Whole Game 2: Malaria and Mosquito Nets

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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

```r
1  library(causalworkshop)
2  net_data
```
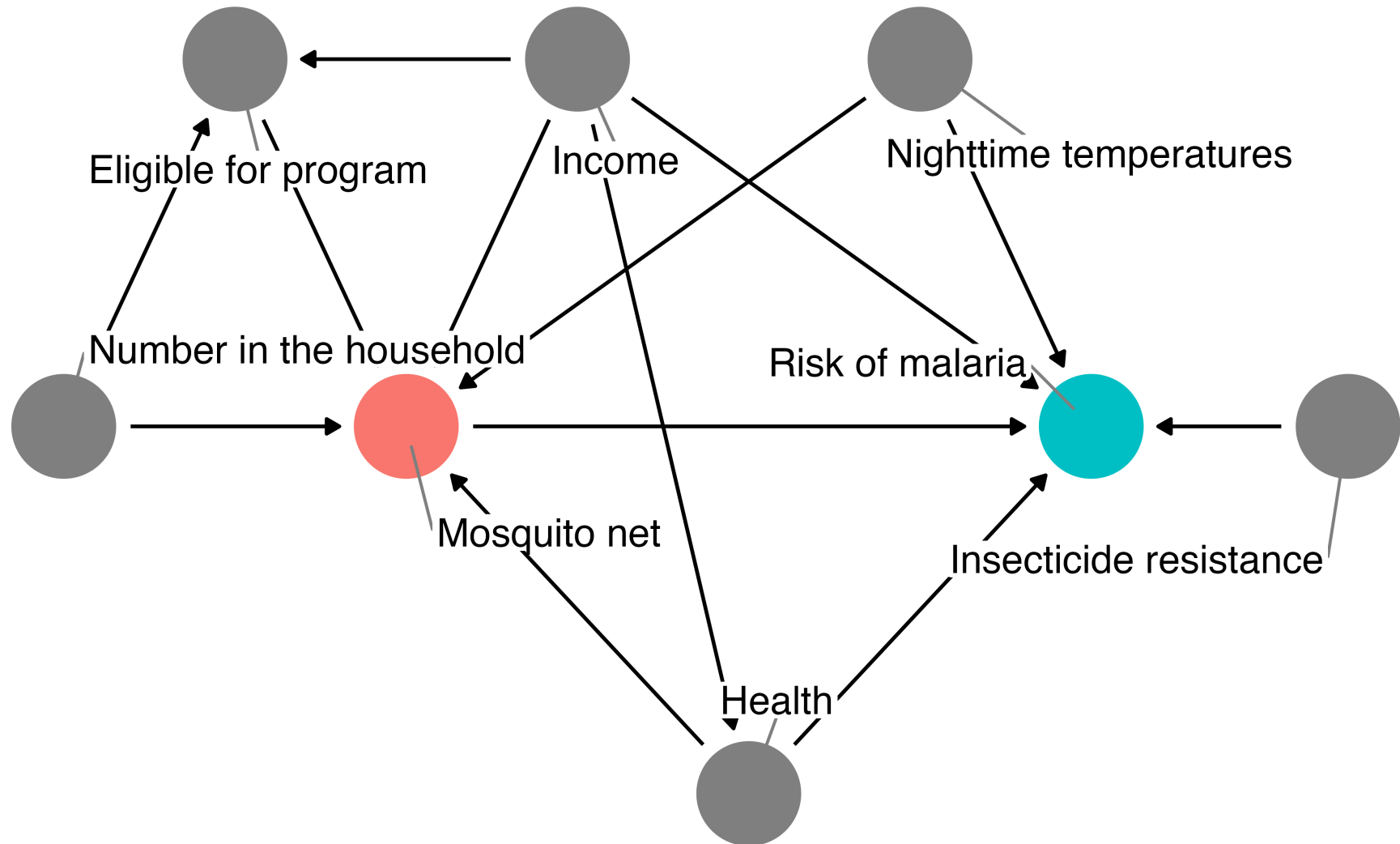
```
# A tibble: 1,752 × 10
      id net    net_num malaria_risk income health household
   <int> <lgl>    <int>        <dbl>  <dbl>  <dbl>     <dbl>
 1     1 FALSE        0           38    779     35         1
 2     2 FALSE        0           48    700     35         3
 3     3 FALSE        0           32   1083     58         3
 4     4 FALSE        0           55    753     68         3
 5     5 FALSE        0           36    919     46         5
 6     6 FALSE        0           30    969     37         3
 7     7 FALSE        0           29   1012     58         1
 8     8 FALSE        0           45    708     30         2
 9     9 FALSE        0           51    733     18         3
10    10 FALSE        0           42    862     64         3
```

Proposed DAG

Eligible for program

Income

Nighttime temperatures

Number in the household

Risk of malaria

Mosquito net

Insecticide resistance

Health

Thanks to Andrew Heiss for the data!

Your Turn!