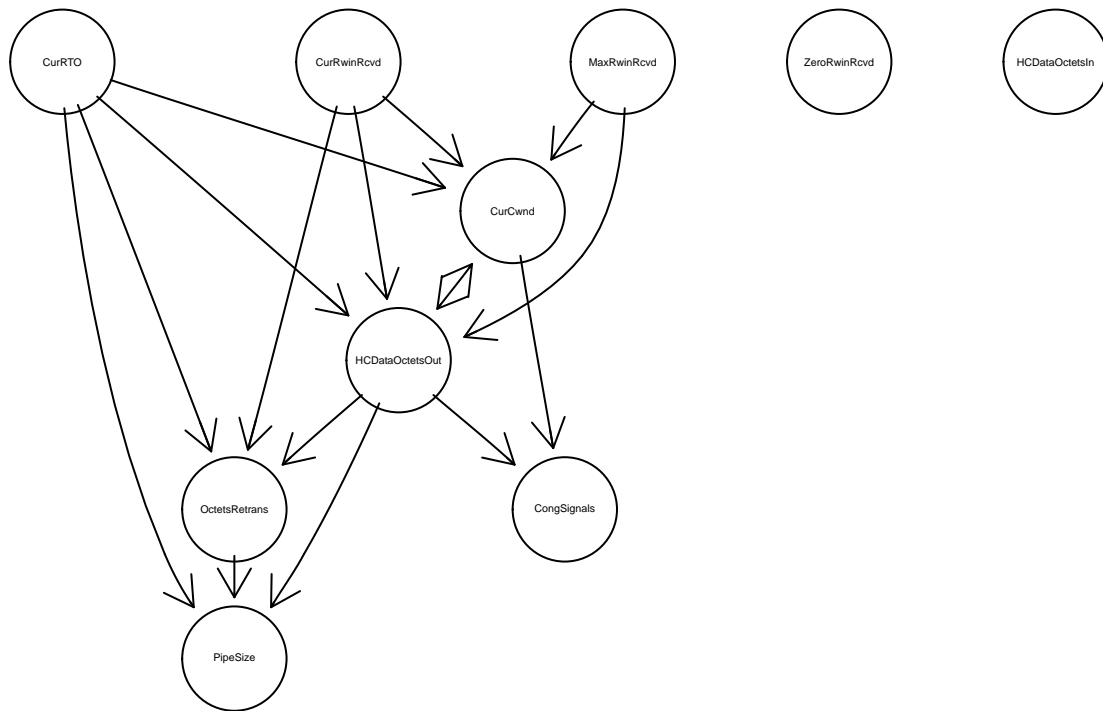
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 288
## [1] "/Users/aaronkruchten/Desktop/PCA flows/da640ed9f0155bf958aeb08e28dbe56d791e5766123526c785c563d5f"
## [1] 289
## [1] "/Users/aaronkruchten/Desktop/PCA flows/da8aed892891c288e37775f0fd978efb8c296d7934fe6e4847618ac3f"
## [1] 290
## [1] "/Users/aaronkruchten/Desktop/PCA flows/daa5dd627d8a77707ad481e045151db66c63d6404a2c06d1dc09a5d4f"
## [1] 291
## [1] "/Users/aaronkruchten/Desktop/PCA flows/db451b950593a5263de9181467191cf75806e0faa3b5c74f75ebad7d"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



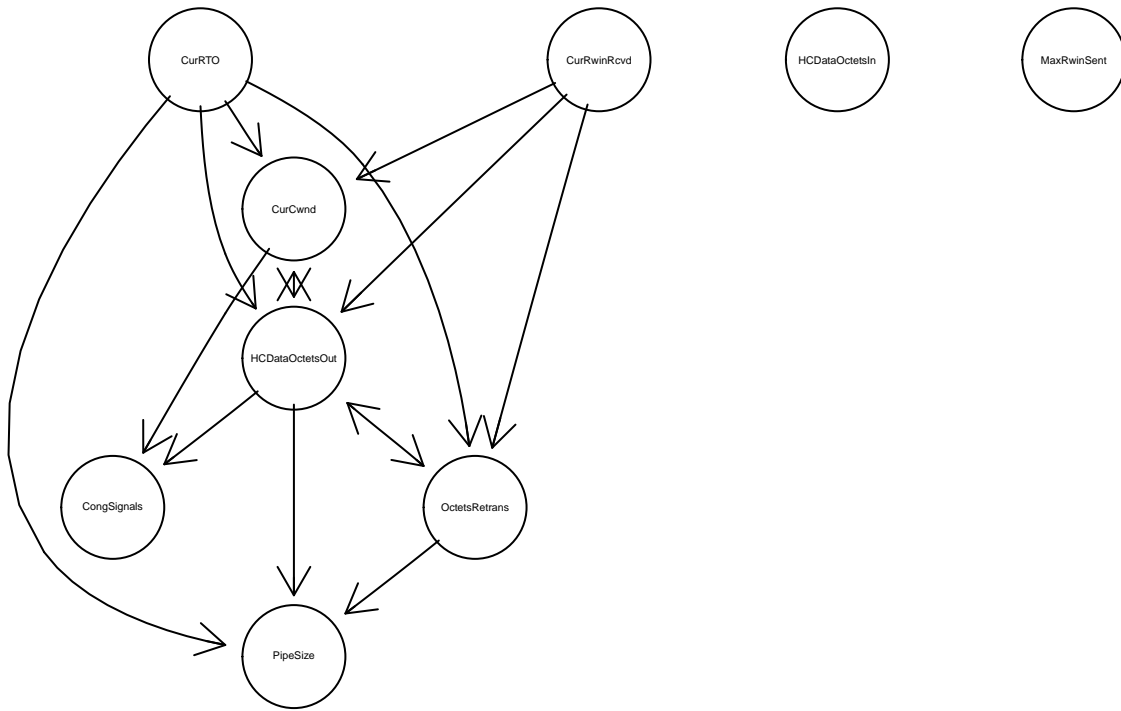
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 292
## [1] "/Users/aaronkruchten/Desktop/PCA flows/dc747253477c21a77a6291ee9c1f10d8bda050f7e4b30c4c1e398c29"
## [1] 293
## [1] "/Users/aaronkruchten/Desktop/PCA flows/dc834330c9e39f32c16bb7c3e1b16c6f3dcef3b8f428d78c1d46f279"
## [1] 294
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ded61f38903d82f9dc85f0425373e87d5796350a96e75247c39a9b7f"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 295
## [1] "/Users/aaronkruchten/Desktop/PCA flows/df2a372870319b906abf0356f9315cbbb094b94a47d3b6f9e8c99c6f"
```


**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

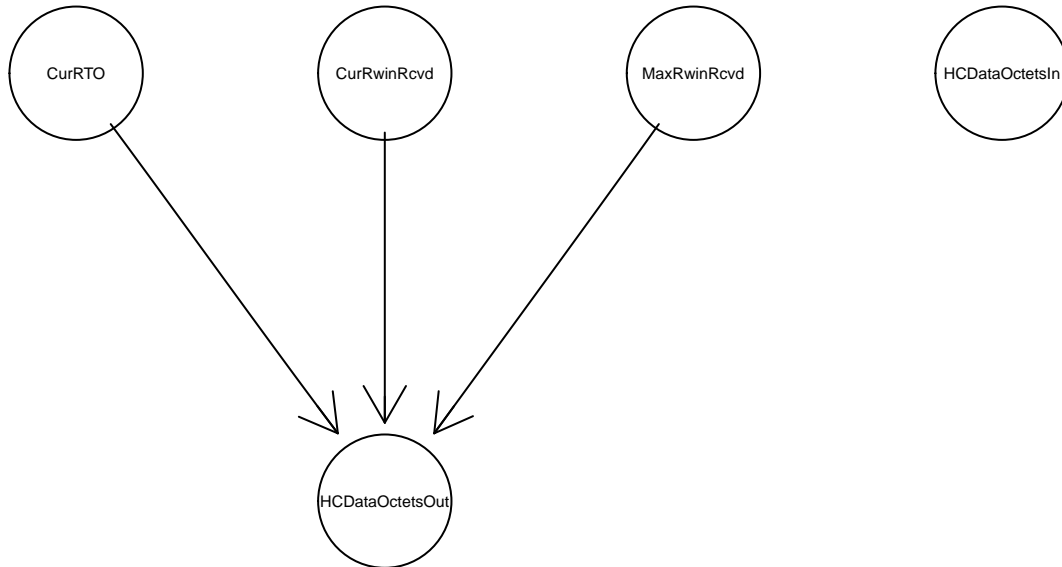


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 296
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e030e14c9c74dc5af6e11be2e9bc437b6321f7270b51a853d6b71b8e"
## [1] 297
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e3b77d96f0d275352ae606b9f9922681614ca985a5360edf4a04f15d"
## [1] 298
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e3dbe23f78e6d1871405616fece4ac8a60e7f260056fc4b67dedeadc"

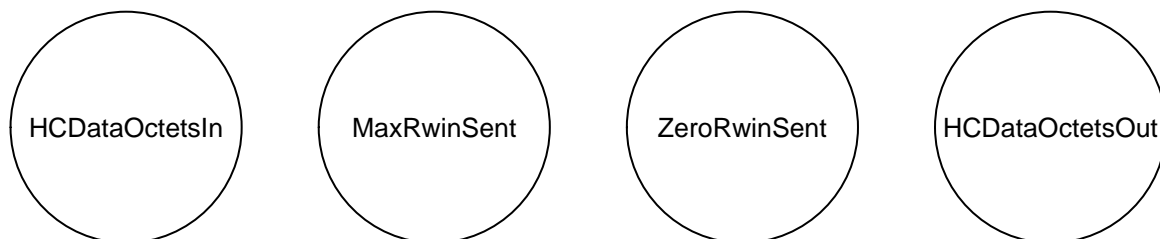
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 299
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e410789d593655dd3da3d3933e9646c7a42d57286a9c3edd692a65c8"
```

