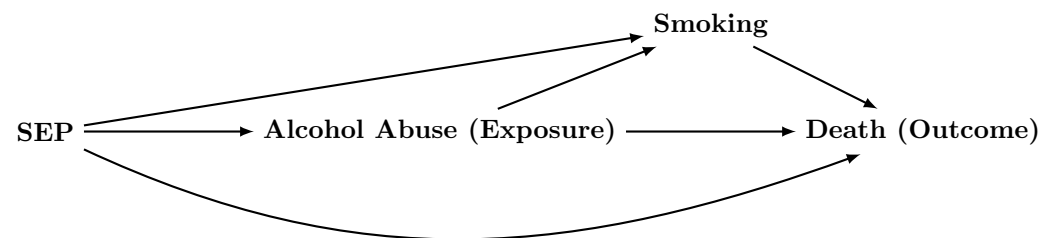# 1 Figure 1

Figure 1: An example of a DAG with exposure to alcohol abuse, Outcome death, confounder socioeconomic position, and mediator smoking.
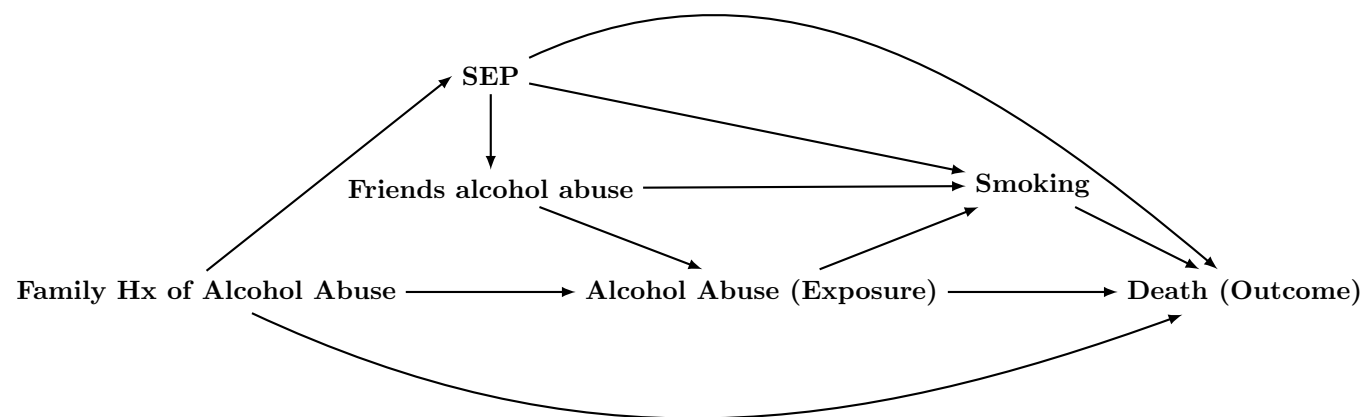
2 Figure 2

Figure 2: Family history of alcohol abuse, socioeconomic position, and friends' alcohol abuse are confounders; smoking is a mediator, alcohol abuse is the exposure of interest, and mortality is the outcome of interest.

