Whole Game 2: Malaria and Mosquito Nets

Malcolm Barrett

Stanford University

1. Specify causal question (e.g. target trial)
2. Draw assumptions (causal diagram)
3. Model assumptions (e.g., propensity)
4. Diagnose model (e.g., balance)
5. Estimate causal effects (e.g., IPW)
6. Sensitivity analysis

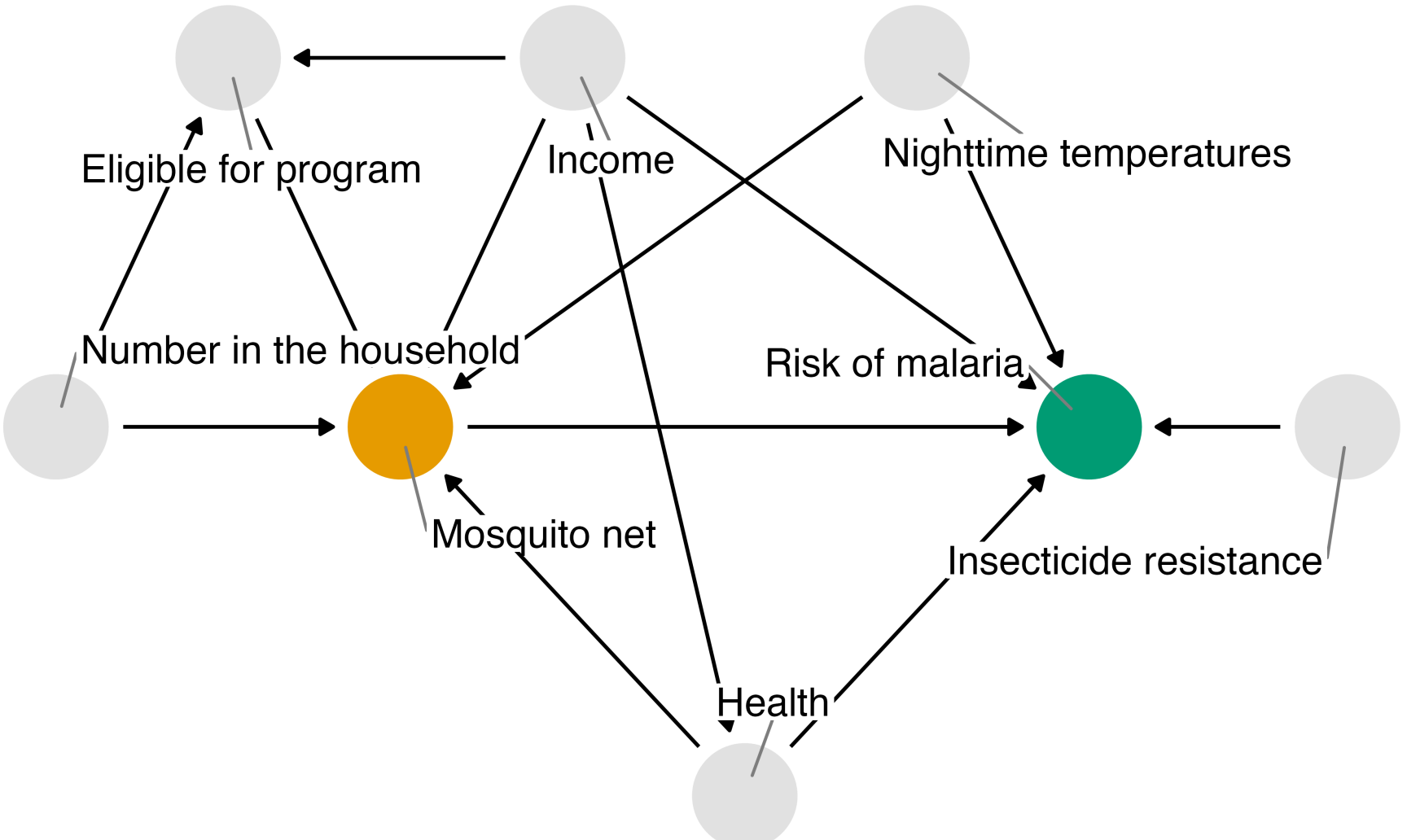
Does mosquito bed net use reduce malaria risk?

The Data

```
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
# ℹ 1,742 more rows
```

Proposed DAG



Thanks to Andrew Heiss for the data!

Your Turn!