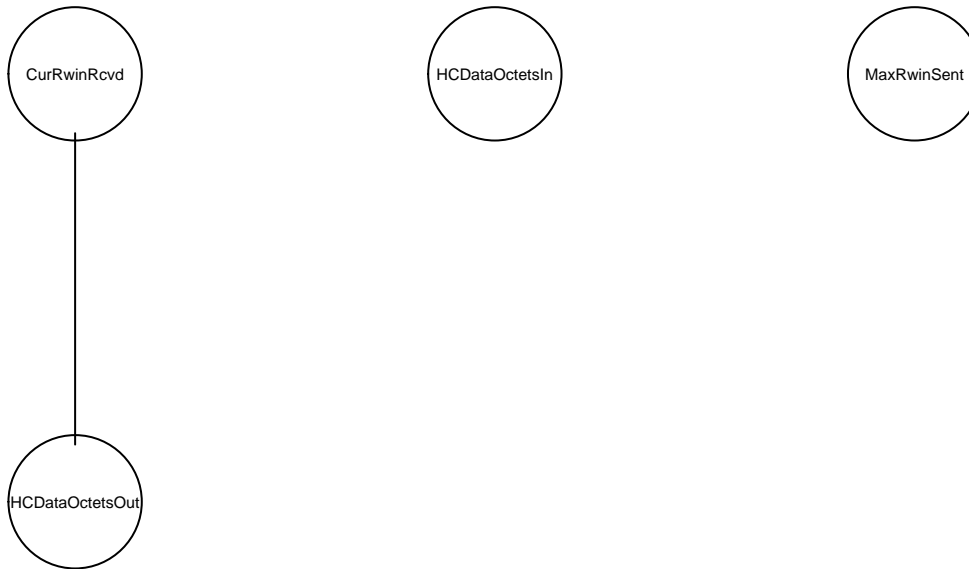
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 300
```

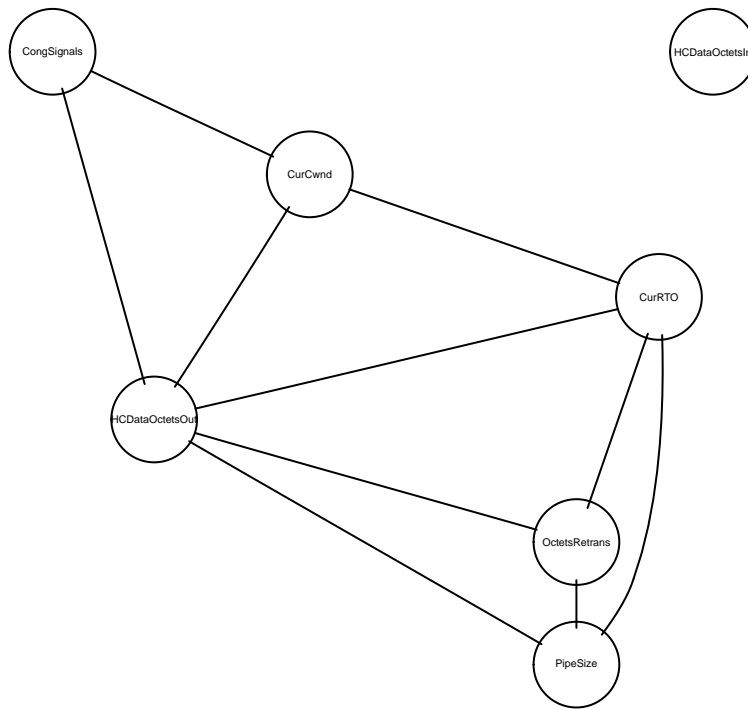
```
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e4b95ae12b17717e808ee870577809638315097c1e5b35ecbff750f63"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,  
   labels = colnames(usable_frame))
```



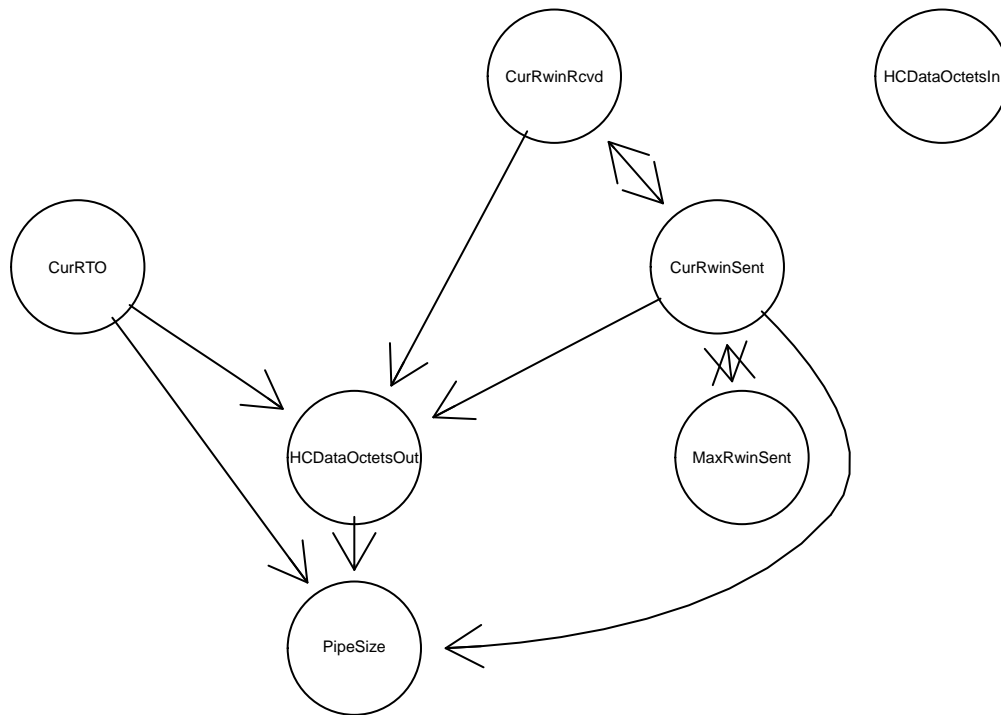
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"  
## [1] 301  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e4fd33665f35d838ae339e7558ec416c48b12339233e0e3fe6b04c3f"  
## [1] 302  