3   Figure 3

SES

Unmeasured (U)   Friends alcohol abuse   Smoking

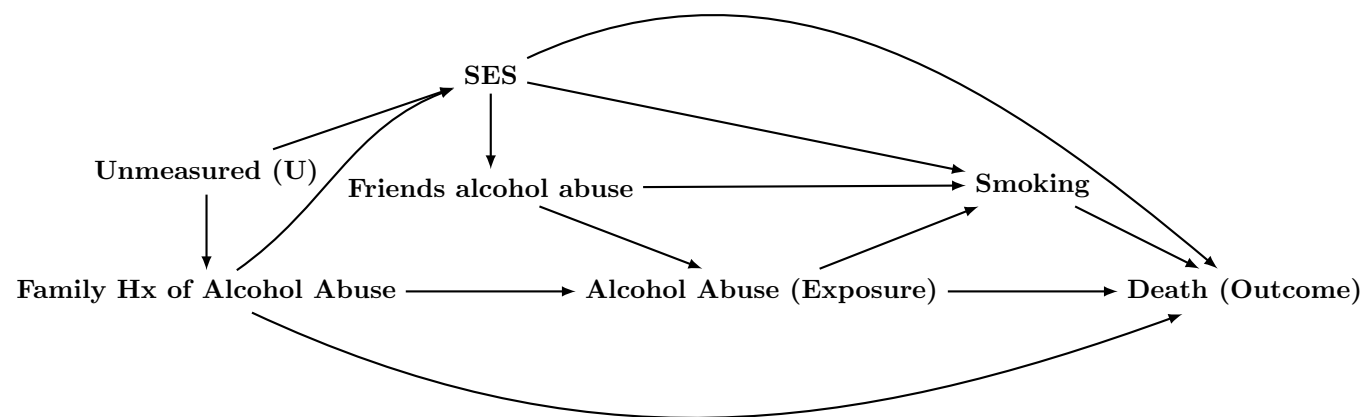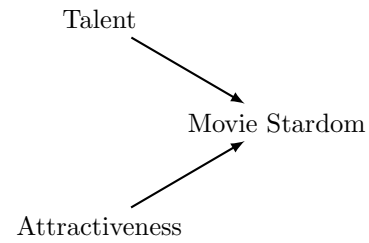Family Hx of Alcohol Abuse ⟶ Alcohol Abuse (Exposure) ⟶ Death (Outcome)

Figure 3: The DAG from Figure 2 with an unmeasured confounder. In this case, U is either unknown or unmeasured but is a common cause of a family history of alcohol abuse and smoking.

4 Figure 4

4.1 Figure 4a

Talent

Movie Stardom

Attractiveness

4.2 Figure 4b
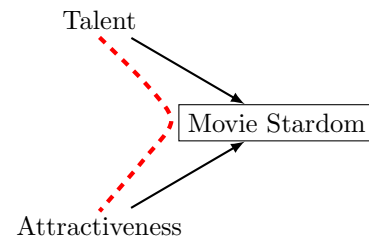
Talent

Movie Stardom

Attractiveness

Figure 4: A) Movie stardom is a collider without adjustment, there is no relationship between a attractiveness and talent B) After adjustment for the collider, there is an induced relationship between talent and attractiveness (red dashed line) through movie stardom, which is not truly causal.
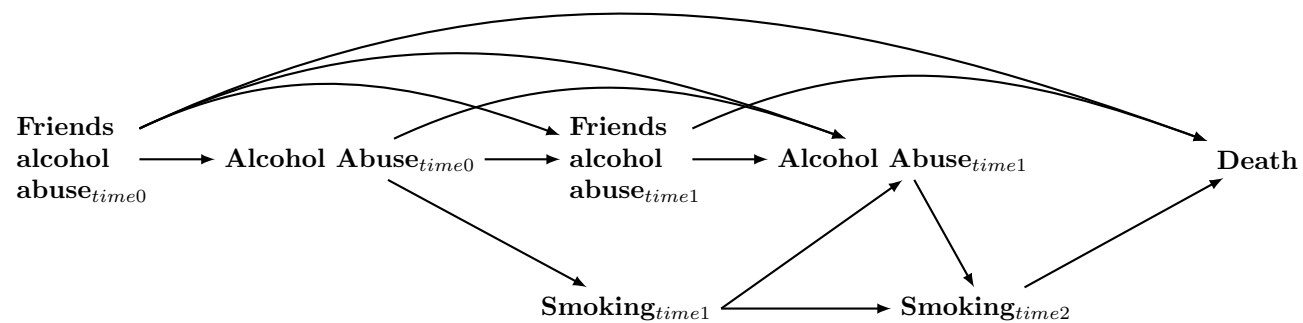
5   Figure 5

