**Supplemental Figure 1.** Directed Acyclic Graph for covariate selection between drinking water disinfection byproducts and congenital heart defects.

Diagram

Description automatically generated

BMI=Body Mass Index; B1P3=one month before pregnancy through third month of pregnancy; CHD=Congenital Heart Defect; DBP=Disinfection by-product; P1=first month of pregnancy; P2=second month of pregnancy

DAGgitty color legend:

A screenshot of a computer screen

Description automatically generated

DAGitty code:

dag {

bb="-6.161,-6.613,6.148,6.288"

"Chlorination Method" [latent,pos="-3.262,4.298"]

"DBP Ingestion" [exposure,pos="-3.649,2.322"]

"Family History of CHD" [latent,pos="4.097,-1.172"]

"Fever in B1P3" [pos="3.228,-4.480"]

"Folic Acid P1,P2" [pos="5.353,-2.575"]

"Household Income" [adjusted,pos="1.522,-5.725"]

"Maternal Age" [adjusted,pos="-3.377,-1.000"]

"Maternal BMI" [adjusted,pos="-5.523,-1.100"]

"Maternal Diabetes" [latent,pos="4.076,5.171"]

"Maternal Medications" [pos="5.133,3.768"]

"Measurement Method" [pos="-4.874,5.572"]

"Other Contaminants" [latent,pos="1.825,4.756"]

"Showering and Bathing" [pos="-5.229,3.768"]

"Urban/Rural" [latent,pos="-5.386,2.895"]

"Water Filtration" [pos="-5.470,4.928"]

"Water Source" [pos="-4.089,5.128"]

Alcohol [pos="-0.635,-3.420"]

CHD [outcome,pos="3.291,2.852"]

Education [adjusted,pos="-3.848,-5.095"]

Location [adjusted,pos="-0.862,-1.101"]

Parity [pos="3.939,-3.291"]

Race [pos="-5.543,-3.563"]

Smoke [pos="0.151,-4.909"]

"Chlorination Method" -> "DBP Ingestion"

"DBP Ingestion" -> CHD

"Family History of CHD" -> CHD

"Fever in B1P3" -> CHD

"Folic Acid P1,P2" -> CHD

"Household Income" -> "Urban/Rural"

"Household Income" -> CHD

"Household Income" <-> Education

"Maternal Age" -> "DBP Ingestion"

"Maternal Age" -> "Maternal BMI"

"Maternal Age" -> CHD

"Maternal Age" -> Education

"Maternal Age" -> Location

"Maternal Age" -> Parity

"Maternal BMI" -> "DBP Ingestion"

"Maternal BMI" -> CHD

"Maternal Diabetes" -> CHD

"Maternal Medications" -> CHD

"Measurement Method" -> "DBP Ingestion"

"Other Contaminants" -> CHD

"Showering and Bathing" -> "DBP Ingestion"

"Urban/Rural" -> "DBP Ingestion"

"Water Filtration" -> "DBP Ingestion"

"Water Source" -> "DBP Ingestion"

Alcohol -> CHD

Education -> "DBP Ingestion"

Education -> Alcohol

Education -> CHD

Education -> Smoke

Location -> "DBP Ingestion"

Location -> "Household Income"

Location -> CHD

Location -> Education

Parity -> CHD

Race -> "Maternal BMI"

Race -> CHD

Race -> Education

Smoke -> CHD

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