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e5214e2e4f45b4558d8db720c1e13703207dd757422ee46950479fce"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



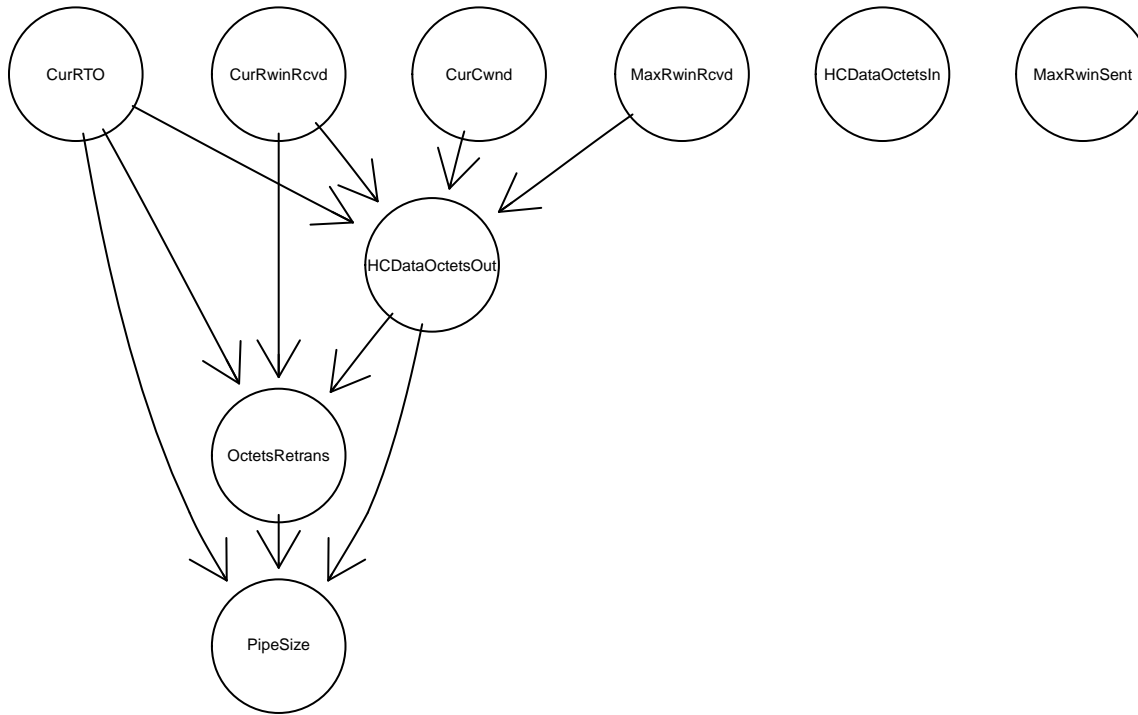
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 303
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e52f6738516323a5ecf53219671b38e583b174b795279fa3f0f2d1dd."
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 304
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e7a458186bf729ee4f2009a36c8b2dc42c329cd5f6ada1e902d80f60"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**

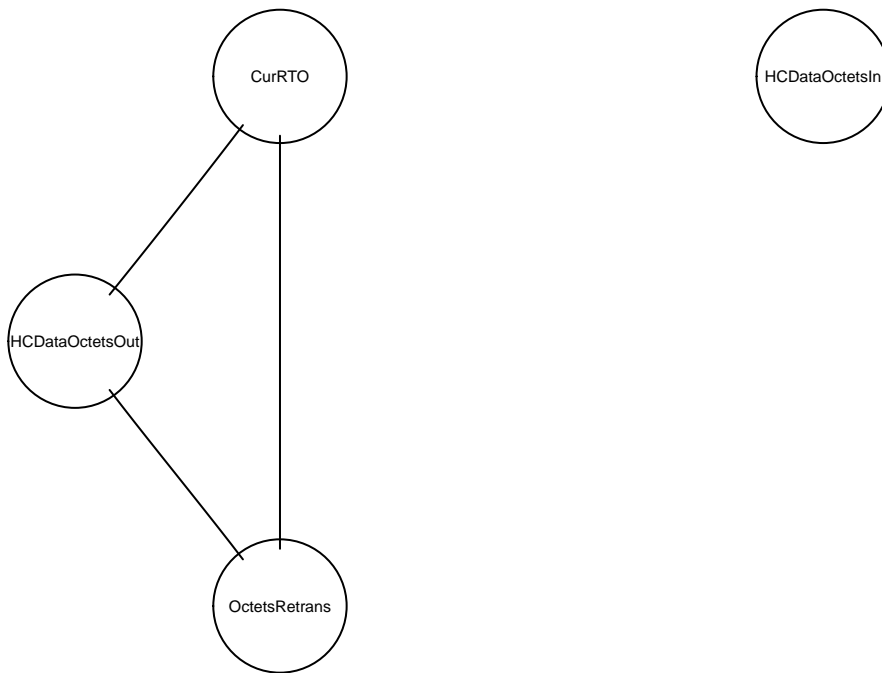