Figure 5: Time Variant DAG with the exposure to alcohol abuse was measured at baseline, and a later follow-up (Alcohol abuse$_{time1}$, and smoking and friends who abuse alcohol were also measured at baseline and follow-up. The outcome is unchanged and is 5-year mortality (Death).
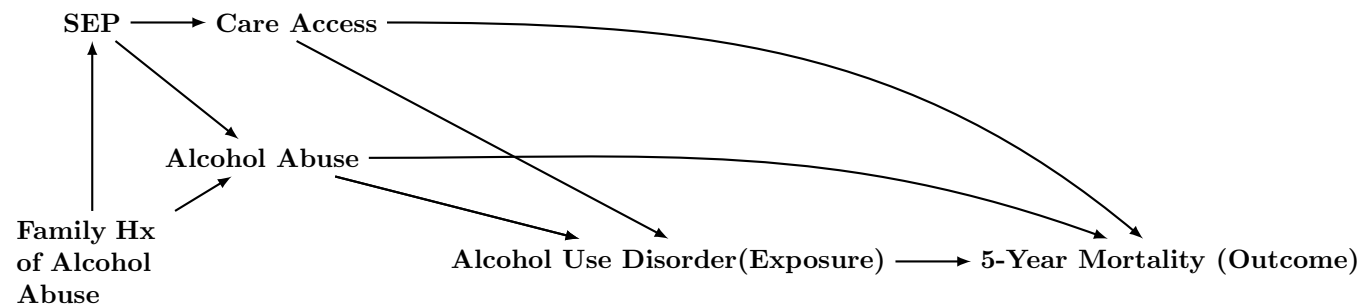
6 Figure 6

A

Alcohol Use Disorder(Exposure) $\longrightarrow$ 5-Year Mortality(Outcome)

B

SEP   Care Access

Alcohol Abuse

Family Hx
of Alcohol   Alcohol Use Disorder(Exposure) $\longrightarrow$ 5-Year Mortality (Outcome)
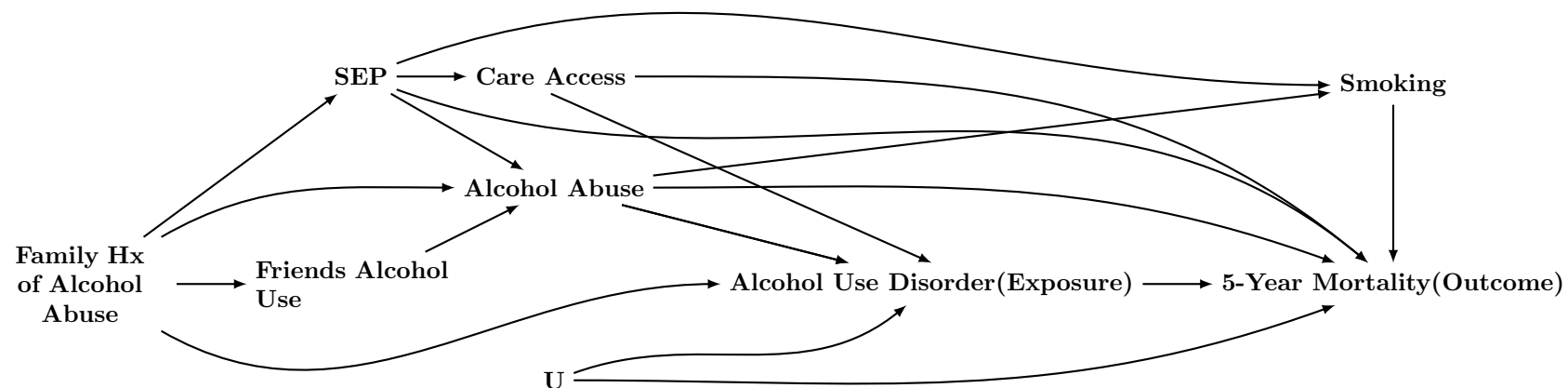Abuse

C

D

Figure 6: Process of constructing a DAG. A) The process starts with defining the exposure and outcome of interest. B) Initial DAGs can be constructed using expert knowledge and previous studies to inform variables that are related to both the exposure and outcome, but also other variables. C) Refinement and consensus help complete the DAG including all relationships between variables and the exposure and outcome. Exp=exposure, SEP=Socioeconomic Position, Hx=history, U=unmeasured and possibly unknown.