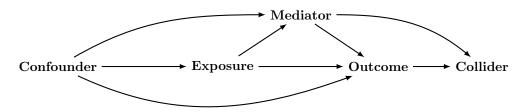
1 Box 1 DAGs

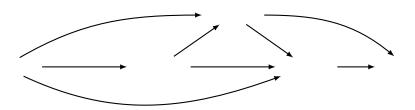


node

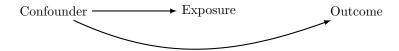
Mediator

Confounder Exposure Outcome Collider

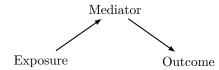
edge



confounder



mediator; indirect effects



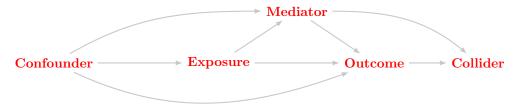
direct effects

Exposure — Outcome

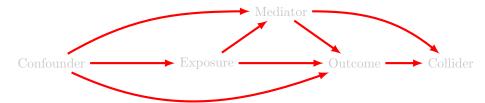
$\operatorname{collider}$



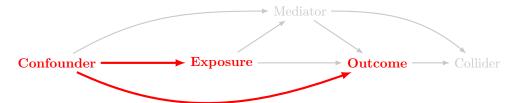
${\bf Nodes}$



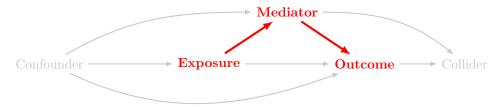
Edges



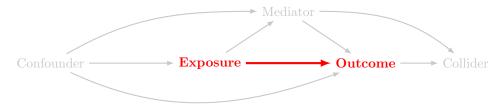
${\bf Confounder}$



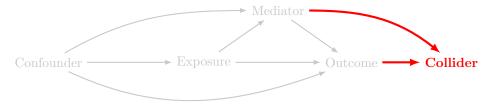
Indirect Effects/Mediator



Direct Effects

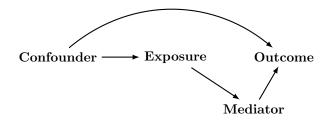


Collider

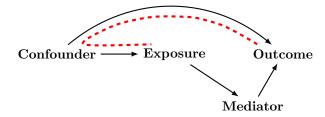


Box 2 figures d-Separation and causal versus biasing path

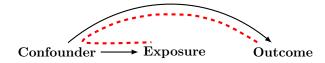
confounder, unadjusted



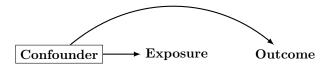
confounder, unadjusted ,biasing path illustrated



confounder, unadjusted ,biasing path illustrated, no Mediator



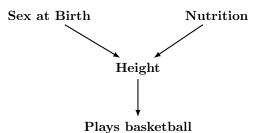
confounder, adjusted, no biasing path



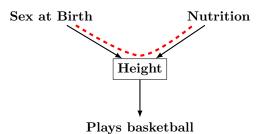
 $\ \, mediator,\, adjusted\,\,,\, no\,\, causal\,\, path$



m-bias, adjusted, no causal path



m-bias, adjusted, no causal path



m-bias, adjusted , no causal path