```

## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 305
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e92fac00e6d703c92763ce5fc55b9ba19d5b8bc25f36f7362ffb7536f"
## [1] 306
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e9391932a43823a9b85ebd32d8dc9dd85c0a05ac9347f0d73bf3fec9"

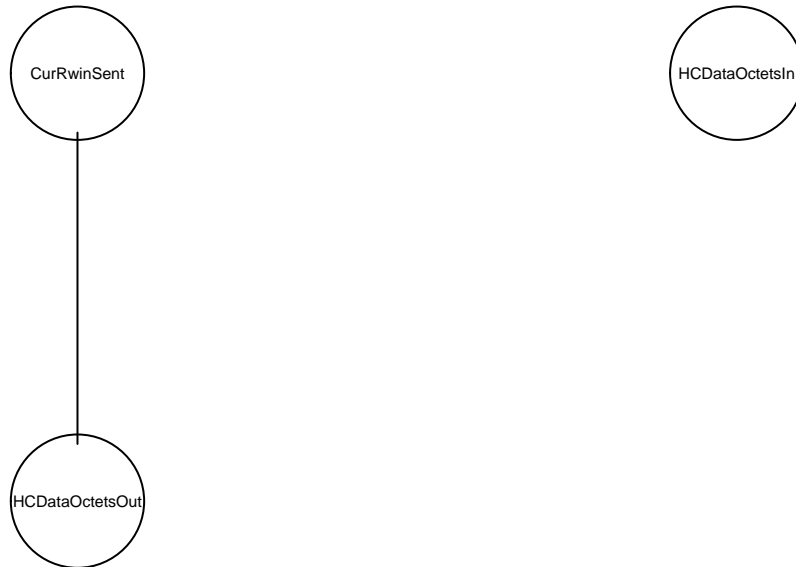
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 307
## [1] "/Users/aaronkruchten/Desktop/PCA flows/e9e74559c48bb340ce1e39843fa1eaa7689cae59dbd58be1bfd697dd"
```

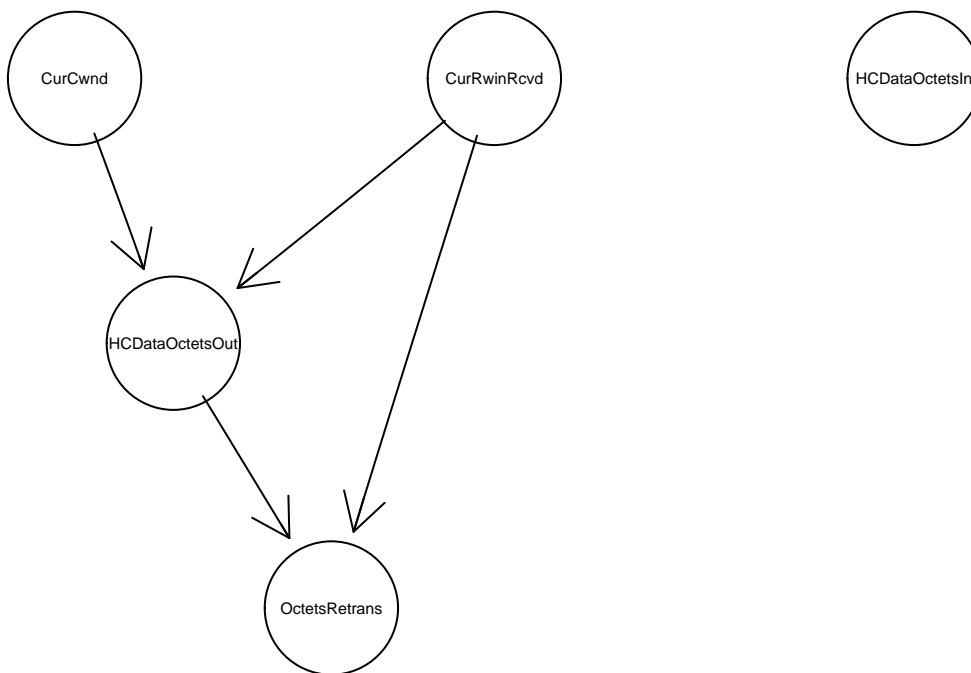
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 308
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ea2d99deec5cc0b99b4346f78a66d93764d80d24c7071543b1d7727f1"
## [1] 309
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ea634defe791d828511c67b45a39a50c9f640289fdf42d875d63efb4"
```

