Whole Game 2: Malaria and Mosquito Nets

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RStudio, PBC

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1. Specify causal question
2. Draw assumptions (causal diagram)
3. Model assumptions (e.g. with a propensity score)
4. Analyze propensities (diagnostics)
5. Estimate causal effects
6. Conduct a sensitivity analysis

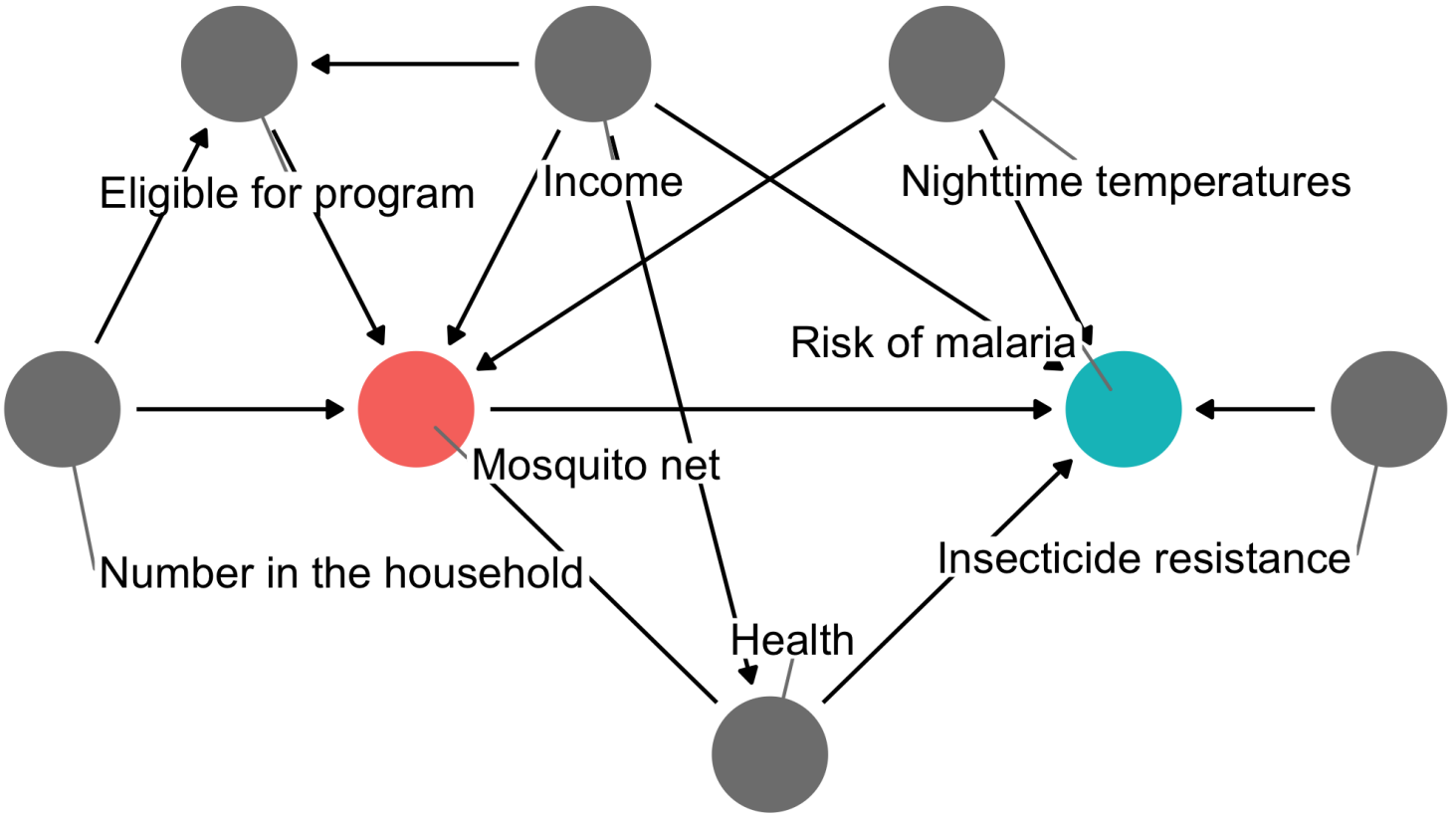
Does mosquito bed net use reduce malaria risk?

The Data

```
library(causalworkshop)
net_data
```

```
## # A tibble: 1,752 × 10
##       id net   net_num malar…¹ income health house…² eligi…³
##    <int> <lgl>   <int>   <dbl>  <dbl>  <dbl>   <dbl> <lgl>
##  1     1 FALSE       0      38    779     35       1 FALSE
##  2     2 FALSE       0      48    700     35       3 FALSE
##  3     3 FALSE       0      32   1083     58       3 FALSE
##  4     4 FALSE       0      55    753     68       3 FALSE
##  5     5 FALSE       0      36    919     46       5 FALSE
##  6     6 FALSE       0      30    969     37       3 FALSE
##  7     7 FALSE       0      29   1012     58       1 FALSE
##  8     8 FALSE       0      45    708     30       2 FALSE
##  9     9 FALSE       0      51    733     18       3 FALSE
## 10    10 FALSE       0      42    862     64       3 FALSE
## # … with 1,742 more rows, 2 more variables:
## #   temperature <dbl>, insecticide_resistance <dbl>, and
## #   abbreviated variable names ¹malaria_risk, ²household,
## #   ³eligible
```

Proposed DAG



Thanks to Andrew Heiss for the data!

Your Turn!