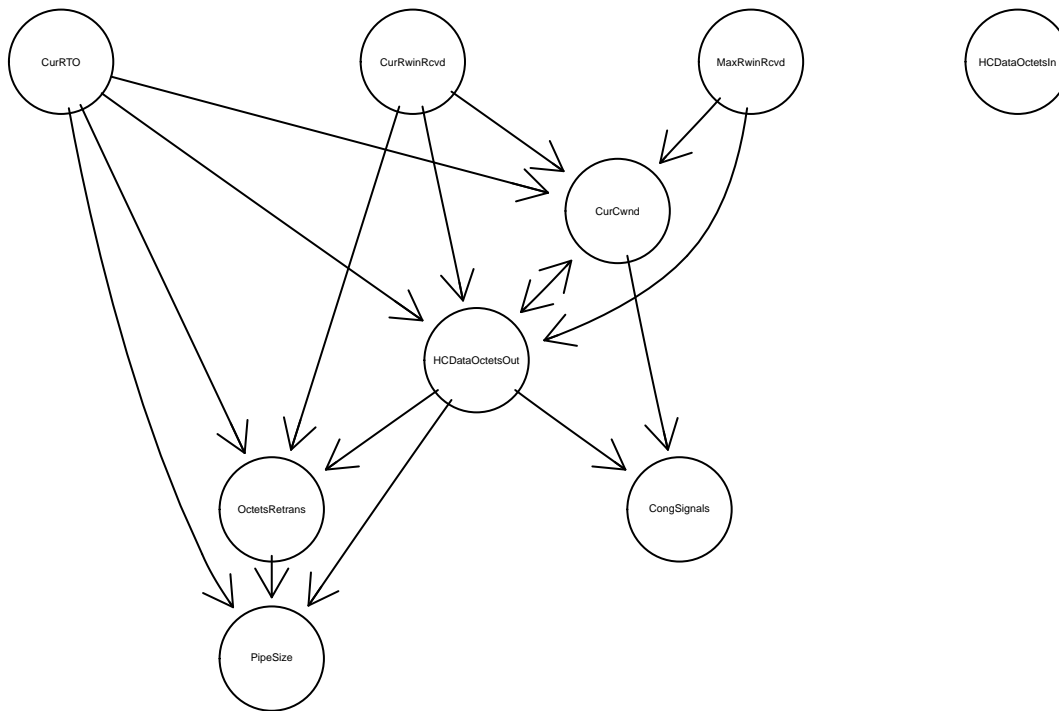


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



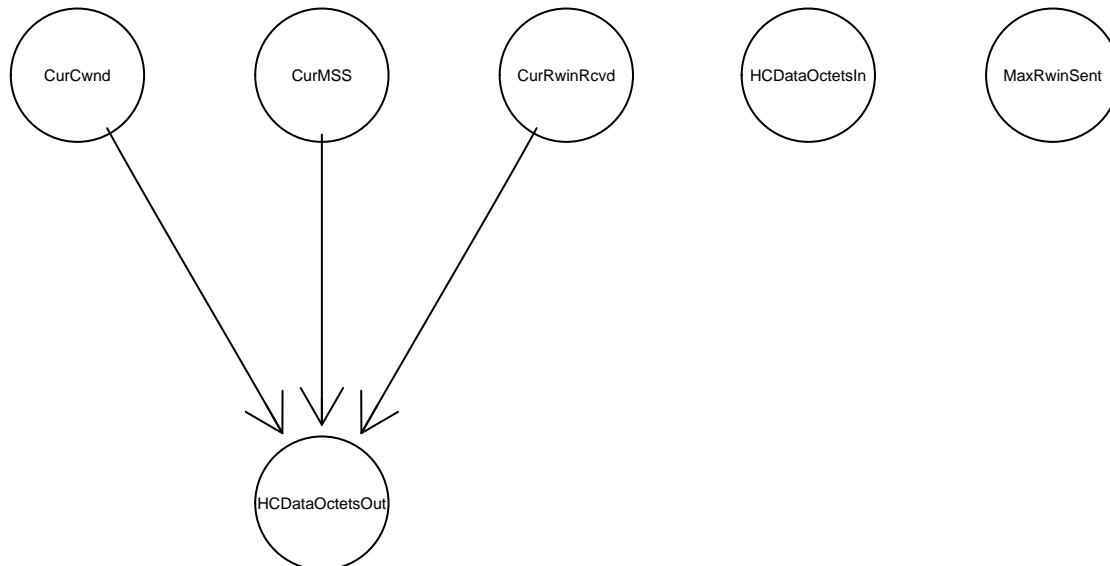
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 310
## [1] "/Users/aaronkruchten/Desktop/PCA flows/eace72713b41d78b84aaa06a123c39800df1d491df670857e31014ad..."
## [1] 311
## [1] "/Users/aaronkruchten/Desktop/PCA flows/eb794d899ea3381da1944934e51e0a700ce4376f75efdac622094eab..."
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



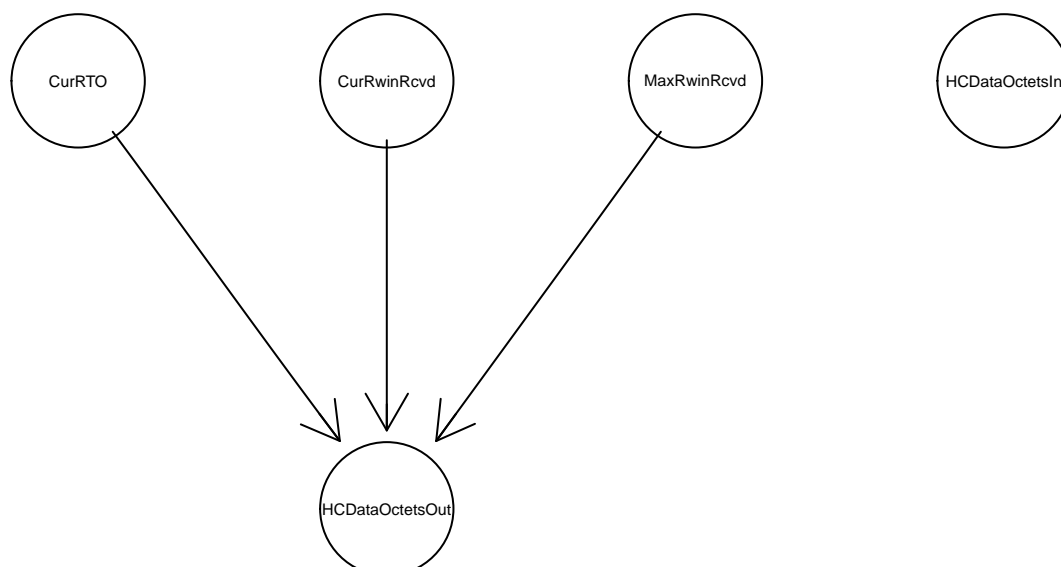
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 312
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ec1598dc97ab3941d14ee41a611e084ccd6b9653800482babea2b80e"
## [1] 313
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ec94cf2b679f9b9ad4c7b7832b158546a05a164540b9dac337bb3091"
## [1] 314
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ec9e19c2112128025fc7034594f8c6ebd6b215cf94b8ae2a7a37fa1c"
## [1] 315
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ed76be8a595028f4dd8a37cd410125d8280e589436e81a20256aad7d"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



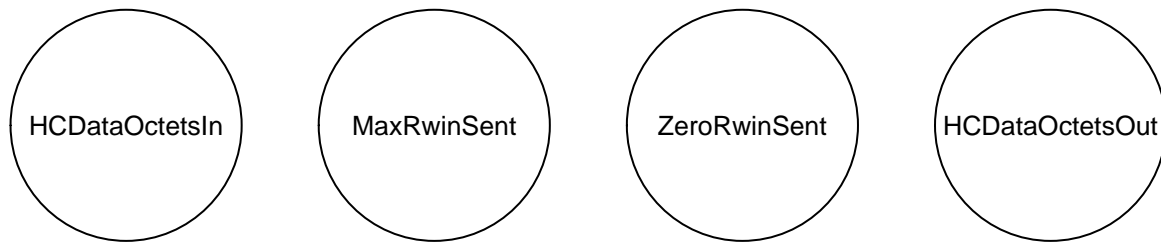
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 316
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ef03715820b236bec6858ec0d274da70b5b6262b5f1b522e75ac634f"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



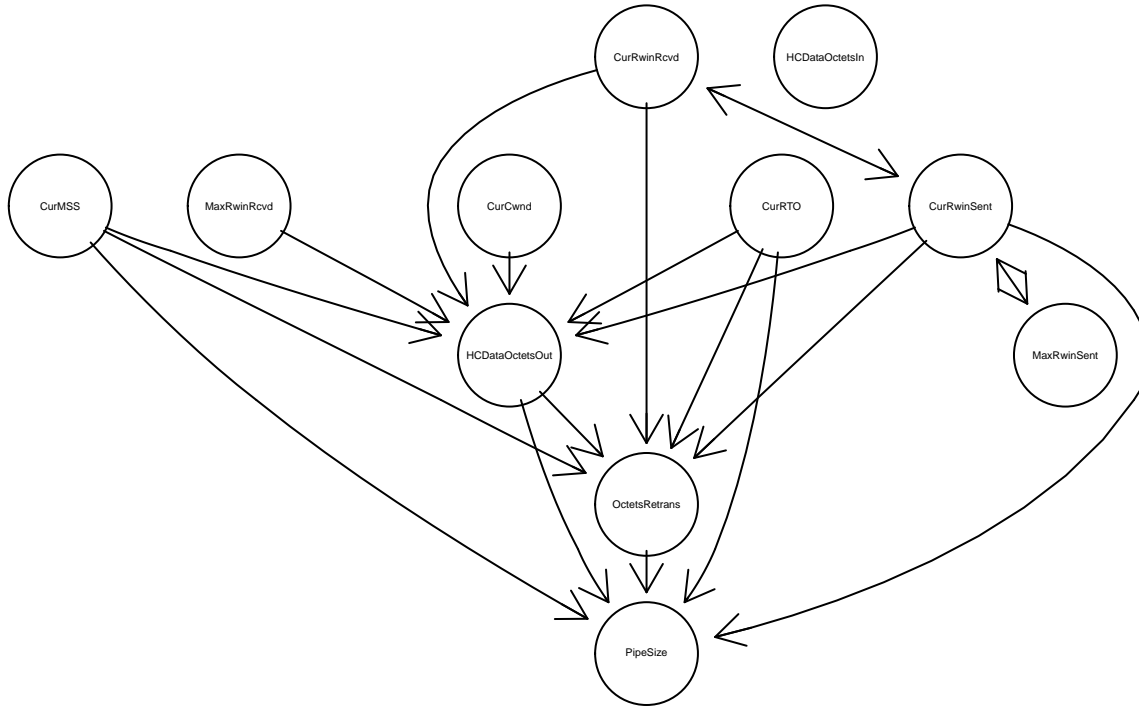
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 317
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ef23ba07f37e21238e46994993aaae9ae585a9643eb47fe12303ecc0"
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



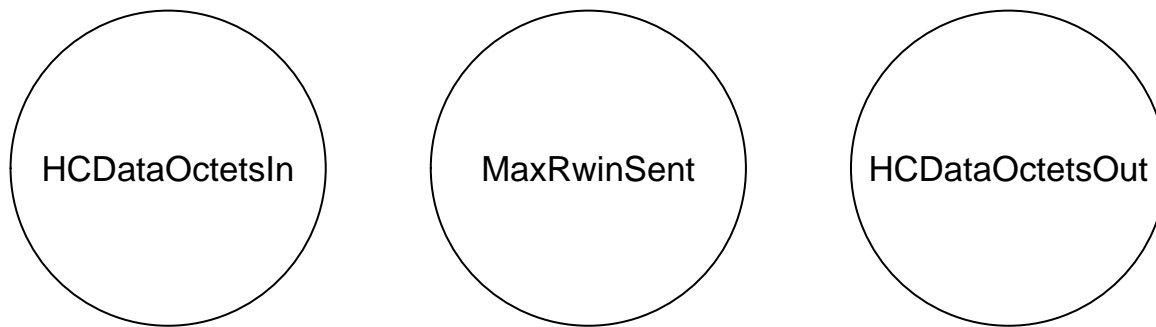
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 318
## [1] "/Users/aaronkruchten/Desktop/PCA flows/efdf3e09541f303cf0536c802e8db5d79ac9bcd245ed0011f9866da7"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



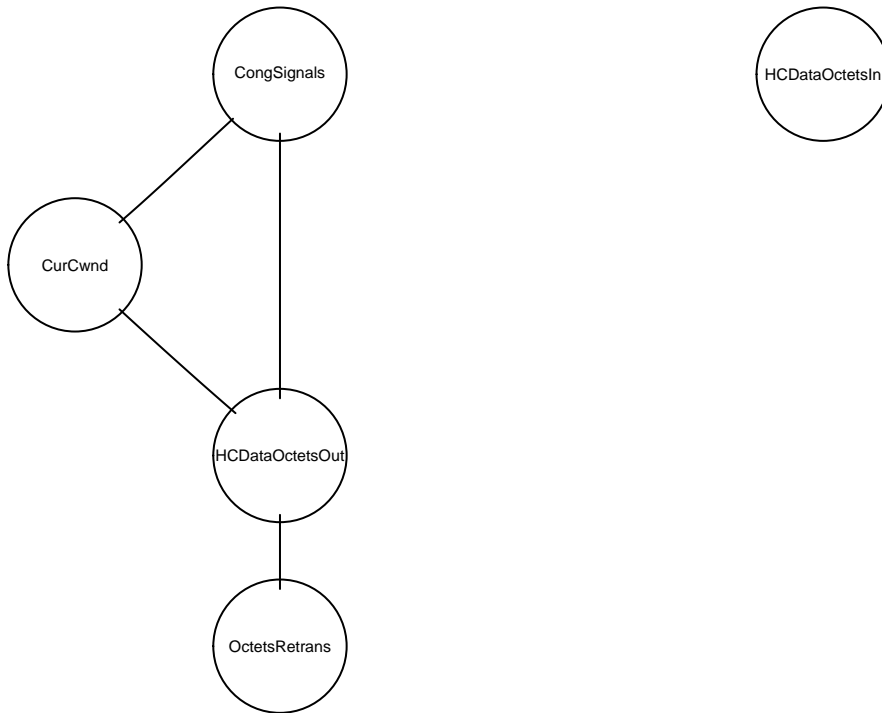
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 319
## [1] "/Users/aaronkruchten/Desktop/PCA flows/f1176660a9e3656b2df09ae9154bb546c71046b112ae7a142170a6cb
## [1] 320
## [1] "/Users/aaronkruchten/Desktop/PCA flows/f1a724db3f60d737380a813d404154aeb74c2744641456eed3b32ef
## [1] 321
## [1] "/Users/aaronkruchten/Desktop/PCA flows/f39f221dfe3625dff61b86ff393518ba18361322e1c45fc7517fc9d8
```

**pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
labels = colnames(usable_frame))**



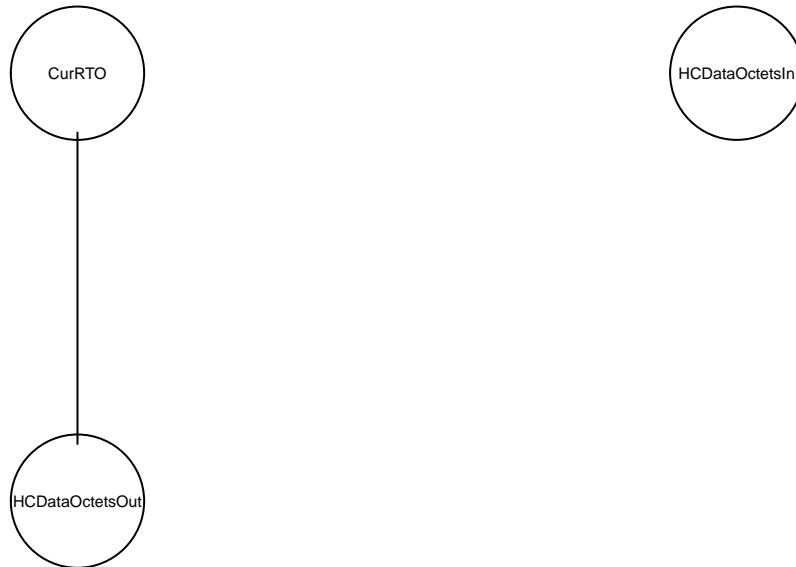
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 322
## [1] "/Users/aaronkruchten/Desktop/PCA flows/f627653a3ebf4d8ef47e7fd61ece93b6ef6db738f09e5d34b57c8493"
## [1] 323
## [1] "/Users/aaronkruchten/Desktop/PCA flows/f6fc4752079a80846aea122ad048837468bae647db2d61ae852dbd45"
## [1] 324
## [1] "/Users/aaronkruchten/Desktop/PCA flows/f82a0786388a4fbe4de9138e62b54702e82824901c5d732a1222056f"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 325
## [1] "/Users/aaronkruchten/Desktop/PCA flows/f8ab66475ce6f5f1479e17f434df3c2b2962e4fecdc699081ced3bbd"
## [1] 326
## [1] "/Users/aaronkruchten/Desktop/PCA flows/f92f4e545f21c5259b1dd64f909a7f2b25f822a8641b01a87ca3a85a"
## [1] 327
## [1] "/Users/aaronkruchten/Desktop/PCA flows/faa40a2df62d9bd11e561e01a37cebac027eae05054a18f6ce1c948f"
## [1] 328
## [1] "/Users/aaronkruchten/Desktop/PCA flows/fc6148272115209657aab151dbc5f11d9c3699969eaa12cff5728470"
## [1] 329
## [1] "/Users/aaronkruchten/Desktop/PCA flows/fcc86728b4d91ae332b8330a6d6371a1081bae3970989e1750da234c"
## [1] 330
## [1] "/Users/aaronkruchten/Desktop/PCA flows/fcd71d940f280102e1a3015180e7c398934058e1847f4b5aebc15b40"
```

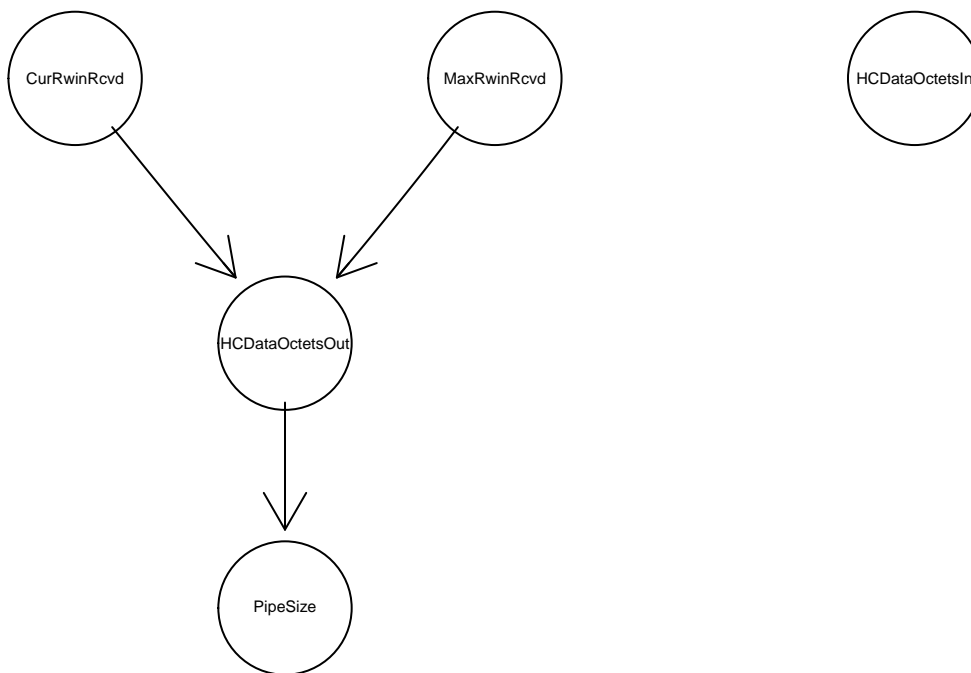
```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 331
## [1] "/Users/aaronkruchten/Desktop/PCA flows/fdee30af2e92efe8c4fe0ef20d81f8080b2d26f8e0ec261c1af5679a"
## [1] 332
## [1] "/Users/aaronkruchten/Desktop/PCA flows/fe580e57ca2f9f8ce878d94becaa2353c8ce3018401dfcf604ff2f13"
## [1] 333
## [1] "/Users/aaronkruchten/Desktop/PCA flows/fe6032587f03dc3e417b3cd6663f0c0353f01e2e55e7c983d50860ec"
```

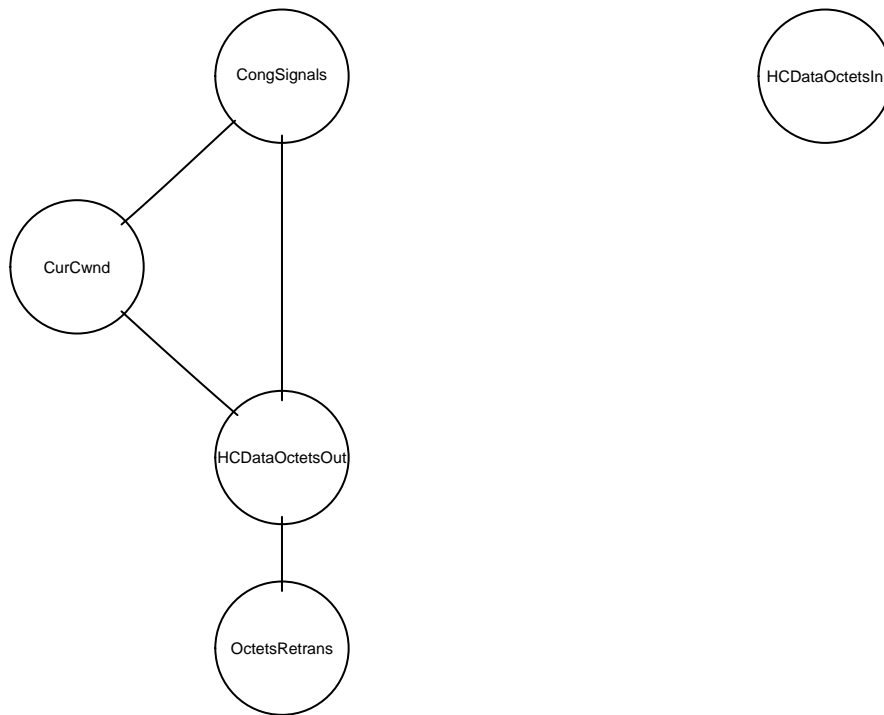


```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



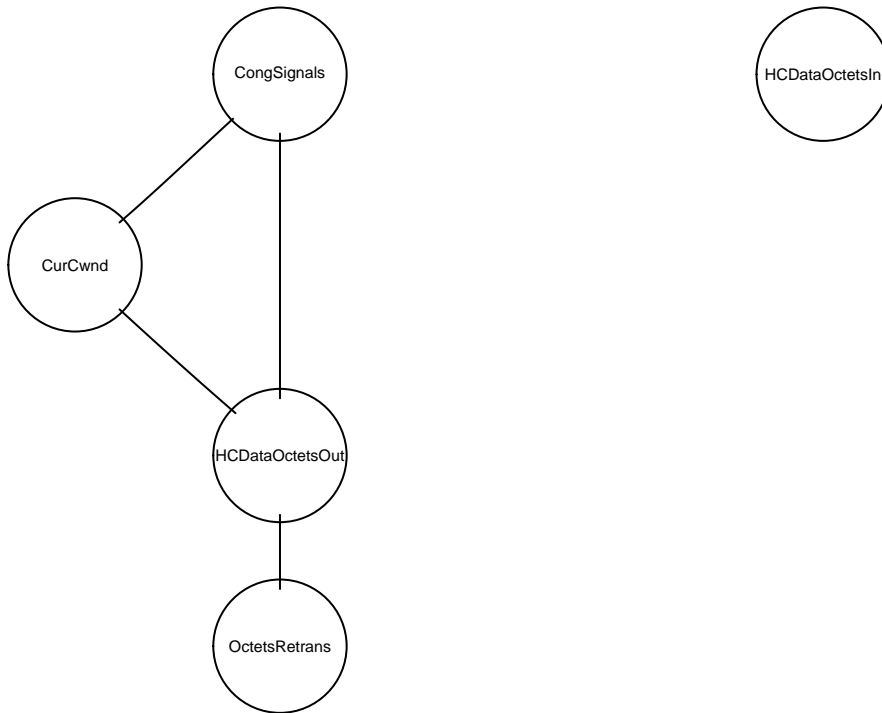
```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 334
## [1] "/Users/aaronkruchten/Desktop/PCA flows/fe76e6c04852db122d328217d5b490abe107cdf24089e04a14c55f8"
## [1] 335
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ff3676766bd1128d41703d4c29f290c00cf19887e1ea74353f199aef"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] 336
## [1] "/Users/aaronkruchten/Desktop/PCA flows/ff6012336a456628e9a0e6a2104524227793da31be8b2a5891c6da4e"
```

```
pc(suffStat = suffStat, indepTest = dsepTest, alpha = 0.001,
  labels = colnames(usable_frame))
```



```
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
## [1] "NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH! NEW GRAPH!"
```

```
## Time difference of 2.733813 hours
```

##	HCDataOctetsOut	OctetsRetrans	HCDataOctetsIn	CurMSS
## HCDataOctetsOut	0	42	0	43
## OctetsRetrans	111	0	0	39
## HCDataOctetsIn	0	0	0	0
## CurMSS	0	0	0	0
## PipeSize	100	82	0	25
## CurRTO	21	14	0	0
## CongSignals	80	0	0	0
## CurCwnd	81	0	0	20
## CurSthresh	0	0	0	0
## Timeouts	0	0	0	0
## CurRwinSent	6	0	0	0
## MaxRwinSent	0	0	0	0
## ZeroRwinSent	0	0	0	0
## CurRwinRcvd	4	0	0	0
## MaxRwinRcvd	0	0	0	0
## ZeroRwinRcvd	0	0	0	0

##	PipeSize	CurRTO	CongSignals	CurCwnd	CurSthresh	Timeouts
## HCDataOctetsOut	18	142	20	124	0	0
## OctetsRetrans	18	100	0	0	0	0
## HCDataOctetsIn	0	0	0	0	0	0

## CurMSS	0	0	0	0	0	0
## PipeSize	0	94	0	0	0	0
## CurRTO	17	0	0	13	0	0
## CongSignals	0	0	0	80	0	0
## CurCwnd	0	72	20	0	0	0
## CurSthresh	0	0	0	0	0	0
## Timeouts	0	0	0	0	0	0
## CurRwinSent	0	0	0	0	0	0
## MaxRwinSent	0	0	0	0	0	0
## ZeroRwinSent	0	0	0	0	0	0
## CurRwinRcvd	0	0	0	0	0	0
## MaxRwinRcvd	0	0	0	0	0	0
## ZeroRwinRcvd	0	0	0	0	0	0
##	CurRwinSent	MaxRwinSent	ZeroRwinSent	CurRwinRcvd		
## HCDDataOctetsOut	81	0	0	132		
## OctetsRetrans	57	0	0	83		
## HCDDataOctetsIn	0	0	0	0		
## CurMSS	0	0	0	0		
## PipeSize	45	0	0	0		
## CurRTO	0	0	0	0		
## CongSignals	0	0	0	0		
## CurCwnd	33	0	0	55		
## CurSthresh	0	0	0	0		
## Timeouts	0	0	0	0		
## CurRwinSent	0	75	0	74		
## MaxRwinSent	75	0	0	0		
## ZeroRwinSent	0	0	0	0		
## CurRwinRcvd	74	0	0	0		
## MaxRwinRcvd	0	0	0	0		
## ZeroRwinRcvd	0	0	0	0		
##	MaxRwinRcvd	ZeroRwinRcvd				
## HCDDataOctetsOut	101	0				
## OctetsRetrans	0	0				
## HCDDataOctetsIn	0	0				
## CurMSS	0	0				
## PipeSize	0	0				
## CurRTO	0	0				
## CongSignals	0	0				
## CurCwnd	40	0				
## CurSthresh	0	0				
## Timeouts	0	0				
## CurRwinSent	0	0				
## MaxRwinSent	0	0				
## ZeroRwinSent	0	0				
## CurRwinRcvd	0	0				
## MaxRwinRcvd	0	0				
## ZeroRwinRcvd	0	0				